

Digitized by the Internet Archive
in 2016

<https://archive.org/details/northcarolinamed49unse>

Journal

North Carolina
Medical Society
January 1988
Volume 49
Number 1

North Carolina Medical Journal

For Doctors and their Patients

**Mairzy Doats
and Dozy Doats
and a Kiddle Eat
Almost Anything:
Bromocriptine
(Parlodel) Overdose**
Ronald B. Mack, M.D.

**Human
Immunodeficiency
Virus Antibody
Testing and Counseling**
M. Lynn Smiley, M.D.,
Rebecca Meriwether, M.D.

**The Practice of
Radiology in
North Carolina,
1979-1989**

Bonnie C. Yankaskas, Ph.D.,
Edward V. Staab, M.D.,
Eilene Z. Bisgrove, MSPH

North Carolina Medical
Journal
UCSF LIBRARY
Received on: 01-20-88



Bromocriptine overdose, page 17

Midwinter Conference
February 5
Charlotte

THERE IS
SOMETHING
IN OUR NAME
THAT BRINGS YOU
A FEELING OF
SECURITY.

CRUMPTON COMPANY.

Why do so many NC physicians participate in the Crumpton Plan of Disability Income Protection?

THE ANSWER is the 47 years of successful relationship and personal service at claim time!

Yes, the feeling of security as well as economic advantage in knowing the program is a plan of carefully designed benefits.

The plan is not filled with a lot of "purple duck feathers," but provides income when you are unable to produce — not promises, but performance.

Why not call us today to obtain the latest details for your group practice? We are delighted to offer our broadened portfolio of professional insurance.



Commercial Insurance Company

Crumpton Company
Box 8500 Academy Center, Durham 27707
800/672-1674 919/493-2441

NORTH CAROLINA MEDICAL JOURNAL

For Doctors and their Patients

January 1988, Volume 49, Number 1

Published Monthly as the Official Organ of The North Carolina Medical Society

(ISSN-0029-2559)

STAFF

Eugene A. Stead, Jr., M.D.
Rt. 1, Box 194, Bullock
EDITOR
919/693-4531

Francis A. Neelon, M.D.
Durham
ASSOCIATE EDITOR

F. Maxton Mauney, Jr., M.D.
Asheville
ASSOCIATE EDITOR

George E. Moore
Raleigh
BUSINESS MANAGER

Laurel Ferejohn
Durham
MANAGING EDITOR
919/684-5728

Jane Whalen
Durham
EDITORIAL ASSISTANT

EDITORIAL BOARD

Charles W. Styron, M.D.
Raleigh
CHAIRMAN

Edwin W. Monroe, M.D.
Greenville

Robert W. Prichard, M.D.
Winston-Salem

Louis deS. Shaffner, M.D.
Winston-Salem

Jay Arena, M.D.
Durham

Jack Hughes, M.D.
Durham

William B. Blythe, M.D.
Chapel Hill

Margaret C. Swanton, M.D.
Clinton

The appearance of an advertisement in this publication does not constitute any endorsement of the subject or claims of the advertisements.

The Society is not to be considered as endorsing the views and opinions advanced by authors of papers delivered at the Annual Meeting or published in the official publication of the Society. — *Constitution and Bylaws of the North Carolina Medical Society*, Chapter IV, Section 3, page 4.

NORTH CAROLINA MEDICAL JOURNAL, P.O. Box 3910, Duke University Medical Center, Durham, NC 27710 (919/684-5728), is owned and published by The North Carolina Medical Society under the direction of its Editorial Board. Copyright © The North Carolina Medical Society 1988. Address manuscripts and communications regarding editorial matters to the Durham address. Questions relating to subscription rates, advertising, etc., should be addressed to the Managing Editor at the Durham address. All advertisements are accepted subject to the approval of a screening committee of the State Medical Journal Advertising Bureau, 711 South Blvd., Oak Park, Illinois 60302 and/or by a Committee of the Editorial Board of the North Carolina Medical Journal in respect to strictly local advertising. Instructions to authors appear in each issue (see table of contents). Annual Subscription, \$12.00. Single copies, \$2.00. Publication office: The Ovid Bell Press, Inc., 1201-05 Bluff St., Fulton, MO 65251. *Second-class postage paid at Raleigh, North Carolina 27611 and additional mailing offices.* Postmaster: Send address changes to North Carolina Medical Society, 222 N. Person St., Raleigh NC 27611.

THE FUTURE IS NOW WITH THE ELIMINATOR

"Eliminator" is a fairly harsh word to describe an x-ray generator. However, the Compu-mAs system from Bennett X-Ray Corp. and B & B X-Ray does so many things for you, there's no other word to explain it. The generator automatically calculates the next available mAs from the 34 time stations and the 7 mA stations, therefore eliminating many of the steps that were once necessary in taking x-rays.

The Compu-mAs:

- Eliminates setting major and minor kVp tap switches
- Eliminates setting high and low range for kV selectors
- Eliminates calculating mA \times time to find mAs
- Eliminates checking and adjusting line compensation
- Eliminates the need to set both mA and time

By eliminating all of these steps, the Eliminator moves into the future without sacrificing dependability and accuracy. Dependability has been a benefit of owning a Bennett Radiographic System for over 30 years. And now, by automatically selecting the next available mAs combination of mA and time, Compu-mAs provides accuracy to almost infinite resolution. The Compu-mAs Eliminator—just another way B & B X-Ray is working for your end result, optimum quality radiographs.

B & B X R A Y

working for the end result—optimum quality radiographs

P.O. Box 802 Matthews, NC 28105

In NC Call 1-800-222-9262
In SC Call Collect 704-847-8521

*Financial services that will get
you in shape for the future.
That's Blue Chip.*

We have a variety of insurance and investment options to make sure your future is financially strong. For example:

- Tax shelters, to keep more of your money working for you;
- Annuities, to make money available at retirement or whenever you need it;
- Insurance, to protect your family, your business and your income.

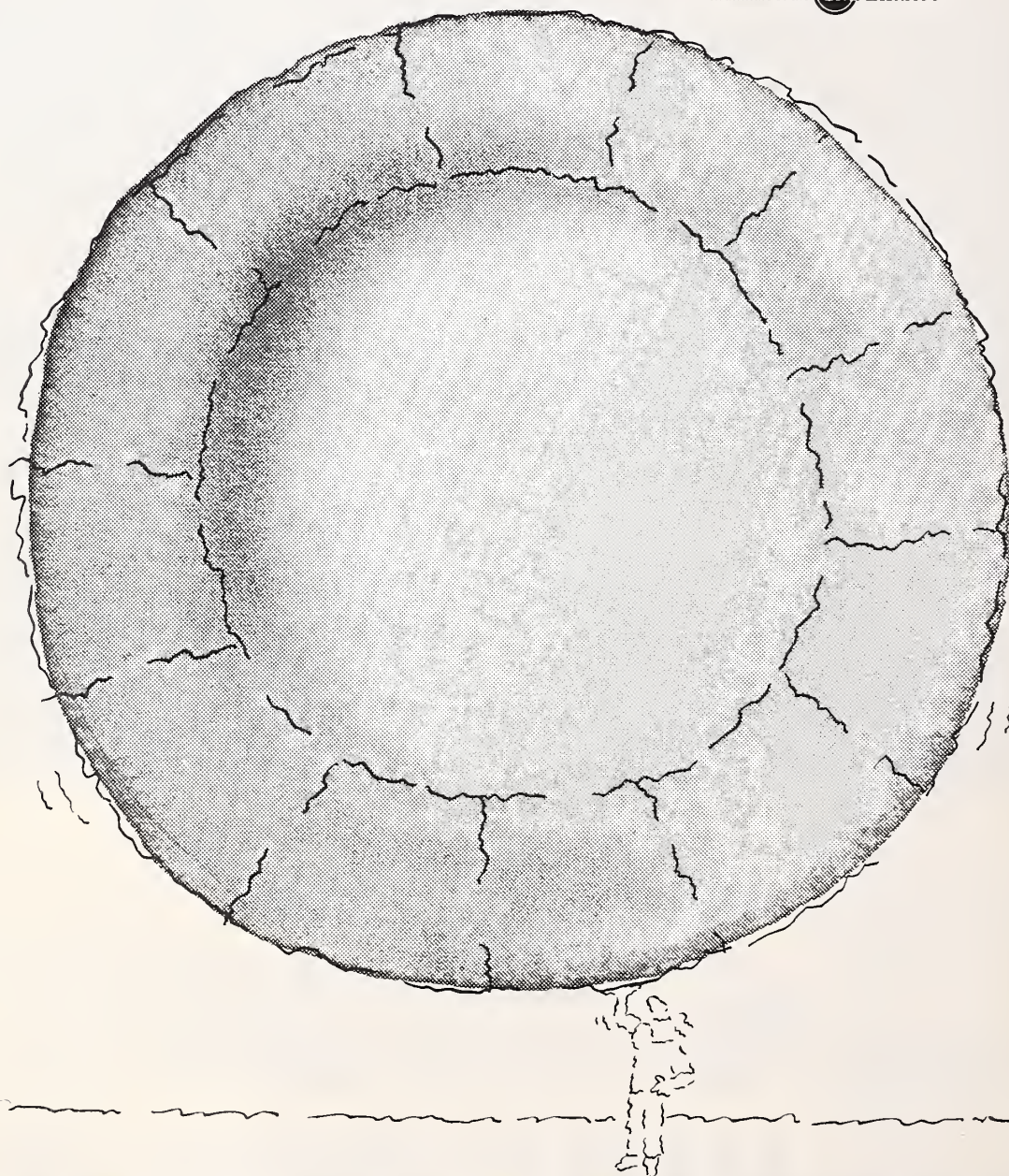
Our specialists will help you identify your needs and develop a program that's right for you.

Start shaping your future today.
Call or write us for details.

The Hinrichs Financial Group

1600 Charlotte Plaza Charlotte, NC 28244
(704) 371-8600

An affiliate of the  **CN Alliance**



Connecticut Mutual Life Insurance Co. (Hartford CT) • Connecticut Mutual Financial Services, Inc. • CM Life Insurance Company • Diversified Insurance Services of America, Inc. and its affiliates.

North Carolina Medical Journal

FOR DOCTORS AND THEIR PATIENTS

Contents / January 1988, Volume 49, Number 1

Cover drawing by Ernest Craige, M.D.

LEARNING EXPERIENCES FROM UNC

5 Human Immunodeficiency Virus Antibody Testing and Counseling *M. Lynn Smiley and Rebecca Meriwether*

SPECIAL ARTICLE

11 The Combined Medical Specialties Unit: After Five Years *W. Blair Brooks, Douglas H. Finestone, John S. Jordan, Emily G. Tillotson, and Francis A. Neelon*

TOXIC ENCOUNTERS

17 Mairzy Doats and Dozy Doats and a Kiddle Eat Almost Anything: Bromocriptine (Parlodel) Overdose *Ronald B. Mack*

SOCIOECONOMICS

21 Results of a Community-Based Comprehensive Pediatric Care Program: Significant Reduction in Inpatient Care Costs for Indigent Children *Ronald B. May and Thomas G. Irons*

SCIENTIFIC ARTICLE

25 Jellyfish Envenomation *Fredric Blum and Ralph Corey*

FOR PATIENTS

29 The Sweet Thing Revisited *Claude A. Frazier*

31 Safety of Lead-Containing Hobby Glazes *Woodhall Stopford*

THE NAMES AND FACES OF MEDICINE

36 Plummer's Nails *Scott N. Lurie*

EDITORIAL

37 Medical Care for Poor Children: Who Provides, and Who Pays for It? *Floyd W. Denny, Jr.*

GERIATRIC MEDICINE

41 Reducing Polypharmacy in the Nursing Home *James H. Sanders, Jr., and Mildred C. Orr*

43 PRN Medications in a Rest Home Setting *Thomas R. White and Geraldine D. Anastasio*

MEDICAL HISTORY

46 I Only Wear a Raincoat When It Rains *J. Lamar Callaway*

DEMOGRAPHICS

51 The Practice of Radiology in North Carolina, 1979-1989: A Survey of All Practices in the State *Bonnie C. Yankaskas, Edward V. Staab, and Eilene Z. Bisgrove*

BULLETIN BOARD

58 Letters to the Editor

60 New Members

61 Continuing Medical Education

62 Classified Advertisements

64 Index to Advertisers

Our **A**lumni Make Great Recoveries.

They needed our program to solve their problems, so you probably won't hear them brag about their Alma Mater. But they're proud of us and we're proud of them, because they continue to live straight and sober *after* they leave our program.

Some people call it success. We call it recovery. And it happens because of teamwork. Our staff, our client's physician, employer, and family, all working together with each patient for the same goal: freedom from drugs and alcohol one day at a time.

Guaranteed. That's right, if a patient follows our program and doesn't remain drug and alcohol free, we'll provide additional treatment at *no charge*.

Don't lose your patients to alcohol and drugs. Get them back with our help and discover what recovery can mean for your patient's life.

We offer 24 hour free confidential evaluations and case consultations 7 days a week.



**Charter
Northridge
Hospital**

400 Newton Road
Raleigh, NC 27615
1-800-447-1800

Patient costs covered by Medicaid, Medicare and most insurance companies.



A Facility of Charter Medical Corporation
Quality Hospitals.



BRIEF SUMMARY

CONTRAINDICATIONS

There are no known contraindications to the use of sucralfate.

PRECAUTIONS

Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that the simultaneous administration of CARAFATE with tetracycline, phenytoin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. The clinical significance of these animal studies is yet to be defined.

Carcinogenesis, Mutagenesis, Impairment of Fertility: No evidence of drug-related tumorigenicity was found in chronic oral toxicity studies of 24 months' duration conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies have not been conducted.

Pregnancy: Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients, adverse effects were reported in 121 (4.7%). Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

DOSAGE AND ADMINISTRATION

The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

HOW SUPPLIED

CARAFATE (sucralfate) 1-gm pink tablets are supplied in bottles of 100 and in Unit Dose Identification Paks of 100. The tablets are embossed with MARION/1712.

Issued 3/84

References:

1. Korman MG, Shaw RG, Hansky J, et al: *Gastroenterology* 80:1451-1453, 1981.
2. Korman MG, Hansky J, Merrett AC, et al: *Dig Dis Sci* 27:712-715, 1982.
3. Brandstaetter G, Kratochvil P: *Am J Med* 79(suppl 2C):36-38, 1985.
4. Marks IN, Wright JP, Gilinsky NH, et al: *J Clin Gastroenterol* 8:419-423, 1986.
5. Lam SK, Hui WM, Lau WY, et al: *Gastroenterology* 92:1193-1201, 1987.

Another patient benefit product from



1594H7

Ulcer therapy that won't yield, even to smoking

YIELD



What do you do for duodenal ulcer patients who should stop smoking, but won't? Both cimetidine¹ and ranitidine² have been shown less effective in smokers than nonsmokers.

Choose CARAFATE® (sucralfate/Marion). Two recent studies show Carafate to be as effective in smokers as nonsmokers.^{3,4} A difference further illustrated in a 283-patient study comparing sucralfate to cimetidine⁵:

Ulcer healing rates:
(at four weeks of therapy)⁵

Sucralfate:

All patients 79.4%

Smokers 81.6%*

Cimetidine:

All patients 76.3%

Smokers 62.5%

Carafate has a unique, nonsystemic mode of action that enhances the body's own ulcer healing ability and protects the damaged mucosa from further injury.

When your ulcer patient is a smoker, prescribe the ulcer medication that won't go up in smoke: safe, nonsystemic Carafate.

Nothing works like


CARAFATE®
sucralfate/Marion

Please see adjoining page for references and brief summary of prescribing information.

*Significantly greater than cimetidine smoker group ($P < .05$)

1594H7

Motrin[®] 800 TABLETS mg ibuprofen



Extra strength
Convenience
Economy



A Century
of Caring
1886-1986

Human Immunodeficiency Virus Antibody Testing and Counseling

M. Lynn Smiley, M.D., and Rebecca Meriwether, M.D.

Effective February 1, 1988, North Carolina State law will require that physicians who order HIV antibody tests also provide counseling to each patient. The editor hopes the following article will offer North Carolina physicians some useful guidelines for testing and counseling.

The acquired immunodeficiency syndrome (AIDS) and human immunodeficiency virus (HIV) infection pose a health threat to North Carolina citizens. As of August 1987, 231 AIDS cases have been reported to the Centers for Disease Control from North Carolina. However, more than this number of patients have sought health care in our state but were reported from other states. Based on estimates that there are 50 HIV-infected persons for each AIDS case, approximately 11,500 North Carolinians are presently infected with HIV and capable of transmitting the virus to others. The time required for the number of AIDS cases to double is presently in excess of 12 months. It is projected that by 1992, at least 1,200 AIDS cases will be reported by this state. Currently, the most effective means of reducing HIV transmission is by providing intensive and frank education about the nature of HIV infection, its mode of transmission, and recommended preventive measures.

Health professionals play a very important role in counseling individuals seeking HIV antibody testing. The HIV antibody test is readily available from either hospital-based or commercial laboratories. Free, anonymous testing and counseling are available in all of the 100 local health departments. These counseling and testing sites were initially established in local health departments in 1985 so that high-risk persons would not donate blood to obtain HIV antibody testing. The focus has now shifted to the provision of risk-reduction counseling with testing as an adjunct. In 1986, health departments submitted 2,004 specimens to the State Laboratory for HIV testing. Of those specimens, 213 (10.6%)

were antibody positive. Over the past 15 months, the increase in HIV testing in local health departments ranged from 12% to 74% per month. Through the first six months of 1987, almost 6,000 persons have been tested and 3.8% had positive tests. Because of waiting lists at some health departments, an increasing number of persons are seeking counseling and testing from physicians in their office practices.

Usefulness of HIV Antibody Test

Testing should be reserved for diagnostic use in patients with symptoms or signs suggestive of HIV infection, for screening blood and organ donors, and as an adjunct to counseling for individuals who wish to learn their HIV antibody status. When advising an individual about testing, two issues must be considered: (1) What is the likelihood that a positive test will indicate infection (positive predictive value)? (2) To what use will the test results be put?

Positive Predictive Value

The enzyme linked immunosorbent assay (ELISA) used in a majority of laboratories for HIV antibody screening (Abbott Laboratories, North Chicago, IL) is highly sensitive (98.3%) and specific (99.8%).^{1,2} It will be positive in 98.3% of HIV-infected individuals and negative in 99.8% of uninfected persons. In groups at high risk for AIDS, positive tests are highly indicative of infection. However, in low prevalence populations (those with few infected persons) the ability of a positive test to predict that an individual is infected is poor. In the general population, 70% to 90% of all positive tests are *falsely* positive, i.e., the confirmatory Western Blot (WB) is negative. The WB, however, is not

From the Division of Infectious Diseases, Department of Medicine, University of North Carolina, Chapel Hill 27514 (MLS), and the North Carolina Division of Health Services, Communicable Diseases Control Branch, Raleigh 27602 (RM).

as sensitive as the ELISA. Thus a small percentage of persons with repeatedly reactive ELISAs and negative WBs are actually infected with HIV.

Negative Predictive Value

For the purposes of counseling, interpretation of negative HIV test results must be done cautiously. As with other viral infections, HIV replication can occur in the absence of a detectable serologic response immediately after infection. For HIV, antibodies may not appear for six to eight weeks following the onset of infection.³⁻⁷ Some individuals develop antibodies only after six to eight months⁸ and, rarely, individuals may be antibody negative but virus culture positive.⁸⁻¹⁰ Thus a negative HIV test less than eight weeks (or possibly even eight months) after the last high-risk exposure is not reassuring. Additionally, some individuals become HIV antibody negative at about the time they develop symptoms and signs of HIV infection. A true negative test means that the person will be susceptible, not protected, if he or she continues high-risk behaviors.

Use of HIV Test Results

When counseling an individual about his or her antibody test result, one must consider the use the patient intends to make of the results, and keep in mind the possibility that the patient or the sex partner is continuing to participate in risk-taking behaviors. It is particularly important that patients be counseled not to use negative test results as permission to participate in unsafe sex. Individuals with negative results may actually be infected but not yet seropositive, or they may become infected by exposure to another individual who has a negative test result, but is infected with HIV.

Risk reduction guidelines must be given to *all* persons regardless of their HIV antibody status:

- 1 Reduce your number of sexual partners. Monogamy or abstinence is safest.
- 2 If you or your sexual partner is at risk for AIDS or you are unsure of your partner's drug and sexual history, don't exchange semen, blood or vaginal fluids during sex. Condoms are recommended to decrease the risk of HIV transmission.
- 3 Don't use drugs. If you do, don't share needles.
- 4 Persons at risk for AIDS should not donate blood, sperm, organs or other body tissues.
- 5 Women at risk for HIV infection should have testing done before having children.

The physician must discuss specific sexual practices and risk-taking behaviors in order to counsel the patient optimally to alter his or her behavior and thereby prevent transmission of the virus to others. A particularly complex example of interpretation of results is posed by a woman who is a member of a high-risk group and is considering childbearing. If the woman has used intravenous drugs and shared

needles (or bought "works" on the street), one must ascertain the approximate date of the last time she "shot up." Let us suppose the woman has been "clean" for six weeks and has a negative HIV antibody test. She should probably be advised to avoid all risk-taking behaviors, including "shooting up" and having sex with persons who are, or might be, at risk for HIV infection. She should probably be advised to return for a repeat antibody test in six to eight months. Her sex partner must also be considered. If this person is infected or participating in high-risk behaviors (sex with multiple partners, other males or IV drug abusers, or using intravenous drugs himself), he must also stop all risk-taking and should be tested at the time his partner is retested. If both partners have avoided risk-taking behaviors and are antibody negative when tested six to eight months later, there is reasonable (though not complete) assurance that they are not infected with HIV and may safely conceive and bear a child. They must be reminded that avoidance of risk-taking behaviors must continue for both partners throughout the pregnancy and during breastfeeding. In this context, it is imperative that both partners be well informed about what behaviors are risky and what they must do to protect themselves, each other, and their child. They must also understand how HIV is transmitted sexually, through IV drug use, and perinatally if they are to remain motivated to avoid risk-taking. The importance of the physician's role in counseling and education in this and similar settings is evident.

In summary, HIV antibody testing is useful diagnostically in persons with symptoms suggestive of HIV infection, to screen prospective blood, organ and sperm donors, and as an adjunct to risk reduction counseling. Counseling and education remain the primary tools available for containing the AIDS epidemic. Since HIV is transmitted sexually, parenterally, and perinatally and not by casual contact, each individual is in a position to protect himself or herself. All physicians must be prepared to arm their patients with accurate information so they can avoid acquiring or transmitting HIV. Testing may mislead some patients and cannot be used as an alternative to careful risk reduction education.

Resources Available

The AIDS Control Program of the North Carolina Division of Health Services has several resources available for persons needing further information about HIV antibody testing and counseling. For assistance, write to AIDS Control Program, P.O. Box 2091, Raleigh 27602, or telephone 919/733-7301.

Pamphlets available for distribution to patients include:

"What Everyone Needs to Know About AIDS."

"Information for Persons with a Positive HIV Antibody Test Result."

References

- 1 Weiss SH, Goedert JJ, Sarngadharan MG, et al. Screening test for HTLV-III (AIDS agent) antibodies: specificity, sensitivity and applications. *JAMA* 1985;253:221-5.

- 2 Petricciana JC. Licensed tests for antibody to human T-lymphotropic virus type III: sensitivity and specificity. *Ann Intern Med* 1985;103:726-9.
- 3 Needlestick transmission of HTLV-III from a patient infected in Africa. *Lancet* 1984;2:1376-7.
- 4 Tucker J, Ludlam CA, Craig A, et al. HTLV-III infection associated with glandular fever-like illness in a hemophiliac. *Lancet* 1985;1:585.
- 5 Cooper DA, Gold J, Maclean P, et al. Acute AIDS retrovirus infection. *Lancet* 1985;1:537-40.
- 6 Ho DD, Sarngadharan MG, Resnick L, et al. Primary human T-lymphotropic virus type III infection. *Ann Intern Med* 1985;103:880-3.
- 7 Esteban JI, Shih JW-OK, Tai C-C, et al. Importance of Western blot analysis in predicting infectivity of anti-HTLV-III/LAV positive blood. *Lancet* 1985;2:1083-6.
- 8 Groopman JF, Hartzband PI, Shulman L, et al. Antibody seronegative human T-lymphotropic virus type III (HTLV-III) - infected patients with acquired immunodeficiency syndrome or related disorders. *Blood* 1985;66:742-4.
- 9 Salahuddin JE, Hartzband PI, Shulman L, et al. HTLV-III in symptom-free seronegative persons. *Lancet* 1984;2:1418-20.
- 10 Levy JA, Shimabukuro J. Recovery of AIDS-associated retroviruses from patients with AIDS or AIDS-related conditions and from clinically healthy individuals. *J Infect Dis* 1985;152:734-8.

**Want to fund your retirement plans
at up to 25% pay and your staff at
only 11% pay? That's leverage!**

Call BARON for answers.

CALL OR WRITE FOR INFORMATION:

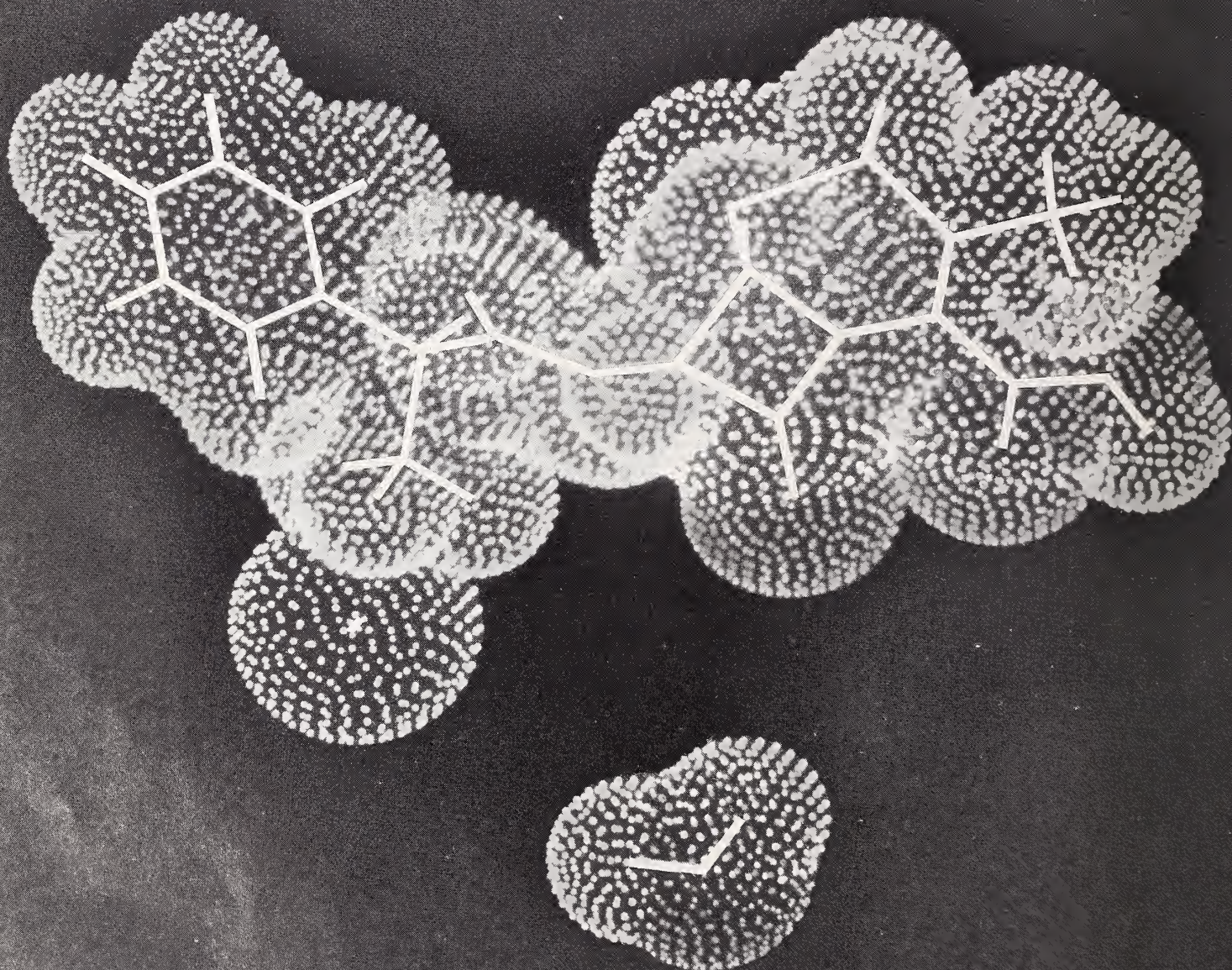
Joseph M. Gordon, CLU, ChFC, CFP
"Admitted to the Registry of
Financial Planning Practitioners"
BARON ADVISORY SERVICES, INC.
4110 Wake Forest Road, #211
Raleigh, NC 27609
790-9904/(800) 222-8783

ANNOUNCING

NEW

KEFTABTM

cephalexin hydrochloride monohydrate



Dista Products Company
Division of Eli Lilly and Company
Indianapolis, Indiana 46285
Mfd by Eli Lilly Industries, Inc.
Carolina, Puerto Rico 00630

© 1987, DISTA PRODUCTS COMPANY KX-9008-B-849336

Computer-generated mole-
cule structure of cephalexin
hydrochloride monohydrate

Convenient 500-mg b.i.d. dosage and demonstrated effectiveness for treatment of:

- skin and skin structure infections*
- uncomplicated cystitis†
- pharyngitis‡

- New hydrochloride salt form of cephalexin—requires no conversion in the stomach before absorption
- Well-tolerated therapy
- May be taken without regard to meals



For other indicated infections, 250-mg tablets available for q.i.d. dosage

Priced less than Keflex® (cephalexin)

Keftab is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-sensitive patients.

Penicillin is the drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever.

*Due to susceptible strains of *Staphylococcus aureus* and/or β -hemolytic streptococci.
†Due to susceptible strains of *Escherichia coli*, *Proteus mirabilis*, and *Klebsiella* sp.
‡Due to susceptible strains of group A β -hemolytic streptococci

KEFTAB™

(cephalexin hydrochloride monohydrate)

Summary: Consult the package literature for prescribing information.

Indications and Usage:

Respiratory tract infections caused by susceptible strains of *Streptococcus pneumoniae* and group A β -hemolytic streptococci.

Skin and skin structure infections caused by susceptible strains of *Staphylococcus aureus* and/or β -hemolytic streptococci.

Bone infections caused by susceptible strains of *S aureus* and/or *Proteus mirabilis*.

Genitourinary tract infections, including acute prostatitis, caused by susceptible strains of *Escherichia coli*, *P mirabilis*, and *Klebsiella* sp.

Contraindication: Known allergy to cephalosporins.

Warnings: KEFTAB SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:

- Discontinue Keftab in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Keftab should be administered cautiously in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy and lactation. Cephalexin is excreted in mother's milk. Exercise caution in prescribing Keftab for these patients.
- Safety and effectiveness in children have not been established.

Adverse Reactions:

- *Gastrointestinal*, including diarrhea and, rarely, nausea and vomiting. Transient hepatitis and cholestatic jaundice have been reported rarely.
- *Hypersensitivity* in the form of rash, urticaria, angioedema, and, rarely, erythema multiforme, Stevens-Johnson syndrome, or toxic epidermal necrolysis.
- *Anaphylaxis* has been reported.
- *Other reactions* have included genital/anal pruritus, genital moniliasis, vaginitis/vaginal discharge, dizziness, fatigue, headache, eosinophilia, neutropenia, and thrombocytopenia; reversible interstitial nephritis has been reported rarely.
- Cephalosporins have been implicated in triggering seizures, particularly in patients with renal impairment.
- *Abnormalities in laboratory test results* included slight elevations in aspartate aminotransferase (AST, SGOT) and alanine aminotransferase (ALT, SGPT). False-positive reactions for glucose in the urine may occur with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Let's get to the "heart" of the matter.
You want a "No Risk" System for your practice, and Med-Care has it!

Med-Care is the powerful office management system created for medical practices and clinics. Med-Care will improve the efficiency and productivity of managing and processing patient information while *improving cash flow*. In short, it will help you manage virtually every aspect of your practice.

The Med-Care System automates labor intensive functions like insurance processing, accounts receivable, billing, appointment scheduling and even routine correspondence. Med-Care has alternate fee schedules to help speed up your patient processing. HMOs and other PHP plans are handled with ease. It is also an invaluable business analysis tool, providing the insight you need to make well-informed decisions about the performance and future growth of your practice.

But what you'll appreciate most about The Med-Care System is its simplicity. A basic knowledge of bookkeeping, billing, and insurance claim procedures is all the experience you need.

A Complete Management System Designed in Cooperation with Medical Professionals.

The reason for The Med-Care System's superior performance and simple operation is that we designed it in cooperation with the medical industry, not just systems programmers, but physicians, medical accountants and medical office managers — people with the real knowledge and understanding of medical office management.

Unless you have an insight into computers and software, selecting the right system as well as the proper support and training can be a difficult, time-consuming and very expensive experience. To make things easier on you, The Med-Care System was developed as a complete system. Everything you need — software, hardware, training and support — is Included.

The Med-Care System comes complete with the Medical Office Management Program, Texas Instruments Micro or Mini System Computer with multiple work stations, printers and high capacity disk drives. Each system is tailored to the specific needs of your practice. And as your practice grows, Med-Care is flexible enough to grow with you.

The Texas Instruments Computers are expandable and support up to 128 workstations with the ability to expand storage as it is needed. They were selected for their price-performance and reliability in group practice environments.



Every Aspect of Your Practice Will Run More Efficiently.

Med-Care software is so versatile, you can tailor it to every management function in your practice. And even if you've never used a computer before, automating your practice with The Med-Care System is simple.

Med-Care's one-time data entry function is another time-saving feature. Because it's totally interactive throughout, you never need to enter the same data more than once.

Here are some of the ways Med-Care can improve the way you manage your practice:

- Speeds up insurance processing by handling multiple claims per patient and can transmit paperless claims to Medicare and major carriers.
- Improves staff management by maintaining information for multiple doctors and locations.
- Reduces collection time by tracing unpaid insurance claims.
- Increases efficiency by aging accounts and insurance pending files automatically.

- Eliminates paperwork by generating daily charge tickets and appointments.
- Increases cash flow by printing statements, medical reminders and collection letters.
- Improves patient service by providing instant access to each patient's medical records.
- Reduces paperwork by generating daily, monthly, or yearly receipt and charge reports by doctor, by procedure and by practice.

Med-Care's Person-To-Person Training: A Nice Way To Get Started.

Before you invest in a medical office management system, it's important to know what you're getting for your money. With The Med-Care System, what you get is more than hardware and software. You get the personal care and attention that has become a trademark of the people at Med-Care.

The moment your system arrives, the people at Med-Care will be there to guarantee a smooth, trouble-free start-up. They'll take you through an informative five-day practice clinic to ensure that everyone feels comfortable and confident with the new system. It's a nice way to get started.

But that's only the beginning. The people at Med-Care help you throughout the year. Our qualified customer service staff is specially trained on the Med-Care System. If you ever have trouble, they'll respond immediately.

We'd like to show you how simple it is to put Med-Care to work for your practice.

In just 30 minutes the system can be demonstrated at no cost or obligation to you. You'll get to see firsthand how The Med-Care System has helped many practices like yours to improve cash flow, increase productivity, and most importantly, improve the overall management of their patients.

All of these things are why Med-Care is the "No Risk" medical practice system for you.

Med-Care

6512 Six Forks Road, P.O. Box 19701
Raleigh, North Carolina 27615
NC 1-800-634-8016; USA 1-800-247-6094;
919-847-5110

The Combined Medical Specialties Unit

After Five Years

W. Blair Brooks, M.D., Douglas H. Finestone, M.D.,
John S. Jordan, Ph.D., Emily G. Tillotson, R.N.,
and Francis A. Neelon, M.D.

For patients with combined medical and psychiatric illnesses, and for their doctors, the total problem is greater than the sum of its parts. Both patients and doctors may have difficulty understanding and accepting that emotional factors contribute to or cause symptoms. Translation of these problems into conventional "medical" terminology is at best inexact, and communication with colleagues is cumbersome. Even when doctors do recognize combined illnesses, the available treatment resources are fragmented and poorly coordinated.

Five years ago Duke University established a new 15-bed inpatient unit at the Medical Center. The Combined Medical Specialties Unit (CMSU) was designed to provide coordinated medical and psychiatric care for patients with medical problems complicated by psychosocial factors.¹ The CMSU has been an effective, useful and busy service since its inception in 1982. To the best of our knowledge, it is unique. In this article, we describe the problems presented by patients with combined illnesses, the rationale for and evolution of the Unit, the characteristics of patients who have been admitted to the Unit, and the nature of the treatment program. We also include an overview of an evaluation program designed to assess whether patients derive long-term benefit from admission to the Unit.

Difficulties in Dealing with Combined Illness

While physicians are often adept at recognizing that psychosocial factors contribute to the overall "illness" of the patient, they are typically less proficient in defining the

specific ways in which this occurs. They feel unprepared to offer appropriate treatment options to patients with complicated combinations of medical and psychiatric problems.

There are a variety of reasons for the doctors' lack of preparedness in this area:

1 Doctors' training does not often include the development of expertise in dealing with patients with combined illnesses; few formal curricula teach effectively the comprehensive skills required to care for these complicated patients.

2 There is no commonly accepted vocabulary by which the doctor can explain to the patient or consult with colleagues about how psychosocial problems contribute to the illness.

3 Many of these patients resist psychiatric evaluation, limiting the usefulness of conventional psychiatric interventions ("I don't have any idea what's going on, but I know one thing — it's not all in my head").

4 In our culture, psychosocial dysfunction is interpreted as "moral weakness." Rather than take personal responsibility for correcting this dysfunction, some patients deny psychosocial causation, assign a "physical" reason for their disability and transfer responsibility to the physician ("You're the doctor. I'll do whatever you say; just fix it").

5 There are few readily available structured interventions for simultaneous medical and psychiatric examination and treatment of such patients.

Why a Combined Medical Specialties Unit?

The conventional medical system has not been effective in managing the unique diagnostic and therapeutic problems presented by patients with combined illnesses. The prevalence of mental disorders in the general population of this

From the Division of General Internal Medicine, Box 3830, Duke University Medical Center, Durham 27710. Supported in part by the Henry J. Kaiser Family Foundation.

country has been estimated to be as high as 15% in several epidemiological studies.² In a community-based survey of North Carolina residents, Blazer et al found that 17% met rigorous criteria for seven common psychiatric disorders.³ In another community-based survey, Murphy et al found a 12% prevalence of anxiety and depression alone.⁴ Johnstone and Goldberg reported that 43% of patients visiting non-psychiatric primary care physicians had a psychiatric disorder.⁵

Despite its being so common, most psychiatric disease is treated by nonpsychiatric practitioners. These practitioners, however, under-recognize and undertreat psychiatric disorders.^{6,7} For the patient, the impact of this "inadequate" psychiatric treatment is repetitive, costly and ultimately ineffective care.

Not surprisingly, patients with combined medical and psychiatric problems are high utilizers of medical care services.^{8,9} Many investigators have documented a decrease in health care utilization following psychiatric intervention in this complicated patient population.^{9,10} To date, however, no published study has adequately demonstrated that psychiatric intervention in such patients also results in an improvement in their health status. We have recently completed a pilot study of patients admitted to the CMSU that shows some functional improvement in 66% of patients and substantial improvement in 32%. Further analysis of these data is in progress, but the preliminary results have encouraged us to embark on a full-scale study to evaluate the impact of the CMSU (see under "Future Directions," below).

Although there are no empirical data, there is a theoretical basis for the expectation that simultaneous multidisciplinary treatment will be more effective than separate and uncoordinated medical and psychiatric treatment. Nevertheless, few combined medical/psychiatric inpatient units exist today. There are important reasons for the scarcity of such units:

- 1 There are administrative challenges in initiating and maintaining such combined units, including "turf" battles over who is primarily responsible for the patient. Coordination of medical and psychiatric services requires constant attention, and the effectiveness of the unit depends upon it.

- 2 Third-party reimbursement for concurrent medical and psychiatric treatment is tentative and varies from carrier to carrier. Although third-party payers have been supportive of the CMSU thus far, they have at times questioned the need for an inpatient program to treat these patients.

- 3 No methodologically sound research has been conducted to assess the efficacy of such units.

We concede that there are obstacles to be overcome in operating a multidisciplinary unit, but we feel that the effort is worthwhile since approaches like the CMSU offer a viable and valuable resource for patients and their physicians. The popularity of the CMSU among Duke clinicians is evidenced by a considerable waiting list for admission (four to eight weeks). These clinicians have observed that many of their

patients with combined medical and psychiatric problems obtain substantial and sustained benefit from the multidisciplinary treatment approach.

Who Gets Admitted to the CMSU?

Since opening, over a thousand patients have been admitted to the CMSU (approximately 280 patients per year at present). The average length of stay on the unit is 16 days. In a recent survey, we found that two-thirds of CMSU patients are women; the mean patient age is 45 years (range, 18-76). The majority (74%) are married. More than 75% of CMSU patients have at least a high school education and 40% a college degree. On admission, 40% of patients were actively employed, 20% were disabled, 15% were retired, 15% were homemakers and 10% were unemployed. Twelve percent of patients had litigation in process involving actual or perceived injury. Church attendance by CMSU patients is high: 80% of the patients report they attend church at least on a monthly basis and 40% attend weekly.

Medical Diagnoses in CMSU Patients

The spectrum of diagnoses on the CMSU is broad; there are no types of medical problems that are excluded from the unit. During our recent pilot study, half of the patients had primary neurological complaints (headache, low back pain, other neuropathic pain complaints). Gastrointestinal disorders, usually irritable bowel syndrome, comprised approximately 15% of the admissions. Fibromyalgia accounted for nearly 10% of the admitting diagnoses. Other admitting diagnoses (in 10% of patients) included: generalized fatigue, cardiovascular disorders, diabetes, and pelvic pain disorders. Psychiatric symptoms alone (depression, anxiety, psychogenic pain disorders) were recognized as the primary reason for admission in 15% of patients.

Psychiatric Diagnoses in CMSU Patients

Since we began the Unit, depression has been the predominant psychiatric discharge diagnosis. For example, during the first six months of 1987, using standard psychiatric diagnostic criteria, 75% of patients had major depression, dysthymia, or adjustment disorder with depressed mood. Stoudemire et al¹¹ have reported earlier that patients commonly entered the CMSU with previously unrecognized depression manifested as somatic symptoms ("masked depression"); our recent study confirms that this is a frequent occurrence. In addition to depression, 10% of patients had somatoform disorders (physical symptoms with no demonstrable organic abnormalities or known physiologic mechanisms; psychological mechanisms are often proposed

to “understand” and “explain” these symptoms), 5% of patients had primary anxiety disorders, and 10% had organic mental disorders.

In total, 95% of CMSU patients had a diagnosis of some psychiatric disorder at the time of discharge. Approximately 50% of patients also received a personality disorder diagnosis, the most common being dependent personality disorder. Family and marital problems represented the most frequently encountered area of psychosocial distress in our pilot study population, although employment-related stresses were also common.

Characteristics that CMSU Patients Have in Common

The patients admitted to the CMSU demonstrate a wide spectrum of medical and psychiatric conditions. Nevertheless, these patients are more homogeneous than the diagnostic diversity would suggest. They have the following characteristics in common:

1 Coexisting medical and psychiatric problems that result in chronic somatic symptoms refractory to conventional medical treatment. The mean duration of symptoms prior to admission to the CMSU is about six years, and many patients have previously had multiple surgical and medical procedures in attempts to “cure” their problem.

2 The patients exhibit dysfunction out of proportion to observable physiological or structural abnormalities. During our recent survey, CMSU patients were found to be at an extremely low level of physical and psychosocial functioning (comparable to patients with severe chronic obstructive pulmonary disease, patients with rheumatoid arthritis or patients recently discharged from a medical intensive care unit).

3 Psychosocial stresses appear to play a causal role in symptom generation, but their importance is often not acknowledged by the patient. On admission, most patients attribute their symptoms solely to “physical” problems.

4 The patients are often described as “difficult” or “demanding.” Caring for these patients requires more than average amounts of time; the practitioner is consistently confronted with the inability of the conventional medical system to “cure” or even help these patients.

5 The patients are admitted to clarify the contribution to their illness of a perceived but poorly characterized psychiatric condition and to develop an effective management plan for their psychosocial problems.

Description of the CMSU

The CMSU is operated by the Department of Medicine. All patients are admitted under the care of a Duke attending physician, usually an internist. Evaluation on the CMSU is provided by a team consisting of the admitting physician,

consulting psychiatrist, medical psychologist, primary nurse, family and marital therapist and multiple consulting specialists as appropriate to each patient’s case.

The admitting internist and house officer develop plans for a complete medical evaluation and comprehensive treatment. Within 24 to 48 hours, a consulting psychiatrist, clinical psychologist and family and marital therapist assess the patient. All patients undergo formal psychological testing including Minnesota Multiphasic Personality Inventory (MMPI), projective tests and neuropsychological assessment as indicated. The results of these tests provide useful data for both physicians and patients: for the physician, the psychological tests provide standardized criteria for understanding and comparing the psychological components of a patient’s illness; for patients, the tests provide concrete data that can help them understand the psychological components of their illness.

When initial medical and psychosocial diagnostic evaluations are complete (usually after four or five days in the hospital), the attending physician and collaborating professionals meet in a joint diagnostic and planning conference to refine therapeutic plans for the duration of the patient’s hospitalization. This conference is a critical element of the CMSU treatment program: it provides a forum to develop the coordination that is essential to treatment plans carried out on the Unit. At this time, when appropriate, the patient may be transferred to the primary care of the psychiatrist for continuing, intensive psychotherapy.

Treatment of Combined Illnesses on the CMSU

Most patients admitted to the CMSU have many complicated factors that contribute to their profound illness-related disability. It must be borne in mind that these are complex problems for which no proven, simple and efficacious treatments are readily available. The aim of the CMSU approach is to integrate multiple treatments in order to demonstrate, in practice, the interrelationship of the “medical” and “psychosocial” aspects of the illness. The treatment plans commonly employed on the CMSU, in addition to all medical diagnostic and therapeutic procedures appropriate to the patient’s case, include the individualized use of the following modalities:

- 1 Individual, group, and marital psychotherapy.
- 2 Education programs in depression and stress management.
- 3 Biofeedback assisted relaxation therapy.
- 4 Assertiveness training.
- 5 Training in chronic pain management skills.
- 6 Physical therapy and reconditioning.
- 7 Smoking cessation counseling.
- 8 Recreational and occupational therapy.
- 9 Nutrition counseling.

While patients are undergoing medical evaluation and treatment, they are participating in those therapeutic modalities designed to help them understand, take responsibility for and cope with the impact of their illness. Most patients are not bed-bound on the Unit; they are encouraged to wear "street clothes," which reinforces their sense of positive health. Patients are also encouraged to eat together in a common "day" room; to be responsible for attending their appointments; and to interact with other patients in scheduled activities on the unit. These activities include group psychotherapy (Medical Support Group), which allows patients the opportunity to speak about and share their experiences with chronic illness; assertiveness training classes, which help patients develop and try out appropriate strategies for verbalizing their feelings rather than paying the symptomatic price of keeping those feelings "inside"; and stress management classes, which emphasize the effects of psychosocial stress on symptom production and introduce new coping methods for dealing with excess stress. In these formal group settings, patients experience a communal sense of safety in exploring "taboo" psychological aspects of their illnesses and develop methods for coping with their chronic problems.

Many patients also take advantage of the "safe" environment of the Unit to discuss their problems informally

with other patients. These informal meetings, often supervised by the nursing staff, frequently increase patients' understanding of and trust in the CMSU approach, enhance their acceptance of the importance of psychological issues and help them learn to cope with their symptoms. The educational power of both the formal and informal groups is demonstrated by patients who, having profitted by their time on the Unit, summarize their experience by saying: "I feel better because I *understand* better what causes my symptoms and I have *learned* how to take care of myself better."

Of particular importance to the functioning of the CMSU is the contribution of the nursing staff. There are 15 registered nurses who have work experience or training in both medical and psychiatric nursing. In addition to routine nursing care, there are a number of assessment and treatment responsibilities that are unique to the CMSU setting:

- 1 The CMSU nurses practice primary nursing. Each patient is assigned a primary nurse who develops a nursing care plan and acts as the principal nursing care giver throughout the patient's stay.

- 2 Nurses engage their primary patients daily in individual discussions, lasting 20 to 30 minutes and focusing on psychosocial issues related to the illness. One of the key responsibilities of the primary nurse is to decrease patients' resistance to accepting the role of psychosocial stress in

Patient Vignette #1: A Woman with a Headache

A 43-year-old woman, married and employed as a telephone operator, was admitted to the CMSU with a 10-year history of headaches that had increased three months before admission. The headaches began with a sensation of feeling hot and flushed followed by appearance of wavy lines in the visual field. The symptoms then proceeded to aching in the right occipital area and behind the right eye. Since the onset of symptoms, she had undergone three computed tomographic (CT) brain scans, a myelogram, a lumbar puncture and an electroencephalogram; all were negative. She had been treated with a number of medications; most recently the patient had been taking Lopressor 100 mg daily and Percodan as needed (averaging four per day). She began frequently missing days and sometimes weeks from work.

The patient had experienced increasing psychosocial stresses, especially during the previous six months: her unmarried daughter had become pregnant; the patient's siblings thrust her into the role of primary caregiver for her elderly mother; the patient's husband was laid off from work; the patient began to ruminate on the fact that she had reached the age of 43 and her father had died at the same age from a cerebrovascular accident; her boss began to increase her responsibilities at work. These factors contributed to feelings of depression; she complained of poor sleep, mild anxiety, fatigue, sadness, crying spells, and obsessive thoughts.

On admission she was a tearful, anxious woman. Her physical examination was normal. Psychological testing

(MMPI) showed significant elevations in the depression, psychasthenia, and hysteria scales. Patients with an MMPI profile similar to hers are usually described as having a depressive reaction with anxiety, and a passive dependent personality. The consulting psychiatrist felt the patient had a major depression.

The patient's headaches were felt to be a mixed migraine/tension type; initial treatment with ergotamine was unsuccessful. Her headaches did resolve, however, as the patient withdrew from her narcotic medication and became involved in the ward activities (biofeedback, assertiveness training, marital therapy, pain management group, and individual and group psychotherapy). She learned new coping skills (assertiveness, relaxation and communication skills) that she felt contributed significantly to the resolution of her headaches by decreasing her perceived stress.

We arranged for the patient and her husband to continue marital therapy after her return home. We also focused with the patient on making concrete plans for how she would use her new skills to decrease stress at home and at work.

At home she was able to resolve her feelings about her daughter's pregnancy; to insist that her siblings participate in their mothers' care; and to be appropriately assertive about demands at work. Over the two years since discharge, the patient has remained free of incapacitating headaches except for a two-week period following her mother's death. She has functioned normally at work and in her home environment off all narcotics.

their illness and to facilitate an understanding of that role.

3 Primary nurses participate in the Joint Diagnostic and Planning Conference, sharing their assessment of each patient's case and contributing to each patient's treatment plan.

4 CMSU nurses lead patient classes in stress management, depression education, and assertiveness training.

5 CMSU nurses reinforce behavior modification by providing a milieu of consistent limit-setting and constructive role-modelling. This has been an effective approach for CMSU patients who persist in maladaptive behavior that is difficult to redirect.

Another important presence on the CMSU is the admitting internist. The internist's presence allays patients' fears that their problems are considered to be "all in my head," and better enables them to accept a multidisciplinary approach. Avoided is the sense of rejection that patients may experience when their internist sends them in referral to a psychiatrist. The CMSU setting facilitates the transition from a narrow "medical" treatment model to a more comprehensive biopsychosocial approach to the illness.¹²

Some important modifications of the CMSU intervention have been made over the past five years. We have placed increased emphasis on communication at discharge with referring physicians to reinforce therapeutic, management, and behavioral programs that have been initiated during the patient's stay on the CMSU. Marital assessment and initi-

ation of marital therapy have become an important part of the CMSU evaluation and intervention. We have included family therapy in the treatment program because family dynamics are especially important in the stabilization of illness patterns in these patients. As much as possible we incorporate family members into treatment programs in order to improve the durability of the changes that are achieved while on the CMSU.

Future Directions for the CMSU

The case vignettes presented with this report demonstrate two patients with headaches. In one, psychosocial stress was predominantly important in symptom production; helping the patient develop new coping skills resulted in complete symptom control. In the other, the elucidation and treatment of a demonstrable "physical" cause (sleep apnea) allowed complete resolution of headache and successful treatment of the patient's incapacitating depression. Of course, not all patients do as well as these two. And because there are remarkably varied patient outcomes, it is clear that we need to:

- 1 Demonstrate and describe the nature of the benefit (if any) derived from the CMSU.
- 2 Assess the cost of any benefit obtained.

Patient Vignette #2: A Man with a Headache

A 64-year-old man, married and a Methodist bishop, was referred by his local surgeon for evaluation of increasing and incapacitating headaches and fatigue. He had considered his prior health excellent, but for several years he had been able to keep active with his ecclesiastic duties only by excluding virtually all outside activities.

Two months before admission, he had a presyncopal episode that was fully evaluated (including a CT scan of the head) without finding any cause. One month before admission, he slipped and hit his head on the door jamb. He did not lose consciousness, but headaches, localized to the vertex and unassociated with other neurological symptoms, began and persisted. CT scan was repeated and was once again normal.

The patient became more and more fatigued, developed depressed mood, sadness without crying, guilty ruminations about peccadillos of the past and inability to function in his job. There was a decreased appetite and a ten-pound weight loss.

On admission to the CMSU, he appeared in no distress but he was tangential and obsessed about details of the remote past. Although he had no thought disorder, he was unable to carry out complicated mental tasks such as psychological testing because of extreme anxiety. The remainder of the physical exam was normal. Laboratory evaluation including complete blood count, sedimentation rate, chemistries, thyroid screen, electrocardiogram, and chest radiograph was normal. Holter monitor showed only premature

atrial contractions. Electroencephalogram was normal but sleep apnea was detected. We then obtained a polysomnogram which was significantly abnormal, characterized by extremely fragmented sleep secondary to the presence of repetitive apneas and hypopneas (320 observed in six hours of sleep).

The consulting psychiatrist and clinical psychologist felt the patient was experiencing a profound depression with considerable associated anxiety. He was treated with nortriptyline, alprazolam and cognitive psychotherapy. Sleep apnea was completely controlled when the patient slept on his side (the patient himself constructed a harness, to position two tennis balls in the middle of his back, ensuring that he slept on his side). The patient's depressive symptoms began to resolve as his sleep improved; his headaches gradually and substantially cleared as his depression lifted. In conjunction with the marital therapist, the patient and his wife made plans for a "second honeymoon" and revised their life patterns so that he could devote substantial time to mutual recreational activities.

Eight weeks after discharge, the patient began to resume his clerical duties, gradually increasing to full capacity over several months. In the nine months since his discharge, his sleep apnea is controlled, he has tapered off his medications, he is working full time (but not excessive overtime as before), and he is experiencing a richer marital relationship. He states that he feels better now than he has "in fifteen years."

3 Define which patients benefit most from hospitalization on the CMSU.

Over the next two years, we will undertake a research project to answer these questions. This month we began a randomized controlled trial, enrollment in which will last until August 1988. Patients referred for admission are assigned by computer to one of two groups: prompt admission to the CMSU; or return to usual care for six months after which time patients will be eligible for admission to the CMSU. The study will not affect the usual care available to Duke clinicians, but for some patients it will delay the availability of the CMSU. During this study all patients will be monitored for functional status and health care utilization and the two groups compared to determine whether CMSU admission is superior to usual care. We will also monitor patient and illness characteristics to see which predict good (or bad) treatment outcomes. We believe that any inconveniences incurred during this study will be compensated by the extremely important information to be derived from it.

The CMSU multidisciplinary approach to patients is not new. Plato espoused a similar philosophy: "As you ought not to attempt to cure the eyes without the head, or the head without the body, so neither ought you to attempt to cure the body without the soul . . . for the part can never be well unless the whole is well." The CMSU approach looks at Plato's prescription for medical care with new eyes, providing an innovative structure which allows today's doctors to carry out these timeless objectives. The uniqueness of the CMSU derives not from the individual modalities used, but from the coordinated use of those interventions. It also derives from the physical structure of a unit devoted to the treatment of patients with combined medical and psychological problems, devoted to "seeing the patient whole."

■

References

- 1 Stoudmire A, Brown JT, McLeod M, et al. The Combined Medical Specialties Unit: an innovative approach to patient care. *NCMJ* 1983;44:365-7.
- 2 Regier DA, Goldberg ID, Taube CA. The de facto US mental health services system: public health perspective. *Arch Gen Psychiatry* 1978; 35:685-93.
- 3 Blazer D, George LK, Landerman R, et al. Psychiatric disorders: a rural/urban comparison. *Arch Gen Psychiatry* 1985;42:651-6.
- 4 Murphy JM, Sobol AM, Neff RK, et al. Stability of prevalence: depression and anxiety disorder. *Arch Gen Psychiatry* 1984;41:990-7.
- 5 Johnstone A, Goldberg D. Psychiatric screening in general practice. *The Lancet* 1976;1:605-8.
- 6 Thompson TL, Stoudemire A, Mitchell WD, Grant RL. Underrecognition of patients' psychosocial distress in a university hospital medical clinic. *Am J Psychiatry* 1983;140:2:158-61.
- 7 Brody DS. Physician recognition of behavioral, psychological, and social aspects of medical care. *Arch Intern Med* 1980;140:1286-9.
- 8 Hooper EW, Nycz GR, Regier DA, et al. Diagnosis of mental disorder in adults and increased use of health services in four outpatient settings. *Am J Psychiatry* 1980;137:2:207-10.
- 9 Smith GR, Monson RA, Ray DC. Psychiatric consultation in somatization disorder: a randomized controlled study. *N Engl J Med* 1986;314:1407-13.
- 10 Kessler LG, Steinwachs DM, Hankin JR. Episodes of psychiatric care and medical utilization. *Medical Care* 1982; 20:1209-21.
- 11 Stoudemire A, Kahn M, Brown JT, et al. Masked depression in a combined medical-psychiatric unit. *Psychomatics* 1985;26:221-8.
- 12 Engel GL. The clinical application of the biopsychosocial model. *Am J Psychiatry* 1980;137:535-44.

Call for Nominations John Huske Anderson Award

North Carolina Medical Society members are invited to submit nominations for the John Huske Anderson Award, "presented to those laymen whose contributions have had a positive impact on the medical profession and the public health in the manner exemplified by John Huske Anderson."

Recognition of award recipients shall include a permanent plaque to be displayed at the headquarters of the Medical Society in Raleigh.

Nominations should consist of a letter and any appropriate supporting documents, and should be sent by February 29 to:

The John Huske Anderson Award
Executive Committee
North Carolina Medical Society
222 N. Person St.
Raleigh 27611

Mairzy Doats and Dozy Doats and a Kiddle Eat Almost Anything

Bromocriptine (Parlodel) Overdose

Ronald B. Mack, M.D.

Let me describe a beautiful scene for you: picture in your imagination a young mother sitting in a rocking chair feeding her newborn infant while her firstborn, a toddler, observes the scene from a distance. How sweet!! This is bound to cause a lot of oo's and ah's from the audience. Isn't it charming? WRONG, POISON BREATH!! The older sibling must be thinking: "I hate that little pooper, I gotta share my kingdom now . . . I'm no longer a king, I'm nothing but a prince." The eldest heir now curses in the obscene language of the age group and shouts "pee-pee caca" to the dismay of the lords and ladies of the manor.

Sometimes worse things can happen besides voicing epithets. The preschool child's investigative nature, the desire to examine the environment with hands and mouth, takes over, and this testing behavior aggravated by boredom and the mother's being busy with the new baby can spell disaster. In the preschool age group, after the age of one year, accidents are the leading cause of death; these untoward events are more common during times of change and upheaval in the home, e.g., moving, painting the house, sickness or death in the family, new baby in the house, etc. We recently had an 18-month-old present to our emergency room with the following story: while his mother was tending to the new baby, the child consumed a fairly large number of bromocriptine (Parlodel) tablets which the mother was taking to eliminate her breast milk; "drying up" her breasts. The mother had just taken her dose, her new baby fussed, she went to the new baby, and the elder sib went for the pills.

Bromocriptine is not found in every household; reports

of overdose are quite uncommon. Its major usage so far in this country has been to suppress lactation in a puerperal individual. It is indicated for hyperprolactinemia states including prolactinoma as well as at least some cases of parkinsonism and acromegaly.¹ Bromocriptine supposedly owes its antiparkinsonism activity to its dopamine agonistic prop-

erties; it possibly has a direct action on dopaminergic receptors in the substantia nigra. The drug can lower growth hormone levels in patients with acromegaly.¹

In 1968 Flükiger and Wagner introduced bromocriptine as an inhibitor of prolactin secretion. This drug is an ergot alkaloid derivative with dopamine receptor agonist action. (Say what?) Apparently these researchers took notice of two important medical observations, i.e., it was well recognized, even in medieval times, that women who consumed ergot-contaminated grain failed to lactate; and it was discovered in more

modern times that ergot alkaloids probably directly inhibit prolactin secretion.

Ergot alkaloids are indole alkaloids with two main types — lysergic acid derivatives and the clavines. Lysergic acid derivatives are either amides or cyclic peptides. Bromocriptine belongs in the cyclic peptide group of lysergic acid derivatives.² (Who cares, you ask!! Don't you remember lysergic acid? Where have you heard that name before? Here's a clue: "Lucy in the sky with diamonds . . .")

Ergot alkaloids have a structural relationship to dopamine and the main actions of bromocriptine are prolonged dopamine receptor stimulation. Unlike some other ergot derivatives, bromocriptine has no important oxytocic or cardiovascular effects. Estrogen has, of course, been a standard medication for lactation suppression and is effective eight out of ten times but has problems associated with its use, such as prolonged lochial discharge, withdrawal bleeding,



From Department of Pediatrics, Bowman Gray School of Medicine, Wake Forest University, Winston-Salem 27103. Illustration by Ernest Craige, M.D.

nausea, headache, flushing, and possibly some increased risk of puerperal thromboembolism in women over age 25 who have undergone cesarean section, forceps or breech delivery.³

Bromocriptine has also been used in cases of parkinsonism, and understanding why may help to explain what can happen in an overdose situation. Because this drug is a dopamine receptor agonist we need to be aware of the fact that in the autonomic nervous system, dopamine is primarily a precursor of norepinephrine; in the central nervous system, however, dopamine is a neurotransmitter in the pituitary, hypothalamic, nigrostriatal, prefrontal and medullary areas. Therefore, we can see from these data that drugs with dopamine-like actions can have major behavioral, motor and endocrine effects.

This drug is available commercially as the mesylate form, in tablets containing the equivalent of 2.5 mg of bromocriptine. The usual recommended dose for lactation suppression is 2.5 mg BID or TID for two to three days then BID for 14 days. Our little patient allegedly swallowed 20 of the little buggers. The drug is rapidly absorbed from the gastrointestinal tract. Peak serum levels occur two to three hours post ingestion. The majority of the drug is metabolized in the liver and excreted in the bile. Of importance in overdose situations is the observation that the elimination half life is six to eight hours. The drug is very highly protein-bound.³

There are few case reports of bromocriptine overdose. Hypotension is a fairly common event probably due to relaxation of vascular smooth muscle in the splanchnic and renal circulation, inhibition of transmitter release of noradrenergic nerve endings and central inhibition of sympathetic activity. The hypotension is similar to that seen with other drugs that possess strong dopamine agonist activity.⁴

Nausea and vomiting can occur, and can be helpful in an overdose situation to empty the upper gastrointestinal tract of the ingested medicine. Bromocriptine can have an emetic effect even in therapeutic doses, especially at the initiation of therapy; the emetic effect appears to be central in origin.

Possibly the most alarming adverse clinical features, as reported in the literature, and as seen in our little environment-taster, are lethargy and other alterations of mental status such as mania, loss of awareness, delusions, paranoia, aggressive behavior and visual hallucinations. Dilation of the pupils is a quite common feature and probably the result of sympathomimetic activity. It would be logical to think that bromocriptine overdose could produce weird behavior on the basis of the fact that the drug is a lysergic acid product. The glitch in that line of reasoning is that bromocriptine is a lysergic acid amide and not a diethylamide derivative. (Remember "acid" trippers, LSD is lysergic acid *diethylamide*). The monoamide form is considerably less hallucinogenic but does have a sedative effect. The "craziness" seen with bromocriptine overdose probably is the result of dopamine stimulation of the central nervous system.⁵ It is believed by some authors that this drug has central effects like L-dopa and the amphetamines and in fact

is a rather significant central nervous system stimulant with antidepressant activity. Our patient was fairly well "zonked" while in the E.R. and was very lethargic, reacting poorly to noxious stimuli as early as one hour post ingestion. By the time he made it to the pediatric ward after gastric decontamination and observation (approximately two hours), he became relatively wild and began to pull out his "tubes." He eventually calmed down and had an uneventful recovery.

It is of interest that without a good history his clinical presentation could have been mistaken for an *anticholinergic overdose* — mydriasis, flushed skin, tachycardia, fever, acting weird with hallucinations, confusion, mania and hypertension. The clinical features could also suggest an overdose of such drugs as *phenylpropanolamine*, *amphetamine*, *cocaine* and other powerful central nervous system stimulants producing mydriasis, tachycardia, hypertension, hallucinations, and paranoid behavior. *Phencyclidine* (PCP) can also be confused with the bromocriptine overdose syndrome. PCP more typically produces hypertension, however. As usual, a good history, being a good medical detective (instead of being a medical defective) should lead to the correct diagnosis.

The treatment appears to be quite non-specific and primarily supportive. In acute toxicity studies in animals there was no mortality from oral bromocriptine at the highest doses that were practicable. Furthermore, the margin of safety between therapeutic doses and lethal doses appears to be quite large.

The induction of emesis with ipecac syrup could be indicated if the ingestion was very recent and estimated to be a significant amount, and if the patient was not obtunded or seizing; gastric lavage may be safer in those cases that are other than recent and alert. Activated charcoal and a cathartic would also seem appropriate following gastric emptying. Hypotension, which is usually transitory, can be treated with Trendelenburg position and/or intravenous fluids if not short-lived; IV dopamine or norepinephrine can be given to those with more recalcitrant hypotension. As yet there is no standard treatment for the mental aberrations seen with this overdose.

If this drug is used more and more to suppress lactation then it will be available to more pre-school ingesters. The mother of a newborn is tired and distracted with the care of the newest family member and the older brother or sister is thus more free to forage. For remember, a kiddie eativy too, wouldn't you? ■

References

- 1 McGregor AM. Bromocriptine. *Practitioner* 1981;225:1471.
- 2 Mehta AE, Tolis G. Pharmacology of bromocriptine in health and disease. *Drugs* 1979;17:313.
- 3 Parkes D. Drug therapy — bromocriptine. *New Engl J Med* 1979;301:873.
- 4 Vermund SH, Goldstein BA, et al. Accidental bromocriptine ingestion in childhood. *J Ped* 1984;105:838.
- 5 Parkes D. Mechanism of bromocriptine-induced hallucinations. *New Engl J Med* 1980;302:749.

Now America's oldest professional liability insurer has come to North Carolina.

The newest professional liability insurer in North Carolina is the oldest in the nation. The Medical Protective Company pioneered the concept of professional protection before the turn of the century and has been serving doctors exclusively ever since. Through good times and bad.

With the current liability crisis escalating, you need to take a close look at your coverage and the company that stands behind it. Then take a close look at us. You'll see we carry the highest

rating from A.M. Best, the firm that tracks the financial stability of insurance companies nationwide. Beyond that, you'll find complete protection at premium rates that are likely lower than you're currently paying. Plus the personal attention and claims prevention assistance you deserve.

Contact Stu Mitchelson today at 704/541-8020. He's the oldest company's representative in its newest state. And he's here to serve you.

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

Stuart Mitchelson, P.O. Box 13489
Charlotte, North Carolina 28211, (704) 541-8020

PHYSICIANS, SCHEDULE SOME TIME FOR YOUR COUNTRY.

Many physicians would like to devote some time to their country in a local Army Reserve unit. We know that making a weekend commitment can be difficult for most physicians. So it is practical for the Army Reserve units to be flexible about time. It's worth discussing.

Incidentally, in addition to satisfying your own desire to serve your country, there are exceptional opportunities to do something totally different from a day-to-day routine. Opportunities to study new areas of medicine, meet new people in your specialty, and be a part of one of the world's most advanced medical teams.

Discuss the opportunities with our Army Medical Personnel Counselor.

FOR SURGEONS LOOKING FOR A CHALLENGE.

Your challenge could be the Army Reserve unit near you. It's a unit that requires the services of surgeons.

You may wish to explore the challenge of teaching in a major medical center. You may wish to explore the special challenges of your specialty in triage. Certainly you'll be confronted by challenges very different from your daily routine.

You'll also have an opportunity to participate in a number of programs in which you'll be able to exchange views and information with other surgeons from all over the country.

The Army Reserve understands the time demands on a busy physician, so you can count on us to be totally flexible in making time for you to share your specialty with your country. We'll arrange your training program to work with your practice.

To find out about the benefits of serving with a nearby Army Reserve unit, we recommend you call our Army Medical Personnel Counselor.

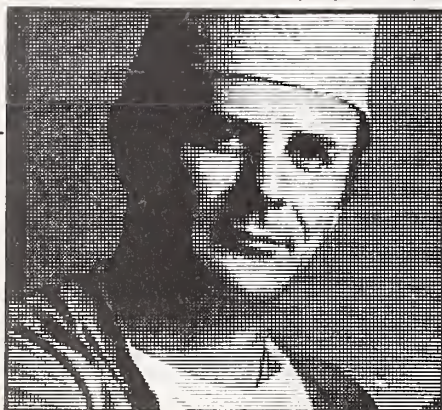
PHYSICIANS, THERE ARE TWO KINDS OF FLEXIBILITY IN THE ARMY RESERVE WE THINK YOU'LL LIKE.

One, time. We know how tough it is for a busy physician to make weekend time commitments. So we offer flexible training programs that allow a physician to share some time with his or her country. We arrange a schedule to suit your requirements.

Two, the opportunity to explore other phases of medicine, to add a different kind of knowledge—the challenge of military health care. It's a flexibility which could prove to be both stimulating and rewarding, with the opportunity to participate in a variety of programs that can put you in contact with medical leaders from all over the country.

See how flexible we can be, call our Army Medical Personnel Counselor.

**ARMY RESERVE.
BE ALL YOU CAN BE.**



HERE'S ONE DOCTOR WHO WON'T PAY HIS MALPRACTICE PREMIUMS THIS YEAR.

The Army covers his premiums. Since he's an Army Physician, there are a lot of worries associated with private practice that he won't have to contend with. Like excessive paperwork, and the overhead costs incurred in running a private practice.

What he will get is a highly challenging, highly rewarding experience. The Army offers varied assignments, chances to specialize, or further your education, and to work with a team of dedicated health care professionals. Plus a generous benefits package.

If you're interested in practicing high quality health care with a minimum of administrative burdens, examine Army medicine. Talk to your local Army Medical Department Counselor for more information.

**ARMY MEDICINE.
BE ALL YOU CAN BE.**

MAJOR OPPORTUNITIES FOR HEALTH PROFESSIONALS.

Army Medicine
Federal Office Bldg.
P.O. Box 10167
Richmond, VA 23240
Call collect: (804) 771-2354

Army Reserve Medicine
2634 Chapel Hill Blvd.
Suite 205
Durham, NC 27707
Call collect: (919) 493-1364



Before prescribing, see complete prescribing information in SK&F LAB CO. literature or PDR. The following is a brief summary.

Contraindications: There are no known contraindications to the use of 'Tagamet'.

Precautions: While a weak antiandrogenic effect has been demonstrated in animals, 'Tagamet' has been shown to have no effect on spermatogenesis, sperm count, motility, morphology or in vitro fertilizing capacity in humans.

In a 24-month toxicity study in rats at dose levels approximately 9 to 56 times the recommended human dose, benign Leydig cell tumors were seen. These were common in both the treated and control groups, and the incidence became significantly higher only in the aged rats receiving 'Tagamet'.

Rare instances of cardiac arrhythmias and hypotension have been reported following the rapid administration of 'Tagamet' HCl (brand of cimetidine hydrochloride) injection by intravenous bolus.

Symptomatic response to 'Tagamet' therapy does not preclude the presence of a gastric malignancy. There have been rare reports of transient healing of gastric ulcers despite subsequently documented malignancy.

Reversible confusional states have been reported on occasion, predominantly in severely ill patients.

'Tagamet' has been reported to reduce the hepatic metabolism of warfarin-type anticoagulants, phenytoin, propranolol, chlorthalidone, diazepam, lidocaine, theophylline and metronidazole. Clinically significant effects have been reported with the warfarin anticoagulants; therefore, close monitoring of prothrombin time is recommended, and adjustment of the anticoagulant dose may be necessary when 'Tagamet' is administered concomitantly. Interaction with phenytoin, lidocaine and theophylline has also been reported to produce adverse clinical effects.

However, a crossover study in healthy subjects receiving either 'Tagamet' 300 mg. q.i.d. or 800 mg. h.s. concomitantly with a 300 mg. b.i.d. dosage of theophylline (Theo-Dur®, Key Pharmaceuticals, Inc.),

demonstrated less alteration in steady-state theophylline peak serum levels with the 800 mg. h.s. regimen, particularly in subjects aged 54 years and older. Data beyond ten days are not available. [Note: All patients receiving theophylline should be monitored appropriately, regardless of concomitant drug therapy.]

Lack of experience to date precludes recommending 'Tagamet' for use in pregnant patients, women of childbearing potential, nursing mothers or children under 16 unless anticipated benefits outweigh potential risks; generally, nursing should not be undertaken in patients taking the drug since cimetidine is secreted in human milk.

Adverse Reactions: Diarrhea, dizziness, somnolence, headache, rash. Reversible arthralgia, myalgia and exacerbation of joint symptoms in patients with preexisting arthritis have been reported. Reversible confusional states (e.g., mental confusion, agitation, psychosis, depression, anxiety, hallucinations, disorientation), predominantly in severely ill patients, have been reported. Gynecomastia and reversible impotence in patients with pathological hypersecretory disorders receiving 'Tagamet', particularly in high doses, for at least 12 months, have been reported. Reversible alopecia has been reported very rarely. Decreased white blood cell counts in 'Tagamet'-treated patients (approximately 1 per 100,000 patients), including agranulocytosis (approximately 3 per million patients), have been reported, including a few reports of recurrence on rechallenge. Most of these reports were in patients who had serious concomitant illnesses and received drugs and/or treatment known to produce neutropenia. Thrombocytopenia (approximately 3 per million patients) and a few cases of aplastic anemia have also been reported. Increased serum transaminase and creatinine, as well as rare cases of fever, interstitial nephritis, urinary retention, pancreatitis and allergic reactions, including hypersensitivity vasculitis, have been reported. Reversible adverse hepatic effects, cholestatic or mixed cholestatic-hepatocellular in nature, have been reported rarely. Because of the predominance of cholestatic features, severe parenchymal injury is considered highly unlikely.

A single case of biopsy-proven periportal hepatic fibrosis in a patient receiving 'Tagamet' has been reported.

How Supplied: Tablets: 200 mg. tablets in bottles of 100; 300 mg. tablets in bottles of 100 and Single Unit Packages of 100 (intended for institutional use only); 400 mg. tablets in bottles of 60 and Single Unit Packages of 100 (intended for institutional use only), and 800 mg. Tiltab® tablets in bottles of 30 and Single Unit Packages of 100 (intended for institutional use only).

Liquid: 300 mg./5 ml., in 8 fl. oz. (237 ml.) amber glass bottles and in single-dose units (300 mg./5 ml.), in packages of 10 (intended for institutional use only).

Injection:

Vials: 300 mg./2 ml. in single-dose vials, in packages of 10 and 30, and in 8 ml. multiple-dose vials, in packages of 10 and 25.

Prefilled Syringes: 300 mg./2 ml. in single-dose prefilled disposable syringes.

Plastic Containers: 300 mg. in 50 ml. of 0.9% Sodium Chloride in single-dose plastic containers, in packages of 4 units. No preservative has been added.

ADD-Vantage® Vials: 300 mg./2 ml. in single-dose, ADD-Vantage® Vials, in packages of 25.

Exposure of the premixed product to excessive heat should be avoided. It is recommended the product be stored at controlled room temperature. Brief exposure up to 40°C does not adversely affect the premixed product.

'Tagamet' HCl (brand of cimetidine hydrochloride) injection premixed in single-dose plastic containers is manufactured for SK&F Lab Co. by Travenol Laboratories, Inc., Deerfield, IL 60015.

* ADD-Vantage® is a trademark of Abbott Laboratories.

BRS-TG:L73B

Date of Issuance Apr. 1987

SK&F LAB CO.

Cidra, P.R. 00639

© SK&F Lab Co., 1988

In peptic ulcer:

**RELIEF
REASSURANCE
REWARD**



Tagamet®
brand of cimetidine
First to Heal

You'll both feel good about it.

RESULTS

A better alternative for hypertensives who are going bananas...

Spare your patients the extra cost—
in calories, sodium and dollars.

Spare your patients the rigors of
dietary K⁺ supplementation.

DYAZIDE®

25mg Hydrochlorothiazide/50mg Triamterene/SKF

Effective antihypertensive*
therapy...without
the bananas

DAW
'DYAZIDE' AS WRITTEN.

* Not for initial therapy. See brief summary.

Before prescribing, see complete
prescribing information in
SK&F CO. literature or PDR.
The following is a brief summary.

* WARNING

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K⁺ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K⁺ intake. Associated widened QRS complex or arrhythmia requires prompt additional therapy. Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or

without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.

Precautions: The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of triamterene and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Angiotensin-converting enzyme (ACE) inhibitors can elevate serum potassium; use with caution with 'Dyazide'. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin [ACTH]). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The

following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function. Thiazides may add to or potentiate the action of other antihypertensive drugs. Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.

Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak™ unit-of-use bottles of 100.

BRS-DZ-L45

a product of
SK&F CO.
Cidra, P.R. 00639

© SK&F Co., 1987

Results of a Community-Based Comprehensive Pediatric Care Program

Significant Reduction in Inpatient Care Costs for Indigent Children

Ronald B. May, M.D., and Thomas G. Irons, M.D.

Of the 60 million American children under the age of 17, more than seven million have no regular source of health care.¹ They are hospitalized 75% more often than children with continuous medical care, and their hospital stays are about twice as lengthy.^{1,2} In 1981, federal funding cuts in health care resulted in 500,000 persons losing eligibility for the Aid to Families with Dependent Children program. In 1985, 52% of the poor were covered by Medicaid, as compared to 65% in 1976. Children were especially affected by these cuts. Munding reports that 40% of all poor Americans are children, and only one-third of them are covered by Medicaid.³ Adding to the problems created by funding cuts has been the fragmentation of care among different providers. More than 71 programs that directly affect health care for children have been created on the federal level alone.⁴

In view of these problems, and trends toward prepaid medical care, many authorities are becoming alarmed about access to medical care for the poor and for children in particular.^{3,5-7} Community health centers, from which many of these children receive care, have also been dwindling in number because of financial problems. New approaches are needed to assure reasonable access to health care for poor children while conforming with budgetary constraints.

One such approach was developed in a rural coastal county in North Carolina in 1981, and is continuing to provide comprehensive pediatric care for the indigent population of that county. The success of this program has been reflected by a continuous expansion of the enrolled population coupled with a marked decrease in the hospitalization rate. Providing continuity of care has led to a significant cost savings in hospital care.

From the Department of Pediatrics, East Carolina University School of Medicine, Room 3E-94, Greenville 27858. Presented in part to the Southern Society for Pediatric Research, January 1987.

Background

Craven County is a predominantly rural coastal county with a population of 77,000. Twenty percent of residents are from families with incomes below the poverty level.⁸ Before 1981, indigent children received preventive care from the county health department, while most sick care was given at the hospital emergency department or in the offices of private physicians.

In 1981, the health department, community hospital, and the East Carolina University School of Medicine agreed to establish a comprehensive program for pediatric care. Under the direction of an on-site faculty member, patient care is provided by public health nurses, nurse practitioners, and house staff from the medical school. All outpatient and inpatient services are provided by the team. Details of the program have been described previously.⁹

Initial funding for the project was supplemented by a grant from the Duke Endowment-Reynolds Foundation. Ongoing funding comes from state Maternal and Child Health grants for preventive care, revenue generated by the program itself, third-party payers including Medicaid, or directly from patients, using an income-adjusted sliding scale schedule.

Methods

Since the inception of the program, data pertaining to number of visits, admissions, and after-hours encounters have been collected on a daily basis. Separate statistics are kept for preventive and illness-related visits. This information is summarized yearly. Files are considered active if the patient has been seen within a three-year period.

New financial information is collected every three months or at each visit that occurs after at least a three-month interval. Families are considered indigent if their income falls within 100% of federal poverty guidelines, or if they receive Medicaid.

Craven County Hospital is the only community hospital serving the study population. It has a computerized accounting system that provides updated information on average daily charges and length of stay. The estimated cost of a pediatric admission was obtained by multiplying average daily cost by average length of stay. Physician charges were not considered.

Hospitalization rates for the study population were compared to those of private patients in the area during the fifth year of program operation. Reviewing patient account records, practicing pediatricians provided information on the number of children hospitalized from their practices. None was able to provide accurate totals for active patient files, but all could provide data on total outpatient visits. Hospital admission rates for the study population were therefore calculated using both total active patients and total outpatient visits as the denominator.

A statistical comparison was made using chi-square and contingency tables.

Results

From 1981 to 1986, the number of patients served increased from 2,997 to 6,010. The total number of outpatient visits also increased from 9,865 to 11,955 (see table 1). During the same period, hospital admissions fell from 188 per year to 95 per year, yielding a ratio of admissions to patients of 1:15.9 in 1981 and 1:63.3 in 1986. Admission rates per 100 outpatient visits were 1.9 and 0.81, respectively ($p<.001$).

A four-person pediatric group practice had a total of 18,151 outpatient visits, with 288 admissions, for a ratio of 1.59 admissions per 100 visits during the twelve-month period preceding July, 1986. The reporting pediatricians estimated that one-third of these admissions were by referral and did not come from the group's own patient base. Correcting for this gives the actual admissions ratio for the practice population of 1.06 per 100 visits. A solo pediatrician in the community had 8,046 outpatient visits and 96 admissions, for a ratio of 1.19 per 100 visits in the same time period. The ratio for the study population during this time was 0.81 admissions per 100 visits (see table 2).

The average cost of an admission to the pediatric inpatient service at Craven County Hospital was \$1,861.35 for 1985-1986. The reduction in total admissions by 93 per year over

Table 2
Admission Rates

	Patient Visits	Admissions	Admissions/100 visits
4-person Pediatric Group	18,151	288	1.59*(1.06)
Solo Pediatrician	8,046	96	1.19
Study Population	11,955	95	0.81

* Number in parentheses omits referred admissions

the study period results in an estimated annual inpatient cost savings of \$173,105.55.

Demographic information based on financial interviews at the health department show that more than 90% of the patients served by this program meet federal poverty guidelines. This number has been consistent throughout the study period. The proportion of Medicaid patients in the study population has dropped from 56% in the first three years to 47% and 44%, respectively, in the last two years. The solo pediatric practice in the community includes 30% Medicaid and 70% private patients. The other surveyed practice sees only private paying patients.

Discussion

It is becoming increasingly important to develop new ways of providing care for the poor. Many alternatives have been proposed, including the revamping of the Medicare and Medicaid systems¹⁰ as well as linking medical education with care of the indigent.^{5,11} The program in Craven County incorporates the latter approach. Requiring the cooperation of three major agencies, including a medical school, the model may lack generalizability. In areas where such an arrangement is possible, however, a program such as this one can provide access to high-quality medical care for the poor, leading to a significant decrease in hospital admissions for the population served. Substantial savings in inpatient care overall can be achieved.

The figure of \$173,105.55 in savings is an estimate based on average non-surgical pediatric admissions. This would appear to be a conservative figure, since neither lengths of stay nor physician fees were taken into account. We did not

Table 1
Program Population

	1981-82	1982-83	1983-84	1984-85	1985-86
Patients enrolled in program	2,997	3,553	5,822	5,904	6,010
Well-baby visits for children under 2 years	2,110	2,134	2,135	2,021	1,970
Physicals for children over 2 years	1,289	1,504	1,462	1,331	1,192
Illness visits	6,466	7,114	8,203	8,297	8,793
Inpatient admissions (not including newborns)	188	178	143	93	95
Newborns	350	348	325	309	344

specifically evaluate lengths of stay in this study. We have empirically observed, however, that lengths of stay in the study population are consistent with those of the private sector in this community. Poor children are reported to have lengthier as well as more frequent stays in the hospital.² Shortening their hospitalizations would provide additional cost savings.

Starfield reported that, in a given year, poor children are 75% more likely to be hospitalized.² Although we are able to compare only the 1986 admission rates in the study population with those of the private community, it is evident that rates of admission in the study population have fallen substantially. In 1981, during the first year of the program, the ratio of admissions to patients served was 1:15.9. In 1986 this had fallen to 1:63.3. Some caution is indicated in interpreting these figures, however, since our definition of an active patient file is based on an encounter within a three-year period. This would make the patient population during the first two years appear spuriously low as compared to the latter years. However, comparing admissions based on patient visits still shows a decrease from 1.9 admissions per 100 visits to 0.81 admissions per 100 visits, a 57% decrease over the five-year period.

We would have preferred to base hospitalization rates on patient population rather than on number of visits. However, the pediatricians surveyed could not accurately estimate their active patient populations. If the study group had more frequent visits per patient than the private sector, it would cause the comparative admission rate to appear lower than a rate based on patients served. Recent information suggests that poor children still have fewer visits than their peers from middle- and lower-income families when severity of illness is taken into account.¹² Therefore, we believe that the use of rates of hospitalization based on total visits is a valid means of comparison.

In a time when medical care is being considered an economic product and prepaid health plans are increasingly active, it is becoming impossible for local hospitals to absorb the costs of indigent care. High-quality preventive and outpatient care must be provided to the poor as a social responsibility as well as an economic necessity. We have demonstrated that providing continuity of medical care to poor children can lead to a marked decrease in their hospital admissions. It is our belief that by providing ready and consistent access to care for these children, we are able to intervene at an earlier stage in their illnesses. Additionally, preventive and educational measures have been employed in an effort to decrease both sickness and numbers of accidents. Familiarity with the patients, their families, and the special problems that complicate care for the poor have all been instrumental in our efforts. Starfield points out that few physicians have been trained to deal effectively with these problems,² which include the patients' inability to purchase medications and other useful therapy, lack of transportation, problematic living conditions, difficulty in communicating with health care providers, and priorities which

often place medical care at a low level.

Acceptance of this program by the community is evident from the continued cooperation of the local agencies, and by the expanding patient population. As can be seen from our data, neither the percentage nor the number of indigent families has decreased. However, the percentage of Medicaid recipients has substantially dropped from 56% to 44%, leaving more children without the financial resources to obtain medical care. This program is, therefore, serving a growing number of the community's children. Local pediatricians and family practitioners remain strong advocates of the program and are actively involved in house staff teaching.

The success of this program reaffirms the importance of developing innovative means of dealing with the problem of medical care for the indigent. It demonstrates that substantial hospital cost savings can be achieved by providing comprehensive care to poor children by means of community resources that do not have to rely on private care providers. ■

Acknowledgments

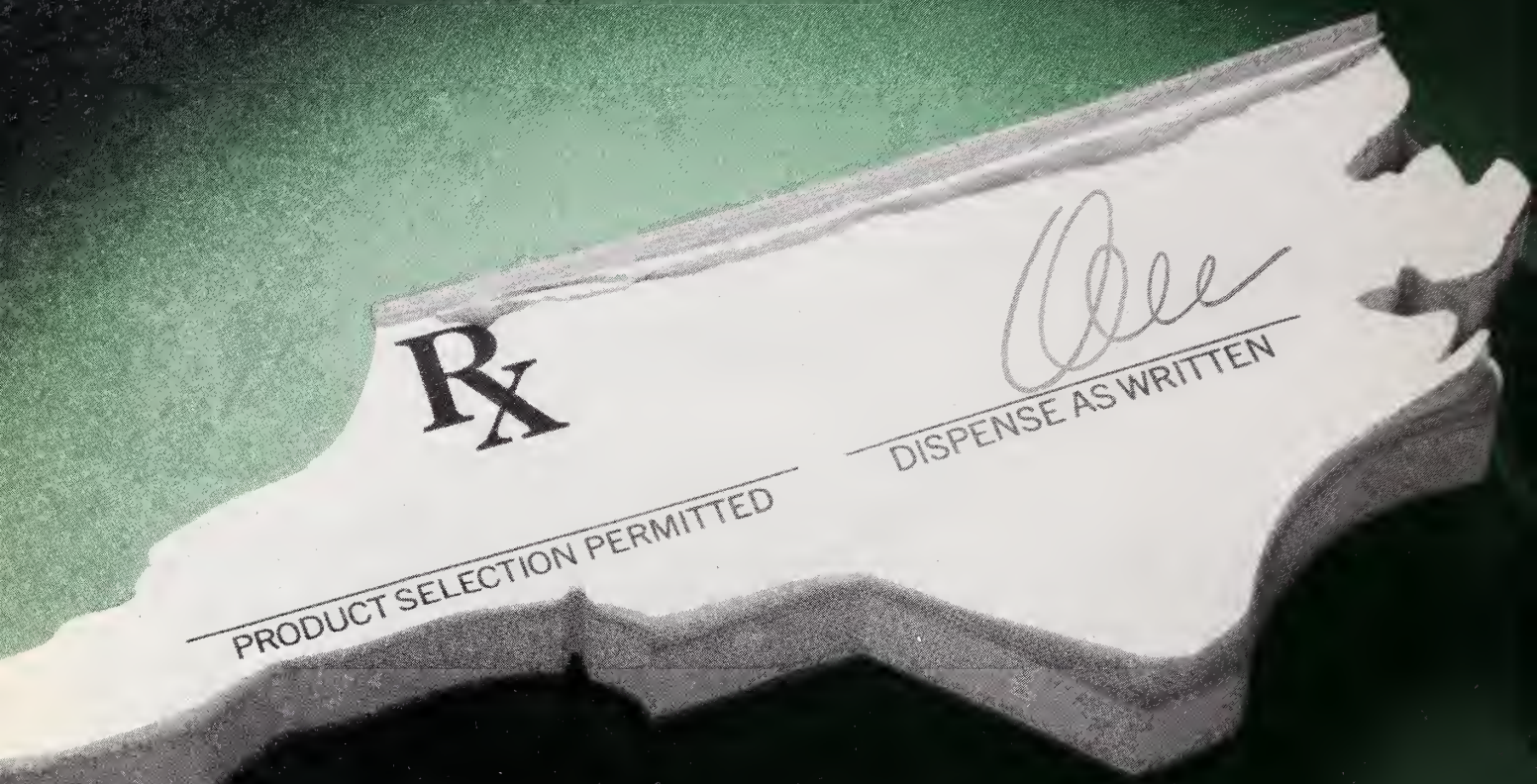
The authors would like to acknowledge the assistance of Drs. Hovey Aiken, Graham Barden, Jr., Graham Barden, III, Allen Bell, and Steven Engel. A special thanks to the administrators of the Craven County Health Department and Craven County Hospital, in particular to Dr. Verna Barefoot.

References

- 1 Newsletter, Ambulatory Pediatric Association. Healthy children. 1985;21:18.
- 2 Starfield B. Family income, ill health, and medical care of U.S. children. *J Public Health Policy*, Sept. 1982:244.
- 3 Munding J. Health service funding cuts and the declining health of the poor. *N Engl J Med* 1985;313:44.
- 4 Austin G. Child health-care financing and competition. *N Engl J Med* 1984;311:1117.
- 5 Rieselbach, RE, and Jackson TC. In support of a linkage between the funding of graduate medical education and care of the indigent. *N Engl J Med* 1986;314:32.
- 6 Pruitt, AW. Health care and the poor. *Amer J Dis Child* 1986;140:749.
- 7 Neuspiel DR, and David RJ. Pediatric health rationing, recent trends and lessons from history. *Amer J Dis Child* 1985;139:757.
- 8 Craven County Chamber of Commerce. Based on projected figures from 1980 U.S. Census Report.
- 9 Irons T. Successful pediatric primary care in a public health setting. *NC Med J* 1983;44:88.
- 10 Ullman R, et al. Hospital-based group practice and comprehensive care for children of indigent families. *Peds* 1977;60:873.
- 11 Whitcomb ME. Health care for the poor: a public-policy imperative. *N Engl J Med* 1986;315:1220.
- 12 Kovar MG. Health Status of U.S. children and use of medical care. *Pub Health Reports* 1982;97:3.

In North Carolina, when you decide to prescribe Librium,

To protect your prescription...



**You sign
on the right.**

Librium[®] 5-mg, 10-mg, 25-mg capsules
brand of
chlordiazepoxide HCl/Roche [®]



Copyright © 1987 by Roche Products Inc., Manati, Puerto Rico 00701. All rights reserved.

Jellyfish Envenomation

Fredric Blum, M.D., and Ralph Corey, M.D.

Jellyfish injuries are well known to coastal practitioners but are rarely seen by the landlocked physicians of central and western North Carolina.

A 25-year-old female was well until one week prior to her clinic visit when she was stung by a jellyfish while swimming off the North Carolina coast. On returning to land she

noticed an area of erythema and tenderness over her left arm. She washed the area with ammonia and water and over the next two days the erythema gradually resolved. However, four days later she had a recurrence of a rash in exactly the same area. This new rash was associated with a pruritic burning sensation. For this reason she sought medical as-

From Department of Medicine, Duke University Medical Center, Durham 27710.



sistance. Physical examination revealed an otherwise healthy female whose only abnormalities were limited to a papular rash with linear components and an erythematous base located over her triceps area (figure). There was no regional lymphadenopathy. The patient was felt to have a delayed hypersensitivity rash to a jellyfish and was placed on topical steroid cream with gradual resolution of her pain and rash.

Jellyfish

Jellyfish, along with sea anemones and corals, comprise the phylum of marine invertebrates known as Coelenterata. Dozens of these species are capable of inflicting injury. The most frequently encountered species of venomous jellyfish include: *Chironex fleckeri* and *Chiropsalmus quadrigatus* (both known as the sea wasp or box jellyfish), *Physalia physalis* (the Portuguese man-of-war), *Chrysaora quinquecirrha* (the sea nettle), and *Stomolophus meeagris* (the cabbagehead jellyfish). The Portuguese man-of-war, the sea nettle and the cabbagehead jellyfish are the species most commonly encountered in the United States.

All coelenterates possess stinging cells on their tentacles for use in feeding and protection. When triggered by pressure these cells forcibly release a spirally coiled venomous thread from within a microscopic intracytoplasmic organelle known as a nematocyst. Hooks and barbs serve to anchor the thread to the victim. The nature of the injected venom differs among species but typically contains a variety of polypeptides, and enzymes. Little is known about the polypeptides, but analysis of the enzymes has revealed ATPase, aminopeptidase, RNase, DNAase, hyaluronidase, fibrinolysin, acid and alkaline phosphatase, and protease activity within various venoms.¹

The spectrum of envenomation syndromes ranges from acute local eruptions to systemic, occasionally fatal reactions.² The more serious reactions are due to either anaphylaxis or a dose dependent venom toxicity. Direct cardiotoxic, as well as neurotoxic, musculotoxic, and dermonecrotic effects have been demonstrated in studies of nematocyst venom.¹ *Chironex*, the box jellyfish indigenous to the southeast Pacific, possesses the most potent venom and accounts for the numerous severe reactions and deaths reported in bathers on the northern shores of Australia.³

Typical mild jellyfish stings result in an immediate intense burning or stinging sensation followed shortly by the appearance of linear erythema or rows of erythematous papules with surrounding edema. Wheals and vesicles can also be seen and initially erythematous lesions may darken to a

purplish hue. These lesions will usually fade over a course of hours to days.

Several cases of eruptions recurring spontaneously at the site of an earlier sting, days to weeks following disappearance of the initial rash, have been reported by Burnett et al.⁴; our case represents the second such eruption seen by one author (FB) within the last year. Recurrences are at the exact spot of the initial eruption and may be either a partial or a complete mimic of the initial reaction. Although recurrences may be accompanied by varying degrees of erythema, pain, pruritis and swelling, the reaction is typically less severe than the original. Most patients will experience a single recurrence lasting several days without further problems. One patient, taking 60 mg of prednisone when stung, had delay of the initial eruption for one week.⁴ She subsequently had four mild, local recurrences spaced three to seven weeks apart.

Although initial reactions to stings are clearly toxic in nature, recurrences would seem to be immunologically mediated. Anti-coelenterate venom antibodies have been repeatedly demonstrated by enzyme-linked immunosorbent assay in exposed humans.^{5,6} The delayed initial reaction as well as the multiple recurrences seen in the diver taking prednisone also points toward an ill-defined immune regulation of recurrences. At present we can only say that "the existence of recurrent local eruptions following only single envenomations almost by definition implies the presence of an antigen depot, presumably, though not necessarily, in the skin."⁴ The mechanism by which this depot interacts with the immune system remains to be elucidated. ■

References

- 1 Burnett JW, Calton GJ. The chemistry and toxicology of some venomous pelagic coelenterates. *Toxicon* 1977;15:177-96.
- 2 Burnett JW, Calton GJ, Burnett JW. Jellyfish envenomation syndromes. *J Am Acad Dermatol* 1986;14:100-6.
- 2 Williamson JA, Le Ray LE, Wohlfahrt M, Fenner PJ. Acute management of serious envenomation by box-jellyfish (*Chironex fleckeri*). *Med J Aust* 1984;141:851-3.
- 4 Burnett JW, Hepper KP, Aurelian L, et al. Recurrent eruptions following unusual solitary coelenterate envenomations. *J Am Acad Dermatol* 1987;17:86-92.
- 5 Gaur PK, Calton GJ, Burnett JW. Enzyme-linked immunosorbent assay to detect anti-sea nettle venom antibodies. *Experientia* 1981;37:1005-7.
- 6 Burnett JW, Carrington SC, Kelman SN, Calton GJ. Studies on the serologic response to jellyfish envenomation. *J Am Acad Dermatol* 1983;229-31.



Sudafed®

(Pseudoephedrine HCl)
Nasal Decongestant

Stops Symptoms Fast, But Won't Stop Her.



Today's active woman can't let cold symptoms slow her down. Recommend SUDAFED when she comes to you seeking relief from sinus congestion — the most uncomfortable cold symptom.

- Fast, effective relief from nasal and sinus congestion
- No antihistamines that can cause drowsiness
- The nasal decongestant most recommended by physicians*
- SUDAFED 12 Hour available for convenient, twice-a-day dosage

Recommend SUDAFED, the dependable decongestant that will stop her symptoms but won't stop her.



SUDAFED Tablets
SUDAFED 12 Hour Safety-Sealed Capsules



You're The Experts In Medicine.

We're The Experts At Preventing Problems In Your Practice.

Medical Mutual is the physician-owned and physician-directed company committed to preventing problems in your practice *before* they occur. Through formal programs and day-to-day assistance, we help you identify areas of risk, reduce potential problems, and enhance your practice.

For example, our Medical Practice Survey brings specially trained staff to your office to audit the peripheral areas we've learned can create problems. The survey—which includes everything from documentation of patient drug

allergies to length of waiting time—offers practical suggestions for reducing your exposure.

Just as important, Medical Mutual provides ongoing assistance to respond promptly to your calls and questions. With 12 years of experience in professional liability coverage, we are the source of information for North Carolina. And if we don't have the answer, we'll find it for you.



Medical Mutual
Medical Insurance Agency, Inc.

Medical Mutual. We'll be there when you need us.

Medical Mutual Insurance Company of North Carolina and its subsidiary, Medical Insurance Agency, Inc., are located at 222 North Person Street, Raleigh, NC 27611 919/828-9334 800/662-7917

NORTH CAROLINA MEDICAL JOURNAL

For Patients

VOLUME 49 / NUMBER 1 / JANUARY 1988

The Sweet Thing Revisited*

CLAUDE A. FRAZIER, M.D.

*My beautiful cat Sweet Thing graced the cover of the September, 1986 issue of this journal (47:413-4). Pet-loving readers may be happy to know that I am still hooked!

I am an allergist. I have an allergy. I tell all of my patients, "No Pets!" I am an allergist with an allergy having a pet while telling my patients not to have pets. Sounds like real hypocrisy.

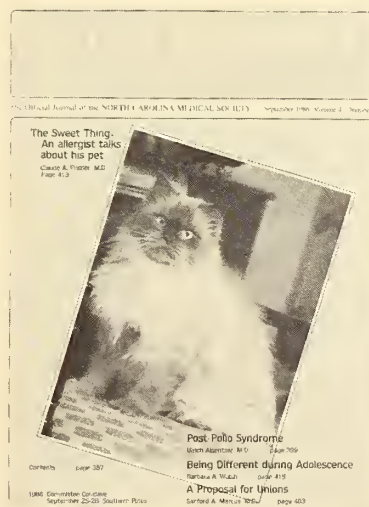
"In the United States, more than 60% of families have a pet. Ownership of furred animals is as common among atopic individuals as non-atopic individuals."¹ Owning a pet is very popular, even if I did not think that I would ever own one myself. "Even non-owners have a great deal of animal contact because animal contact is neither rare nor random. There are so many animal-owning households it is a common experience to encounter animals during normal interactions, like when visiting others. Obviously, animal-owning visitors are transporting fur and dander when they interact with people."²

Now, for my defense, excuse, or what ever you want to call it. I did not plan, nor have I ever considered,

having a cat for a pet, because of all animals the cat causes the most allergic symptoms. "It has been shown that while dogs significantly outnumber cats as household pets, there is a greater frequency of sensitivity to cats."³ I did not even like cats, and I told this to my cat.

My wife had divorced me so my secretary bought me a Himalayan kitten to keep me company. When I came in from playing tennis and sat down, there was this little kitten sitting beside my reclining chair. I said, "I don't want you." I started reading the newspaper and completely ignored the kit-

ten. He didn't ignore me. He reached one paw under my arm and onto my chest. I raised my arm higher and he climbed up on my chest, sat down, touched his little nose to mine, stared into my eyes with his half-closed eyes,



From Doctors Park - Bldg. 4, Asheville 28801.

and softly meowed saying, "Pet me." He had me and he continues to have me.

I have read that pets have been good for people, especially people who are sick or lonely. Now I know this to be true: "pet ownership also influences the treatment pattern of the physician. While 36% of allergists who did not own animals themselves recommended immediate removal of pets from the homes of their allergic patients, only 21% of allergists who had pets when they were children did so, and only 19% of physicians who were present owners summarily recommended animal removal. The difference between these three groups is significant ($p > 0.01$)."⁴

Before having Sweet Thing, I insisted, without feeling, that my patients with allergic symptoms have no pets; "Absolutely no pets!" Now my medical opinions have changed. Since Sweet Thing came along this admonition has not been wholehearted. I tell my patients who have pets that it is *best* for them not to have a pet, then I wait for their response. If they are adamant, I think about Sweet Thing and how I would also be opposed to the loss of my pet. If they easily accept this and it is not a problem for them to lose their pet, I let it go at that. If the patient wants to keep the pet, then I recommend that he or she have hypodesensitization.

A study of persons with asthma was done to see how many had exposure to cats and other pets. "Although 70% of those exposed to cats had asthma, as many as 34% who also had asthma were not exposed. This difference is significant at the $p > 0.02$ level, and it is clear that lack of exposure to cats at least does not protect

one from asthma and surely not from generalized allergic sensitivity."⁵ I still advise my patients who do not have pets not to acquire pets, as they may become allergic to them.

I remember in medical school that I felt some opposition toward those who were antivivisection. Since having Sweet Thing — well, I know that I would never let him be operated on for scientific investigation. Believe me, this is a real change in my feelings. It is a much more personal thing to me now. ■

References

- 1 Herring S, McGeody SJ, Jones JD, Mansmann HC. The maintenance of pets in allergic families; I: a survey of health benefits. *Annals of Allergy* 1981;46:24-9.
- 2 Beck AM, Meyers N. The pet owner experience. *Allergy Proceedings* 1987;8:185-7.
- 3 Murray AB, Ferguson AC, Morrison BJ. The frequency and severity of cat allergy versus dog allergy in atopic children. *The J of Allergy and Clin Immun* 1983;72:145-9.
- 4 Baker E, McCulloch MJ. Allergy to pets: problems for the allergist and the petowner. In: *Perspectives on our lives with companion animals*. Katcher AH, Beck AM (eds). Philadelphia: University of Pennsylvania Press, 1983, pp 341-5.
- 5 Ohman JL. Allergy in man caused by exposure to mammals. *J of the Am Vet Med Assoc* 1978;172:1403-6.

Safety of Lead-Containing Hobby Glazes

WOODHALL STOPFORD, M.D., M.S.P.H.

Some two million Americans are hobby ceramicists. The glazes that they use have been developed since the turn of the century to minimize the risk of lead exposure.

Hobby glazes are pre-prepared liquid glazes used by nonprofessional ceramicists to paint decorative ceramic pieces. This hobby began after World War II when a slipware body was developed that allowed a ceramic piece to mature in a short time (three to five hours) at low temperatures, compared to the 20 to 40 hours of firing at higher temperatures required for pottery.

Of the two million Americans who are hobby ceramicists, 95% are women and 70% are between the ages of 30 and 50. Approximately 80% of hobby glazing is done in educational studios run by distributors of hobby glazes. Such distributors fire finished pieces completed either at the educational studio or at a home studio. In addition to glazes, the distributor may also supply greenware or bisque ware (prefired ware) that is ready for the application of glazes or stains.

The majority of hobby glazes are brush applied. They are made up of frits (prefired mixtures of metal oxides, silica, alumina, and alkalis), ceramic pigments (metal oxide-containing crystalline materials formed at high temperatures), clays, flint (fine quartz), feldspars, water and other additives. Lead-free glazes have been developed for use in institutions (less than 5% of the market for hobby glazes) and by consumers who want a glaze that requires no precautions during its use. "Food-safe" glazes are lead-containing glazes which, if fired to cone 06 (1,830° F) or higher, will comply with the Food and Drug Administration's safety requirements for lead release from finished articles. To assure that glazes that have been initially certified as food-safe continue to be so, manufacturers participate in a program that periodically tests the lead release of articles finished with these glazes. Glazes that are certified as food-safe will release less than 2 ppm lead when a standard 8 oz. cup fired with

such a glaze is tested by the FDA method. Stains can be solvent or acrylic-based and are meant for application to bisque ware without any further firing.

Since the 1930s, a considerable effort has been expended to develop a viable lead-free glazing system: one that matures at low temperatures, does not require precise control of firing temperatures, does not crack easily, and is durable enough to stand up under repeated use and washing in a dishwasher. No such frit or glazing system has been identified. Lead-containing glazes continue to be required where durability, "forgiveness" of application defects or imprecise firing, and a brilliance of applied colors are desired. Current efforts have turned to the development of a broader range of low lead release, food-safe glazes. New frits are being developed that meet these criteria. When this developmental effort has been completed, high lead releasing glazes will only be necessary for the application of decorative features.

Studio and Lead-Containing Glaze Safety

Each manufacturer of hobby glazes employs teachers who in turn, through formal courses, instruct classroom studio operators. This course work includes training in the safety principles for the operation of the studio: application of glazes, personal hygiene, and kiln operation. More than 90% of classroom studio operators have attended such courses and have become certified instructors. Because this hobby is so technical, users of hobby glazes require formal instruction to be able to successfully make hobby ceramic ware.

In 1983 the American Society for Testing and Materials developed a national voluntary consensus standard (ASTM D4236) for chronic health hazard labeling of art and craft materials, including hobby ceramics. In excess of 90% of hobby glazes have received a toxicologic evaluation required by this standard and have been labeled in accordance with this standard.

From the Division of Occupational Medicine, Department of Community and Family Medicine, Duke University Medical Center, P.O. Box 2914, Durham 27710.

Safety in production of glazes. The most hazardous operations involved in the use of lead-containing glazes are those dusty jobs that include the production of frits and the production of the glazes themselves. By pre-mixing hobby glazes, ceramic manufacturers have eliminated consumer exposure to these operations. A further benefit is uniform composition of glazes to limit lead release after firing.

Lead exposure during application of glazes. During the last year, two studies have suggested that any hazards involved in the application of lead-containing hobby glazes are limited. Intraindustry studies have shown that individuals who use hobby glazes use them only a few hours a week and remain involved in the hobby an average of three years.

To make a worst-case assessment of exposure risk, investigators initially studied professional artists and decorators employed by companies manufacturing hobby ceramic glazes. Such workers apply liquid hobby glazes with brushes. Blood lead determinations were made on seven of these workers from three companies in the United States and Canada.

The results of this initial study showed that the average blood lead level of these professional artists and decorators was less than 10 mcg/dl (range: < 5 to 18 mcg/dl). For comparison, the average blood lead level of Americans participating in the National Health and Nutritional Survey was 14.6 mcg/dl in 1976 and 9.2 mcg/dl in 1980.¹

Although hobby glazes are meant for brush application, it is possible, using specialized industrial equipment, to spray apply these glazes. To assess the potential hazard of spraying, a second, controlled study initiated at one manufacturing facility looked at workers whose job included the spray application of hobby glazes. Whole blood lead assays were done on nine laboratory technicians as well as on three color tile assemblers. The laboratory technicians spend several hours a day brush applying hobby glazes but also work with dry glazes and the spray application of liquid glazes. Color tile assemblers do not work with dry glazes but with spray- and brush-applied glazes. These workers wear laboratory coats, and spray applications are done in a spray booth. Thirty-four controls were chosen from workers in the office or kiln manufacturing plant where no lead-containing glazes are used. The results of this study are summarized in table 1.

Table 1
Mean Blood Lead

Category	Range (mcg/dl)
Lab Technicians	<14 (<5-23)
Tile Assemblers	12 (6-16)
Controls	<5.9 (<5-12)

Although the spray application of glazes appears to be associated with some exposure, the hazard associated with this exposure appears to be limited.

Lead exposure during kiln firing. Articles glazed with hobby glazes are uniformly fired in electric kilns. Kilns owned by hobbyists are usually small (0.6 cu. ft.), while in schools and distributor studios larger kilns are used (> 3 cu. ft. in volume). The covers of these kilns are often opened during one part of the firing cycle and ventilation holes are usually open allowing combustion fumes to be given off. Consequently all manufacturers of kilns and hobby glazes recommend that such kilns be used with a ventilation system that will prevent fumes from building up in the room.

To date, some seven studies have been completed that have assessed lead emissions from electric kilns containing articles glazed with lead-containing hobby glazes. These studies are summarized in table 2. In each study where no ventilation was specified, all hoods and fans were turned off and doors and windows were closed to restrict ventilation. Samples were taken one to two feet in front of each kiln at breathing zone height. The current limit set by the Occupational Health and Safety Administration (OSHA) for lead in air is 50 mcg/m³. These studies highlight that there is little potential for exposure to lead fumes during firing of hobby glazed ceramics, either in the home or distributor studio, as long as a minimum of ventilation is provided.

Safety of Low Lead-Releasing Glazes

In England at the turn of the century, more than 200 lead poisoning cases were seen each year among potters. To help curb the epidemic, glazes were developed that released limited amounts of lead when exposed to weak acids, simulating gastric juice. By 1903, lead-containing glazes used in specified processes had to have limited lead release when tested against a dilute hydrochloric acid solution (less than 5% their dry weight released when

Table 2
Lead Emissions from Electric Kilns Containing Articles Glazed with Lead-Containing Hobby Glazes.

Study	Location	Ventilation	Ambient Lead (mcg/m ³)
UNC	lab	none	0.4
UNC	lab	wall fan	0.02
UNC	lab	hood	0.02
Utterback	home	none	ND
Garland/Mudhut	distrib.	none	16.9
Garland/Mudhut	distrib.	dilutinal	0.23
Garland/Mudpatch	distrib.	none	0.29
New Brighton	school	none	ND
Twining	home	none	ND (< 2)
Pemco	lab	none	ND

calculated as PbO). By 1956, no lead poisoning cases were reported in the pottery industry, and the improvement was attributed to the use of low lead-releasing glazes and good work practices. Because of the safety of these glazes, lead exposure in air in the pottery industry in England is measured in the form of weak-acid-extractable lead as opposed to total lead.

Because hobby glazes are generally applied by brush and not by spraying, the primary route of exposure is by ingestion. In this regard, the safety of low lead-releasing glazes has been confirmed by subacute feeding studies in rats. Biodynamics has completed a seven-day feeding study where they compared measures of lead absorption in groups of rats fed on low lead-releasing frits or frits that readily released lead when exposed to weak acid. The results of their study are summarized in table 3.

Table 3
Lead Absorption in Rats

<i>Frit</i>	<i>Number</i>	<i>Blood Lead (mcg/dl)</i>	<i>Kidney Lead (ppm)</i>
High Solubility	(20)	23	11.1
Low Solubility	(20)	3.0	3.9
Controls	(10)	3.7	3.6

Since the source of lead in hobby glazes is from lead frits, the expectation would be that exposure to hobby glazes would result in levels of absorption similar to those resulting from exposure to lead frits: there would be limited absorption when low lead-releasing frits are used in the manufacture of the glazes. Low lead-releasing glazes may or may not be food-safe. However, manufacturers are limiting development of new lead-containing glazes to those of the food-safe variety.

Use of Lead-Containing Glazes in Schools and Institutions

Lead-containing hobby glazes should only be used by individuals who are capable of following safety guidelines: if supervision is required (grade schools, hospitals, nursing homes, mental institutions), lead-free hobby glazes should be used. In England the use of lead-containing glazes in schools is restricted to low lead-releasing glazes. The Ministry of Education recommends the following precautions:

- Glazing should be done only in a room suitably equipped for the purpose.
- Since the danger of lead poisoning is greatest where lead or its compounds are inhaled, processes which are likely to give rise to these compounds in dust form in the air should not be allowed unless there is efficient exhaust ventilation or a suitable

respirator is used. Where a spray is used there should be a separate booth with efficient exhaust fan. The Minister understands that these processes are normally confined to establishments of further education (trade schools).

- Anyone who has carried out the processes should wash their hands and use a nail brush immediately afterwards.
- All benches and work surfaces should be washed down after use and splashes of glaze should be removed from floors and walls.
- Food should not be eaten in any room used for pottery making.
- Protective clothing (e.g., overalls or aprons) should be worn during all pottery classes and should be washed as necessary. An apron with bib of impervious materials should be worn by anyone while actually engaged in glaze dipping and should be washed after use.²

Warning Labels on Lead-Containing Glazes

In 1983, the American Society of Testing and Materials (ASTM) adopted Practice D4236 for labeling of art and craft materials for chronic adverse health effects. This practice requires that such materials be labeled if any customary or reasonably foreseeable use can result in a chronic hazard.

A similar standard for labeling ceramic art materials has been adopted by ASTM which extends the content of ASTM D4236 to include a set of guidelines for the safe use of hobby ceramic materials. The current labeling for lead-containing hobby glazes reads:

WARNING: CONTAINS LEAD

When using do not eat, drink or smoke. Wear a work apron and wash hands immediately after use. If pregnant or contemplating pregnancy, use only with professional supervision. Ingestion may cause anemia; nervous system or kidney damage; or harm to the developing fetus. Do not spray apply. KEEP OUT OF REACH OF CHILDREN. For further health information see (education pamphlet).

An informational and educational program has been developed through ASTM to supplement this labeling and help assure the safest use of lead-containing glazes. This program began with distribution of recommendations for the safe use of hobby glazes to all distributors and retailers whose products are labeled in compliance with ASTM D4236. The program focuses on the distributor-run classroom studio. These studios provide a clean work environment and supervision to assure safe work practices.

Non-hobby lead-containing glazes, for which a user educational program has not been developed, include on the label a warning to avoid use if pregnant or contemplating pregnancy.

Summary

Hobby glazes are meant to simplify the production of ceramic ware by hobbyists. The most hazardous operations, frit making and glaze formulating, have been eliminated. Hobby glazes are specifically meant for application by brush, thus eliminating some means of exposure and limiting the primary route of exposure to ingestion. The majority of hobby ceramic work is done in distributor operated classroom studios where a clean environment is provided, supervision is available to assure safe work practices, and finished pieces are fired under controlled conditions.

"Food-safe" and lead-free glazes are available for producing ceramic pieces meant for food use. Lead-free glazes are also suitable for use by children and in institutions where any hazard must be minimized.

Ninety percent of hobby glazes have been labeled for health risks in conformance with ASTM D4236, a national consensus standard for chronic health hazard labeling of art materials. Such labeling has been supplemented by a comprehensive educational pamphlet and training in studio safety.

The same qualities of these glazes that allow them to be used safely by the hobbyist make them attractive for the potter and professional ceramicist: hazards associated

with frit and glaze making are eliminated and "food-safe" glazes are available that do not require further testing for lead release. Potters and professional ceramicists, however, do use dipping and spraying to apply glazes in some situations. These operations may be associated with excessive lead exposure unless appropriately controlled. Unless such workers are willing to take *all* precautions necessary to work with an industrial application of a lead-containing glaze (spray booths, glove boxes, personal protection and environmental and medical monitoring), they should use a lead-free glaze.

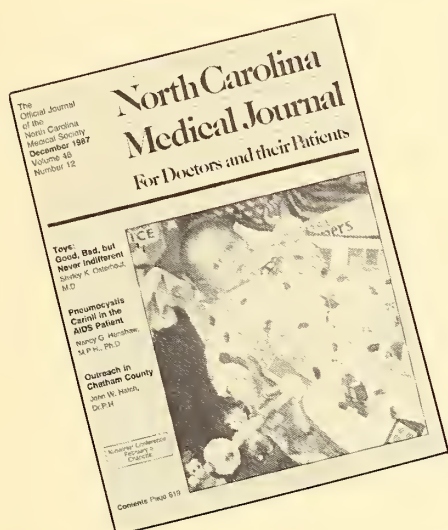
To assure that lead-containing hobby glazes are indeed being used safely, studies have been done under intense use situations. The brush application of these glazes, spray application in spray booths, and kiln firing are associated with only limited exposure to lead. Low lead-releasing hobby glazes have been developed, and continue to be developed, whose use further limits potential lead hazards. ■

References

- 1 Annest JL, et al. *New Engl J Med* 1983;308:1373-7.
- 2 Ministry of Education. Administrative Memorandum No. 517: Restrictions on the use of certain types of glazes in the teaching of pottery. London, 1973.

North Carolina Medical Journal

Subscribe for yourself or a friend



Please enclose a check or money order for:

☐ \$12.60 (NC Residents; this includes 5% sales tax)

☐ \$12.00 (out of state subscribers)

☐ New ☐ Renewal

Send to NCMJ, Box 3910 DUMC
Durham 27710. (919/684-5728)

Please print:

My Name _____

Address _____

City/State/Zip _____

Please send a gift subscription to:

Name _____

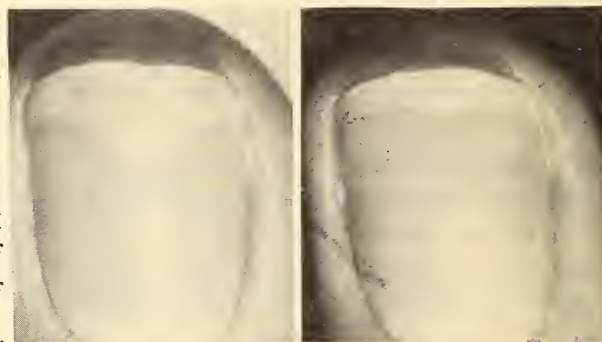
Address _____

City/State/Zip _____

Plummer's Nails:

The onycholysis (separation of the distal nail plate from its bed, left) associated with hyperthyroidism of any etiology. Seen most commonly on the ring finger, infrequently on the index finger, and rarely on the thumb.

The onycholysis is central, symmetrical and without associated pitting of the nail as in psoriasis. Treatment of the hyperthyroid state resulted in the disappearance of Plummer's nails (right) over a four-month period.



Henry Stanley Plummer was a world expert on disorders of the thyroid gland and a leading force in the development of the Mayo Clinic. In his life we see a series of seeming coincidences that led him to greatness.

Plummer was born March 3, 1874 in Hamilton, Minnesota where his father was a doctor. His grandfather and his brother William Albert were both physicians as well. As a child Plummer's favorite book was his father's *Gray's Anatomy*. Plummer accompanied his father on sick calls throughout his childhood, and his later interest in thyroid diseases has been attributed to a patient with an enormous goiter whom Plummer saw on one such call.

Despite his interest in anatomy, Plummer originally wanted to be an engineer. His father's persuasion and the family tradition of medical careers swayed him, however, and he went on to medical school at Northwestern. He graduated in 1898 and went into practice with his father in Racine, Wisconsin.

Pasteur told us that chance favors the prepared mind; such was the circumstance leading Plummer to the Mayo Clinic. The elder Plummer, faced with a difficult case of blood dyscrasia, called Dr. William J. Mayo into consultation. Upon Dr. Mayo's arrival the elder Plummer was ill and young H.S. Plummer filled in. He so impressed Dr. Mayo with his knowledge and drive that the brothers Mayo invited him to join their practice in Rochester, Minnesota — marking the beginning of Plummer's long and productive career at the Mayo Clinic.

Plummer established the laboratory of basal metabolism at the Mayo, organized the biochemistry lab and initiated electrocardiography. His interest and work in the new field of radiology left him with x-ray burns of the hands which scarred him for life. He also pioneered esophagoscopy and bronchoscopy and made many improvements in the method of dilating esophageal strictures, eliminating the need for gastrostomy. The syndrome of esophageal stricture, koilonychia, and angular stomatitis (Plummer-Vinson syndrome) bears his name.

Never formally trained in architecture, Plummer became a master builder through his design and construction of parts of the Mayo Clinic, especially the building which now bears his name. He served on the clinic's Board of Governors from its inception in 1920 until his death in 1936.

Plummer is best known for his work in thyroid disorders. He described the many pathologic changes in various states of thyroid function. Adenomatous goiter with hyperthyroidism ("toxic nodular goiter") became known as Plummer's disease, and his observations on onycholysis in hyperthyroidism led to the eponym of Plummer's nails.

Plummer investigated both hypothyroidism and hyperthyroidism. In one experiment he convinced a small group of patients with myxedema to eat sandwiches made with fresh uncooked animal thyroid of a determined weight to prove the effectiveness of crude replacement. One of his most important contributions was the demonstration of the efficacy of Lugol's solution in 1923. It was known that iodine was part of the thyroxine molecule but the amount and structure of the molecule were unknown. Moebius hypothesized that the thyroxine secreted in hyperthyroidism was defective. Plummer speculated that this defect was a deficiency of iodine. "This incompletely built up thyroxine, as it leaves the gland, can enter into catabolic reaction faster than the normal, stable molecule and raise the metabolic rate more rapidly. If, therefore, we can change the character of the molecule, we can change the basal metabolism" (J Iowa Med Soc 1924;14:66-73). Investigations based on this theory led to the discovery that Lugol's solution (5 gms. iodine and 10 gms. potassium iodide in 100 cc. water) provides short-term suppression of thyroid function and prevents thyroid crises, thus greatly decreasing the morbidity and mortality from thyroid surgery. This was, of course, the right treatment for the wrong reason, as the thyroxine secreted in hyperthyroidism is normal; Lugol's solution is effective not by altering the structure of thyroxine but by acutely decreasing the release of thyroxine from the gland by an as yet unknown mechanism. ■

— Scott N. Lurie, M.D.

Department of Medicine, Duke University Medical Center, Durham, 27710

Medical Care for Poor Children

Who Provides, and Who Pays for It?

Floyd W. Denny, Jr., M.D.

In this issue of the *Journal* our attention is called to one of the largest and most important problems found by all of us who are responsible for the care of children: who provides, and who pays for, the medical care of children whose parents cannot pay for private care? Doctors May and Irons report the initial results of an imaginative approach which entailed collaboration among a school of medicine, a community health department, and a community hospital (Results of a Community-Based Comprehensive Pediatric Care Program, p. 21).

This six-year study showed a large decrease in the cost of hospitalization in 1986 compared to 1981. At first blush this gives the impression of a great feat and suggests that we should give serious thought to using the authors' model in other areas and circumstances where poverty poses a problem. Before we do that, however, we should realize that this is a difficult and basically unsolved problem and that there are some flaws in the study that raise questions which must be answered before we have a satisfactory solution.

May and Irons report a savings in hospitalization costs in their study group of \$173,000 in 1986 when compared to 1981 — a reduction of 57%. Their 1986 hospitalization rate compared favorably with that in two local private pediatric practices. Unfortunately, the way the study was done precludes any definitive conclusions. The rates of hospitalization in the authors' study group were not compared to a similar or control group that did not have the same kind of comprehensive care. It is possible (though I admit not probable) that the rates of hospitalization would have fallen irrespective of the mode of medical care.

The comparison with private practices is also flawed, because while the study data were collected in a prospective fashion, the practice data were collected retrospectively. This makes any comparison precarious. In addition, the authors considered only hospitalization expenses and did not calculate the cost of physicians' fees nor the cost of the

ambulatory care program. Again, it is possible that the savings in hospitalization costs were offset by an increased cost outside of the hospital. The decrease in visits per child of a little over three per year in 1981 to just under two per year in 1987 suggests that this is not true, but data are lacking.

May and Irons have made an excellent start, but their observations need verification by studies done with greater scientific vigor. However, before I, or others, criticize this study, it should be understood that this type of research is very difficult to do. Under ideal circumstances in studies such as this there should be a comparison or control group that receives none of the planned interventions. In both groups data should be collected prospectively in carefully delineated protocols. Finally, careful consideration must be given to the criteria of success. May and Irons considered only a reduction in hospital costs. Careful attention should be given to the total cost of care to the poor. The shifting of cost from the hospital to the clinic may be desirable for the patient and good medicine but it might not save money. If that is the case we need to know it.

The problems of getting such diverse groups as an academic medical institution, a community hospital, and a community health department to work collaboratively are fairly emphasized by the authors in a previous publication, and indeed may prohibit this approach in many areas.¹ In an endeavor of the kind described, the roles of the various participants must be clear and understood by all parties. It seems reasonable for community health departments and hospitals to be involved in care of the poor. The role of academic medical centers is less clear in this regard. While service is an integral part of the mission of such centers, the primary roles are in teaching and research. In my opinion, when attempts are made to utilize academic medical centers to provide medical care for the indigent, great care should be taken to see that such programs provide the opportunity for students and housestaff to learn from these valuable experiences. As demonstrated in the reported study, such programs also provide unusual research opportunities.

As pointed out by May and Irons, the plight of the poor in this country, especially among children, is getting worse.

From University of North Carolina School of Medicine, Program for Health Promotion and Disease Prevention, Box 3, Wing D, 208-H, Chapel Hill 27514.

The problem goes far beyond the delivery of medical care; it involves most aspects of our society. Since good medical care, and indeed good health, is our province, we should play a major role in seeking solutions, whatever the cost. These authors are to be congratulated for pointing out the nature and seriousness of the problem — and for making

such a good start. Society, and in our case organized medicine, must respond. ■

Reference

- 1 Irons T. Successful pediatric primary care in a public health setting. NCMJ 1983;44:88.

Dx: recurrent herpes labialis

WILLIAM M. CAMERON, M.D.
738 EAST HIGH ST

For _____

R

*Herpecin-L
Lip Balm
Sig: q.h.
as needed*

HERPECIN-L®

"HERPECIN-L is my **treatment of choice** for perioral herpes." GP, NY

"HERPECIN-L appears to actually **prevent** the blisters . . . used **soon enough**." DDS, MN

"HERPECIN-L® . . . a **conservative approach** with **low risk/high benefits**." MD, FL

"Used at **prodromal symptoms** . . . blisters **never formed** . . . remarkable." DH, MA

"(In clinical trials) . . . **response** was **dramatic**. HERPECIN-L . . . proven far superior." DDS, PA

"All patients claimed **shorter duration** . . . at **prodromal symptoms** . . . HERPECIN-L **averted** the attacks." MD, AK

OTC. See P.D.R. for information. For samples to make your own clinical evaluation, write: CAMPBELL LABORATORIES, Inc., P.O. BOX 812-MD, FDR STATION, NEW YORK, N.Y. 10150

In North Carolina HERPECIN-L is available at all *Crown, Eckerd, Kerr, Mutual Drug, Revco and RiteAid* and other select pharmacies.



"The Power of the Pen"

When you decide to use Bactrim, use the power of the pen as well. It guarantees your patient will get Bactrim—with the power of penetration where you want it, the power of concentration where you want it, and the power to persist. Three powers well worth trusting.

And remember, after deciding on Bactrim, protect your decision. Take an extra half-second, in accordance with your state regulations, to prevent substitution.

SPECIFY.

Do not Substitute

Bactrim™ DS

(160 mg trimethoprim and 800 mg sulfamethoxazole/Roche)

Bactrim™ Pediatric

(40 mg trimethoprim and
200 mg sulfamethoxazole per 5 ml)

ROCHE®

Please see summary of product information on following page.

Copyright © 1987 by Hoffmann-La Roche Inc. All rights reserved.

Before prescribing, please consult complete product information, a summary of which follows:

CONTRAINDICATIONS: Hypersensitivity to trimethoprim or sulfonamides; documented megaloblastic anemia due to folate deficiency; pregnancy at term and during the nursing period; infants less than two months of age.

WARNINGS: FATALITIES ASSOCIATED WITH THE ADMINISTRATION OF SULFONAMIDES, ALTHOUGH RARE, HAVE OCCURRED DUE TO SEVERE REACTIONS, INCLUDING STEVENS-JOHNSON SYNDROME, TOXIC EPIDERMAL NECROLYSIS, FULMINANT HEPATIC NECROSIS, AGRANULOCYTOSIS, APLASTIC ANEMIA AND OTHER BLOOD DYSCRASIAS.

BACTRIM SHOULD BE DISCONTINUED AT THE FIRST APPEARANCE OF SKIN RASH OR ANY SIGN OF ADVERSE REACTION. Clinical signs, such as rash, sore throat, fever, pallor, purpura or jaundice, may be early indications of serious reactions. In rare instances a skin rash may be followed by more severe reactions, such as Stevens-Johnson syndrome, toxic epidermal necrolysis, hepatic necrosis or serious blood disorder. Perform complete blood counts frequently.

BACTRIM SHOULD NOT BE USED IN THE TREATMENT OF STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A β -hemolytic streptococcal tonsillopharyngitis have a greater incidence of bacteriologic failure when treated with Bactrim than with penicillin.

PRECAUTIONS: General: Give with caution to patients with impaired renal or hepatic function, possible folate deficiency (e.g., elderly, chronic alcoholics, patients on anticonvulsants, with malabsorption syndrome, or in malnutrition states) and severe allergies or bronchial asthma. In glucose-6-phosphate dehydrogenase deficient individuals, hemolysis may occur, frequently dose-related.

Use in the Elderly: May be increased risk of severe adverse reactions in elderly, particularly with complicating conditions, e.g., impaired kidney and/or liver function, concomitant use of other drugs. Severe skin reactions, generalized bone marrow suppression (see WARNINGS and ADVERSE REACTIONS) or a specific decrease in platelets (with or without purpura) are most frequently reported severe adverse reactions in elderly. In those concurrently receiving certain diuretics, primarily thiazides, increased incidence of thrombocytopenia with purpura reported. Make appropriate dosage adjustments for patients with impaired kidney function (see DOSAGE AND ADMINISTRATION).

Use in the Treatment of Pneumocystis Carinii Pneumonitis in Patients with Acquired Immunodeficiency Syndrome (AIDS): Because of unique immune dysfunction, AIDS patients may not tolerate or respond to Bactrim in same manner as non-AIDS patients. Incidence of side effects, particularly rash, fever, leukopenia, with Bactrim in AIDS patients treated for *Pneumocystis carinii* pneumonitis reported to be greatly increased compared with incidence normally associated with Bactrim in non-AIDS patients.

Information for Patients: Instruct patients to maintain adequate fluid intake to prevent crystalluria and stone formation.

Laboratory Tests: Perform complete blood counts frequently; if a significant reduction in the count of any formed blood element is noted, discontinue Bactrim. Perform urinalyses with careful microscopic examination and renal function tests during therapy, particularly for patients with impaired renal function.

Drug Interactions: In elderly patients concurrently receiving certain diuretics, primarily thiazides, an increased incidence of thrombocytopenia with purpura has been reported. Bactrim may prolong the prothrombin time in patients who are receiving the anticoagulant warfarin. Keep this in mind when Bactrim is given to patients already on anticoagulant therapy and reassess coagulation time. Bactrim may inhibit the hepatic metabolism of phenytoin. Given at a common clinical dosage, it increased the phenytoin half-life by 39% and decreased the phenytoin metabolic clearance rate by 27%. When giving these drugs concurrently, be alert for possible excessive phenytoin effect. Sulfonamides can displace methotrexate from plasma protein binding sites, thus increasing free methotrexate concentrations.

Drug/Laboratory Test Interactions: Bactrim, specifically the trimethoprim component, can interfere with a serum methotrexate assay as determined by the competitive binding protein technique (CBPA) when a bacterial dihydrofolate reductase is used as the binding protein. No interference occurs if methotrexate is measured by a radioimmunoassay (RIA). The presence of trimethoprim and sulfamethoxazole may also interfere with the Jaffe alkaline picrate reaction assay for creatinine, resulting in overestimations of about 10% in the range of normal values.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Carcinogenesis: Long-term studies in animals to evaluate carcinogenic potential not conducted with Bactrim. **Mutagenesis:** Bacterial mutagenic studies not performed with sulfamethoxazole and trimethoprim in combination. Trimethoprim demonstrated to be nonmutagenic in the Ames assay. No chromosomal damage observed in human leukocytes *in vitro* with sulfamethoxazole and trimethoprim alone or in combination; concentrations used exceeded blood levels of these compounds following therapy with Bactrim. Observations of leukocytes obtained from patients treated with Bactrim revealed no chromosomal abnormalities. **Impairment of Fertility:** No adverse effects on fertility or general reproductive performance observed in rats given oral dosages as high as 70 mg/kg/day trimethoprim plus 350 mg/kg/day sulfamethoxazole.

Pregnancy: Teratogenic Effects: Pregnancy Category C. Trimethoprim and sulfamethoxazole may interfere with folate metabolism; use during pregnancy only if potential benefit justifies potential risk to fetus. Nonteratogenic Effects: See CONTRAINDICATIONS section.

Nursing Mothers: See CONTRAINDICATIONS section.

Pediatric Use: Not recommended for infants under two months (see INDICATIONS and CONTRAINDICATIONS sections).

ADVERSE REACTIONS: Most common are gastrointestinal disturbances (nausea, vomiting, anorexia) and allergic skin reactions (such as rash and urticaria). **FATALITIES ASSOCIATED WITH THE ADMINISTRATION OF SULFONAMIDES, ALTHOUGH RARE, HAVE OCCURRED DUE TO SEVERE REACTIONS, INCLUDING STEVENS-JOHNSON SYNDROME, TOXIC EPIDERMAL NECROLYSIS, FULMINANT HEPATIC NECROSIS, AGRANULOCYTOSIS, APLASTIC ANEMIA AND OTHER BLOOD DYSCRASIAS (SEE WARNINGS SECTION)**

Hematologic: Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, neutropenia, hemolytic anemia, megaloblastic anemia, hypoprothrombinemia, methemoglobinemia, eosinophilia. **Allergic Reactions:** Stevens-Johnson syndrome, toxic epidermal necrolysis, anaphylaxis, allergic myocarditis, erythema multiforme, exfoliative dermatitis, angioedema, drug fever, chills, Henoch-Schoenlein purpura, serum sickness-like syndrome, generalized allergic reactions, generalized skin eruptions, photosensitivity, conjunctival and scleral injection, pruritus, urticaria and rash. Periarthritis nodosa and systemic lupus erythematosus have been reported. **Gastrointestinal:** Hepatitis (including cholestatic jaundice and hepatic necrosis), elevation of serum transaminase and bilirubin, pseudomembranous enterocolitis, pancreatitis, stomatitis, glossitis, nausea, emesis, abdominal pain, diarrhea, anorexia. **Genitourinary:** Renal failure, interstitial nephritis, BUN and serum creatinine elevation, toxic nephrosis with oliguria and anuria, crystalluria. **Neurologic:** Aseptic meningitis, convulsions, peripheral neuritis, ataxia, vertigo, tinnitus, headache.

Psychiatric: Hallucinations, depression, apathy, nervousness. **Endocrine:** Sulfonamides bear certain chemical similarities to some goitrogens, diuretics (acetazolamide and the thiazides) and oral hypoglycemic agents; cross-sensitivity may exist. Oliguria and hypoglycemia have occurred rarely in patients receiving sulfonamides. **Musculoskeletal:** Arthralgia, myalgia. **Miscellaneous:** Weakness, fatigue, insomnia.

DOSAGE AND ADMINISTRATION: Not recommended for use in infants less than two months of age.

URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN: Usual adult dosage for urinary tract infections is one DS tablet, two tablets or four teaspoonfuls (20 ml) b.i.d. for 10 to 14 days. Use identical daily dosage for 5 days for shigellosis. **Recommended dosage for children** with urinary tract infections or acute otitis media is 8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses every 12 hours for 10 days. Use identical daily dosage for 5 days for shigellosis. **Renal Impaired:** Creatinine clearance above 30 ml/min, give usual dosage; 15-30 ml/min, give one-half the usual regimen; below 15 ml/min, use not recommended.

ACUTE EXACERBATIONS OF CHRONIC BRONCHITIS IN ADULTS: Usual adult dosage is one OS tablet, two tablets or four teasp. (20 ml) b.i.d. for 14 days.

PNEUMOCYSTIS CARINII PNEUMONITIS: Recommended dosage is 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

HOW SUPPLIED: DS (double strength) Tablets (160 mg trimethoprim and 800 mg sulfamethoxazole)—bottles of 100, 250 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 20. **Tablets** (80 mg trimethoprim and 400 mg sulfamethoxazole)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40. **Pediatric Suspension** (40 mg trimethoprim and 200 mg sulfamethoxazole per teasp.)—bottles of 100 ml and 16 oz (1 pint). **Suspension** (40 mg trimethoprim and 200 mg sulfamethoxazole per teasp.)—bottles of 16 oz (1 pint).

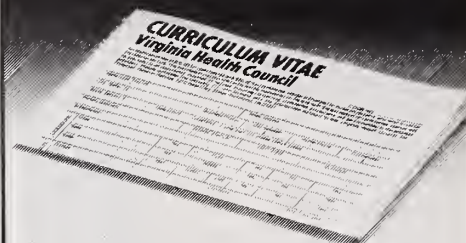
STORE: TABLETS AT 15°-30°C (59°-86°F) IN A DRY PLACE PROTECTED FROM LIGHT. STORE SUSPENSIONS AT 15°-30°C (59°-86°F) PROTECTED FROM LIGHT.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

P 1 0586

What Does It Take To Practice In Virginia?



Good Form.

The curriculum vitae form from the Virginia Health Council is the smart way to locate practice opportunities in Virginia. After all, the Council has been helping place physicians for nearly 40 years. To receive a form, contact the Virginia Health Council at 3312 W. Cary St., Richmond, Va. 23221; (804) 358-9946.

Virginia Health Council

PHYSICIANS Ambulatory Care Clinics Nationwide

John Short & Associates, Inc., an internationally recognized health care management and consulting firm, is actively seeking **PHYSICIANS** with experience and credentials in **FAMILY MEDICINE/GENERAL PRACTICE** and **PRIMARY CARE SPECIALTIES**.

Full or part-time positions are available in multiple states to staff existing Primary Care Clinics and to prepare for potential sites throughout the nation. Qualifications, except for General Practitioners, include Board Certification or Board Eligibility.

John Short & Associates Inc. offers competitive compensation including paid malpractice insurance, professional development fund and incentive programs. For additional information please contact: Susan Bray, Recruiting Director, John Short & Associates, Inc. Box 1305, Columbia, MD 21044.

Reducing Polypharmacy in the Nursing Home

James H. Sanders, Jr., M.D., and Mildred C. Orr, R.N.

Many studies have been made and much written about the problem of polypharmacy, but little is being done to correct it. It is particularly severe in nursing homes, with an average of 6.1 drugs being prescribed for patients in skilled nursing facilities in the U.S.¹ There are several reasons given for the problem, including pressure on the physician to prescribe, therapeutic enthusiasm, over-energetic treatment, inappropriate treatment, and patients with multiple problems.²

Polypharmacy causes increased problems in many cases, with adverse drug effects and interactions producing illness and accidents. It also increases costs.³⁻⁶ Medicare and Medicaid will pay for only six prescriptions per patient. If there are more, the patient, the family or the nursing home must pay for them. The potential for adverse drug reactions has been estimated at 5% in patients taking one drug, increasing to 100% in those taking ten or more.⁷

A Local Facility Addresses the Problem

Believing that polypharmacy is an important problem, the Utilization Committee of Brian Center of Brevard, North Carolina determined to try to reduce it. Ours is a small

From Brian Center of Brevard, N.C., P.O. Box 1096, Brevard 28712.

facility with three levels of care including 41 intermediate and 66 skilled nursing beds. We have an open medical staff with different interests and numbers of patients.

We found that the average number of drugs per patient in intermediate care and skilled nursing was 9.2, greater than the national average. We checked periodically and reported to each physician the number of drugs being prescribed for each of his or her patients, possible drug interactions, prescribed drugs of questionable efficacy, and a comparison of the physician's prescribing practices with the national average and with the other physicians on the staff.

The medical director spoke about the problem at a medical staff meeting. The quality control nurse appraised the nurses of the problem and enlisted their help. Patients' families were made aware of the problem of polypharmacy with a discussion by the medical director at a family night meeting.

The results of this effort are presented in table 1. Medical staff members varied significantly in their interest and effort in reducing polypharmacy in their patients; but significantly, all but one, a doctor who had a good previous record, improved in their prescribing practices. The average number of drugs prescribed for the facility's intermediate care and skilled nursing patients was reduced from 9.2 to 5.1.

Our efforts to control the problem of polypharmacy continue. Progress is slow because education and persuasion

Table 1. Polypharmacy Monitor

M.D. #	June 19, 1986		October 2, 1986		February 13, 1987	
	Number of Patients	Average Number of Prescriptions	Number of Patients	Average Number of Prescriptions	Number of Patients	Average Number of Prescriptions
1	15	7.6	15	5.9	13	5.8
2	4	14.7	4	10.5	4	8.8
3	1	7	1	6	0	0
4	2	8.5	2	8	2	7
5	4	4.7	8	4.4	7	4.8
6	4	9.7	3	6.6	3	3.7
7	11	9.2	9	8.9	7	7.3
8	38	4	41	3.3	43	2.9
9	8	11	6	7	6	6.3
10	7	7.5	7	5.9	9	5.7
11	10	11.3	10	11	10	10.1

are our only weapons. We believe that a close look at our prescribing habits in the nursing home could lead to better care of the elderly and chronically ill in the hospital and private practice as well. ■

References

- 1 Physicians' drug prescribing patterns in skilled nursing facilities. Washington, DC: Office of Long Term Care, DHEW Publication No. (OS) 76-50050, June 1976.
- 2 Black D, Denham MJ, Acheson RM, et al. Medication for the elderly. *Journal of the Royal Coll of Phys of London* 1984;18:7.
- 3 Lamy, PP. Drug prescribing for the elderly. In Reichel W (ed), *Clinical Aspects of Aging*, 2nd ed. Baltimore: Williams and Wilkins, 1983, p. 21.
- 4 Gryfe CL, Gryfe, BM. Drug therapy of the aged: the problem of compliance and the roles of physicians and pharmacists. *J Am Geriatr Soc* 1984;32:301.
- 5 Carruthers SC. Principles of drug treatment in the aged. In Rossman I (ed), *Clinical Geriatrics*, 3rd ed. Philadelphia: JB Lippencott Company, 1986, p.114.
- 6 Lamy PP. The elderly and drug interactions. *J Am Geriatr Soc* 1986;34:586.
- 7 Kellaway GSM, McRae E. Intensive monitoring for adverse drug effects in patients discharged from acute medical wards. *New Zealand Med J* 1973;78:525.

YOCON[®]

YOHIMBINE HCl

Description: Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalamic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon[®] is indicated as a sympatholytic and mydriatic. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.^{1,2} Also dizziness, headache, skin flushing reported when used orally.^{1,3}

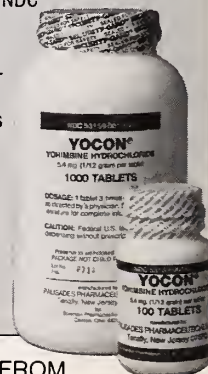
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.^{1,3,4} 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to 1/2 tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.³

How Supplied: Oral tablets of Yocon[®] 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:

1. A. Morales et al., *New England Journal of Medicine*: 1221. November 12, 1981.
2. Goodman, Gilman — *The Pharmacological basis of Therapeutics* 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. *Weekly Urological Clinical letter*, 27:2, July 4, 1983.
4. A. Morales et al., *The Journal of Urology* 128: 45-47, 1982.

Rev. 1/85



AVAILABLE EXCLUSIVELY FROM
**PALISADES
 PHARMACEUTICALS, INC.**
 219 County Road
 Tenafly, New Jersey 07670
 (201) 569-8502
 Outside NJ 1-800-237-9083

PRN Medications in a Rest Home Setting

Thomas R. White, M.D., and Geraldine D. Anastasio, Pharm. D.

The use of medications in elderly patients has received considerable attention in the literature in recent years. The use of multiple drugs, the need for alterations in drug dosing, and increased susceptibility to adverse drug reactions are well documented issues among elderly patients.¹ Surveys of intermediate and skilled nursing homes indicate that elderly residents are typically prescribed five to seven medications each.^{2,3} These studies have noted that 45% to 60% of these medications are prescribed on a pro re nata (prn), or as needed basis. Aycock, et al sampled 138 nursing homes in South Carolina and found that each resident was prescribed, on average, three prn medications, with a range of 0 to 13 per patient.⁴

While prn orders may be convenient for the physician and nurse, there clearly is potential for misunderstanding and harm to the patient.² This may be particularly true in the setting of the extended care facility where there is considerable nursing autonomy, infrequent or sporadic physician involvement, and a population of patients at high risk for medication-related problems.

Studies to date have primarily focused on nursing homes. There has been no in-depth study of use of medications on a prn basis in a rest home or domiciliary care facility. Available data indicate that in North Carolina there are 390 rest homes with a total of 16,412 beds.⁵ Our study examines the prescribing of prn medications in one rest home setting. Since the principal caregiver in the rest home by regulation need not be a nurse and typically is a layperson, the decision to administer a prn medication becomes a particularly important one.

Methods

We conducted a retrospective survey of the medications prescribed in a 202-bed rest home facility during one month.

From Charlotte Memorial Hospital, P.O. Box 32861, Charlotte 28232-2861, and Department of Family Medicine, School of Medicine, University of North Carolina, Chapel Hill 27514.

Medical care for the rest home was provided by local general and family physicians.

Each patient's age, sex, race and medications were recorded. Medications ordered for the entire month or a portion of the month were included for analysis. The following data were recorded for each medication order: drug name; drug class (according to the American Hospital Formulary Service classification system); dosage/route/frequency of administration; and whether scheduled or prn. The reason for administration (as stated) was recorded for each prn medication.

All data were entered into a microcomputer and descriptive statistics were computed using standard software packages.

Results

Patient Population: During the study period there were 202 patients living in the rest home. Data were incomplete or unavailable on 13 patients, leaving a study group of 189 patients. The following demographic data characterized the study group: 58% female, 42% male; 74% white, 26% black; mean age 73.2 years; age range 31-96 years.

Medication Orders: We recorded a total of 1,027 medication orders, representing 258 different medications. The average number of medications per patient was 5.4, with a range of 1 to 13. Six hundred nineteen medication orders were scheduled, or 60% of the total (mean 3.3 per patient, range 0 to 10). Prn medications accounted for 408 orders, or 40% of the total (mean 2.1 per patient, range 1 to 7). The most frequent prn medications according to drug class are shown in table 1 (next page). The medication classes most frequently prescribed prn as opposed to scheduled are shown in table 2 (next page).

Prn medication orders specified the drug name 85% of the time; dosage, 81%; and frequency, 50%. "Laxative of choice" accounted for the orders specifying no drug name. The orders omitting dosage were primarily for "laxative of choice" and various topical agents for which no dosage

could be specified. Omission of the frequency of administration, reason for administration and duration of therapy occurred among all drug classes. For example, the reason for administration of prn antihistamines was omitted in 45% of the orders.

Discussion

There are obvious reasons for the existence of prn medication orders. Prn medications are often intended to provide symptom relief for patients with episodic problems. The prn order may increase efficiency and reduce telephone time between the nurse and physician. Furthermore, many of the prn medications prescribed in this rest home are over-the-counter ones, which normally would be available to the patient at home and not ordinarily subject to any degree of control or supervision.

In this rest home, the prescribing of medication was similar to published figures for higher levels of extended care. As in Aycock's report,⁴ laxative/stool softeners, analgesics/antipyretics, and sedatives/hypnotics comprise the top three prn classes. Differences included twice as many prescriptions for antipsychotics, and half as many topical agents in this rest home compared to the nursing homes. These differences are most likely related to variance in prescribing

techniques among physicians and the fact that the patient population in this rest home is somewhat younger, more ambulatory, and more likely to suffer from mental illness (i.e., mental retardation, schizophrenia, etc.).

The prescribing of prn medications should be viewed with greater concern in the rest home setting than in higher levels of care. Commonly, the caretaker in the rest home setting is a layperson with no formal nursing training. Physician involvement may be infrequent or sporadic. In North Carolina, only an annual physician visit is required for rest home patients. Only recently the state has adopted a requirement for semi-annual medication reviews. In contrast, for nursing home patients, physician visits are required every 30 to 60 days and medication recertification every 60 to 90 days.

The scope of the project did not allow documentation of the actual administration of prn medications nor did it allow monitoring of any adverse outcomes. In Aycock's study, 55% of the prn drugs were never administered during the 60-day study period.⁴ We underscore, however, the potential for untoward events.

Other problems among the prn orders, in addition to those already mentioned, included duplication, questionable efficacy, and potential patient harm. As examples of duplication, 14 patients were prescribed more than one laxative prn; nine patients more than one prn analgesic; and one patient, two prn antihistamines. Orders of questionable efficacy included 11 prn stool softners, and one for an antidepressant prn. Orders of potential patient harm included 19 written for aspirin or acetaminophen prn for fever, and six for diuretics on a prn basis (four for edema and one for elevated blood pressure).

Some of these potential problems are of greater concern than others. For example, omitting the reason for administration of a prn laxative would not be likely to cause any confusion for the nurse; but other drug classes may be used for more than one indication, such as antihistamines being used for sleep, or for congestion, or in combination with neuroleptics, and this medication could be administered in inappropriate situations and for reasons not originally intended by the physician. Whether a prn medication is administered appropriately and safely depends very much on the skill and experience of the nurse. Delaying antibiotic therapy of a specific infection while administering acetaminophen for the patient's fever, or treating dependent pedal edema with a diuretic to the point of dehydration and electrolyte imbalance, are possible scenarios.

Several steps have been taken as a result of these observations. We now have guidelines for using prn medications in the rest home (see table 3). To avoid accumulation, all prn medications are discontinued by the nursing staff after one week unless specified otherwise. Medication reviews are now conducted for each patient every six months, involving the medical director of the facility, a consulting clinical pharmacist, the dispensing pharmacist, and nursing staff or caregivers. Although exact figures are not yet avail-

Table 1
Most Frequently Prescribed PRN Medication Classes

	No.	(% Total)
1. Laxatives/Stool Softeners	133	32
2. Analgesics/Antipyretics	132	32
3. Sedatives/Hypnotics	28	7
4. Antipsychotics	24	6
5. Antihistamines	20	5
6. Antacids	14	3
7. Topical Agents	12	3
8. Cough Preparations	9	2
9. Misc CNS Agents	8	2
10. Bronchodilators	6	1

Table 2
Percentage of Orders for a Medication Class Prescribed PRN

	(%)
1. Laxatives/Stool Softeners	87
2. Antidiarrheals	86
3. Antacids	78
4. Analgesics/Antipyretics	74
5. Antihistamines	59
6. Topical Agents	57
7. Bronchodilators	50
8. Sedatives/Hypnotics	42
9. Misc CNS Agents	32
10. Antipsychotics	23

Table 3
Nurse Initiated Floorstock Medications

The following floorstock meds may be administered for the following problems *without* a physician order:

Orders which may be initiated *once per month* without doctor notification:

- 1. *Pain:* Tylenol (325-650 mg) 1 to 2 tabs every 4 hours for pain up to 3 days. Notify physician immediately if severe pain develops. Notify physician within 3 days if mild pain (requiring every 4 hour meds) persists.
- 2. *Fever:* Tylenol (325-650 mg) 1 to 2 tablets every 4 hours up to 24 hours. Notify physician if oral temperature remains greater than 100 for more than 24 hours. If temperature is 101.5 or above, or there are changes in mental status, notify physician immediately.
- 3. *Cough:* Robitussin DM, 1-2 teaspoons every 6 hours up to 5 days. Notify physician if no improvement after 5 days, or if accompanied by temperature greater than or equal to 100 (oral) after 24 hours. Notify physician if cough productive of yellow or green sputum.

Orders which may be initiated *once per week* without doctor notification:

- 4. *Constipation:* Milk of Magnesia 2 tablespoons 3 times a day up to 48 hours or Milk of Magnesia with cascara 1 tablespoon two times a day for up to 48 hours.
- 5. *Heartburn/Indigestion:* Maalox Plus, 1 to 2 tablespoons every 4 hours for up to 48 hours.

NOTE: All unused floorstock medications may remain in the patient's medicine drawer for future use. These are general guidelines only. Nurses should feel free at any time to call the physician if there are any questions or concerns regarding the patient.

- 1 Always provide for the caregiver a clear reason for administration on the prescription order.
- 2 Consider the level of training and clinical expertise of the staff responsible for the administration of medications.
- 3 When prescribing prn, use medications which are generally familiar as to dosing, indications, and potential side effects. Many over-the-counter medications may serve this purpose.
- 4 For chronic problems or complaints, requiring frequent medication administration, consider a standing order for the patient.
- 5 For new symptoms, ensure a mechanism for limiting the duration of medication use and for notification of the physician if a symptom is persistent.
- 6 Become actively involved with the medication review process for the long-term care facilities in your community.

Acknowledgments

The authors would like to thank William McGaghie, Ph.D., and William Sloane, M.D., for reviewing the manuscript.

References

1 Ouslander JG. Drug therapy in the elderly. *Ann Intern Med* 1981;95:711-22.

2 Howard JB, Strong Sr KE, Strong Jr KE. Medication procedures in a nursing home: abuse of prn orders. *J Am Geriatr Soc* 1977;25:83-4.

3 Segal JL, Thompson JF, Floyd RA. Drugutilization and prescribing patterns in a skilled nursing facility: the need for a rational approach to therapeutics. *J Am Geriatr Soc* 1979;27:117-22.

4 Aycock EK, Osemene PI, Sear AM. Utilization of prn drugs in long-term care facilities in South Carolina. *J SC Med Assoc* 1979;68:631-4.

5 Charles Butler. (Verbal Communication). Mecklenburg County Department of Social Services, July, 1987.

able, the reduction in the problems associated with prn medications has been substantial.

The authors recommend that physicians involved in rest home care be aware of the extent of prn prescribing and the potential problems as underscored in this report. Based on our experiences, we recommend the following:

I Only Wear a Raincoat When It Rains

An Anecdotal Philosophy of Patient Management

J. Lamar Callaway, M.D.

Foreword:

J. LAMAR CALLAWAY, M.D.

Lessons from a Leader of Men

How to develop leaders of men? How does one become a maker of people rather than a maker of things? What are the characteristics of a great man? J. Lamar Callaway has become distinguished as a leader and developer of men. By observing his approach to life we may discover lessons which will be useful to young people.

Callaway mastered the technical aspects of his profession. He worked hard and effectively to bring his knowledge of dermatology to a level equal to the level of the superb clinician under whom he trained. He had an advantage over many of his peers because he knew that at the end of his formal training he would return to Duke to join the faculty of the Duke Medical School. His mentors, guiding his professional development, knew

that the time invested in Callaway would pay rich dividends. Callaway would be in a position to encourage students and house staff to become dermatologists and some of these young men would return to Callaway's mentors in Philadelphia.

Callaway joined the Duke Faculty in 1937 when the school was small. Students, interns, residents, junior and senior faculty were engaged in the task of establishing a new medical school. They wished to learn all they could and prove that the graduates of Duke could compete successfully with the graduates of the best medical schools in the country. With young and vigorous associates, Callaway was able to use dermatologic problems as an entry



Perspective

I consider dermatology to be cutaneous medicine. I have never considered dermatology to be a specialty, somehow separate from internal medicine. When you think about skin, whether it is afflicted with warts or hives or poison ivy or more serious conditions or diseases, you have to think of the entire organism from the perspective of internal medicine.* I think that people who don't think of dermatology in this way are wrong.

*The skin is an important organ which often reflects the health of the entire body, as in the case of such systemic diseases as dermatomyositis, AIDS or eruptive xanthomas.

James B. Duke Professor Emeritus of Dermatology, Duke University Medical Center, Durham 27710. From an oral history recorded and edited by James F. Gifford, Jr., Ph.D. Compiled from the Archives, Duke University Medical Center, with financial assistance from The Mary Duke Biddle Foundation.

On Our Common Humanity

I see many a patient who comes in with one or another dermatosis and one of the things that I do, to the chagrin and concern of my nurses, residents and colleagues, is to touch and rub the skin of these persons. And then I take my fingers, and I rub my face. I point out to this person, who is very concerned about the eruption on his arm or leg or wherever, that the lesion is not contagious. He didn't catch it from anybody. He can't give it to anybody . . . to his family, for example, or to friends . . . as I have demonstrated by touching and rubbing my own face after touching him.

On the Authority of the Physician

Not infrequently a patient will ask me how I can be sure of the nature of his problem. In such instances I frequently point to an object on my desk and ask "What is that?" The patient says, "It's a telephone." I say, "Yes, it is a tele-

into the understanding of the lives and problems of the patients seen by the dermatological division. He found his natural home in the Department of Medicine where his associates — Ruffin, Nicholson, Orgain, Hansen-Prüss, Persons, Menefee, Hendrix and Graves — were caring for patients who made their initial contacts with their doctor by diseases involving one or more of the sub-disciplines of medicine. Caring for the person who had the disease became a Duke tradition and Callaway had an important role in establishing and developing this tradition. Callaway disciples are distinguished by this trait of using the skin as the window which allows the dermatologist to view the culture and biology of the patient. The complete dermatologist in the Callaway tradition strives to be the complete physician.

Callaway had the rare ability to relate easily and comfortably to the educated and uneducated, to the rich and poor, to the anxious and depressed, to the hostile and seductive. As a professional, he took pride in his ability to make the adaptations to the patient at hand. He never required the patient to adapt to him. His rare ability to develop metaphors to improve communication with his patients is well illustrated by the anecdotes used by Cal to help his patients cope. These short essays will bring back memories to all of Cal's folk.

Callaway ran a well-ordered shop. He was in the hospital early, rounds were conducted on time, patients' records and letters to referring physicians were kept up to date, conferences were well planned and executed. The chief was always available for consultation on patients or for needed advice on the personal problems of the staff. It was easy to enlist the help of the pathology, microbiology and mycology departments because people liked to work with Cal and his unit. No wonder bright young men joined up with a chief who enjoyed the day and looked on his work as being as much fun as golf.

Callaway loves Duke. He has worked for the improvement of the University, not just for Dermatology. He appreciated the advantage of the Medical School being on the university campus and spent time and energy in creating a climate of mutual trust. Patients love Callaway and they transfer part of that love to Duke. The large patient following and the steady stream of superbly educated doctors peopling the southeast moved Duke into the top tier of medical schools. Scientific and research excellence followed, but clinicians led the way and Dermatology at Duke was in the forefront. You know the names of the Duke-trained dermatologists who are leaders in the discipline. I will not list them here.

Callaway early established a presence on the national scene. He and his charming wife, Kay, have won every honor that Dermatology has to offer. Their personal charm is no small factor in spreading Duke's fame on the national and international scene.

Cal is willing to give of himself to help others. He is secure enough in his profession to enjoy the triumphs of his young men. By example he gives them the wisdom to say, "I don't know" without loss of face.

We return to our question: how to select and develop leaders of men? Callaway offers us some insight. Master your profession. Organize your day so you and your colleagues find the tasks of each day rewarding and satisfying. Understand the people with the diseases, as well as the diseases. Treat the rich and poor alike. Use your specialty to open the window on the totality of your patient. Practice and demand excellence. Use criticism and praise in proper portions to stimulate achievements. Be available at home, but expand your influence to the national arena. Be wise or lucky enough to find a supportive and helpful wife. Love the institution, which you have helped to create, more than yourself.

— Eugene A. Stead, Jr., M.D.

phone, but the Japanese are very clever people and it just might be that this is a Japanese portable radio that is made to look like a telephone and that each of these buttons actually controls the setting for a different station." As he reacts to this I say, "I happen to know that this is a telephone, but I know it because of having seen so many others in the past. In the same way I know the nature of your problem, although to someone less well-trained or experienced it might appear to be something different."

Another example I sometimes use is to ask the patient to think about something . . . a helicopter, for example. Until I first saw a helicopter, I didn't know what a helicopter was, but now that I have seen quite a number, I understand quite well what they are. Similarly, I did not always have an understanding of the problem you are presenting as a patient, but even when I have seen enough of this condition

to recognize it, like the helicopter, I cannot entirely explain it.

First Meeting

I often have to explain to patients, when I see them at the first visit, why I am not getting lots of laboratory studies immediately. I say to this person, "You have boils and you have recurring boils and you have been having recurring boils for the last couple of years." I do not necessarily, at the first visit, get blood sugars and glucose tolerance studies and endocrine gland consultations and internal medicine consultations. I usually elect to outline a treatment program using antibiotics, not over a period of two weeks, but over a span of two or three months, to see if I can sterilize the

skin and improve the environment. Later on, perhaps, I will want more information and a complete medical and laboratory evaluation may be necessary.

One Blue Eye and One Brown Eye

Occasionally we see patients who have very rare dermatoses, and this is, of itself, a matter of great concern to them. I have to explain to these people *why* they have this dermatosis, and I point out to them that the fact of their having a relatively rare condition is of no greater significance than if they had one blue eye and one brown eye. It is, in fact, unusual to have one blue eye and one brown, but I have had many patients with this condition, just as I have had many patients with relatively rare skin conditions that I cannot explain.

Even the Russians Don't Know

There are patients who have, for example, psoriasis, and ask why. I explain to them that some persons are boys and some girls, some persons have psoriasis and some have diabetes. But there is no specific reason why some people develop psoriasis or diabetes, and I usually remark that, although the Russians know almost everything else in the world, even they don't know why some people have these diseases. I then explain that, like diabetes, there is no cure for psoriasis, but there are methods of control. I know of no one who has cured either diabetes or psoriasis. These are conditions rather than diseases. A person does not catch a condition, nor spread it. Conditions like psoriasis are very simple difficult problems . . . a play on words. What is simple is that they have psoriasis, but control may be difficult.*

*Modern therapy, including the rebirth of anthralin and the use of PUVA, have made psoriasis more controllable. Methotrexate is unquestionably a hazardous drug, but it is not universally hazardous. I have given patients 25 grams of methotrexate over a period of many years, and their livers look like the livers of teenagers.

The Oak and the Pine

Here is a patient who has a fungus infection. He sleeps with his wife, embraces his wife in intimate contact, and she never develops the infection. I use the following explanation for this:

In my front yard I have an oak tree which is the healthiest oak tree in North Carolina. It has moss growing on the side. Next to it is a pine tree which has been judged the healthiest pine tree in North Carolina. It has no moss growing on its bark and never will have moss growing on its bark. I may

call out a tree surgeon, and he may remove the moss from the oak, but when he pulls out of my driveway the tree is still an oak. It may have moss again. It may not have moss again. If it does have moss again, this does not mean the tree is sick or that there is anything wrong with its metabolism. It just happens to be an oak. Oak bark grows moss. Pine bark does not grow moss. Some people are born with an "oak bark" type of skin which will support the growth of fungus organisms while other people are born with a "pine bark" type of skin which will not support the growth of offending organisms. (Otherwise, these two people are physically, biochemically and endocrinologically the same.)

On Doing What Is Possible

A lot of people come in with keratoses and they have these barnacle-like growths on their skin and they want to know what to do. I point out that, as a rule, three things are involved. One is heredity, which can't be changed, and one is the process of aging. People over 65 are more likely to develop keratoses than people who are 35. The only factor that can be controlled is sunshine. You cannot control your heredity, nor can you reverse growing older, but you can avoid sunshine or use a sunscreen.*

*With SPF of at least 15.

I Only Wear a Raincoat When It Rains

Every now and then I want to give a patient a course of prednisone. Now I am fully aware that prednisone is a cortisone, that it cannot be used continuously, and I am not going to use it continuously. I am going to use it just for this particular time. I tell patients undergoing this course of treatment that I only wear a raincoat when it rains. I do not wear a raincoat every day, but when it does rain, I wear a raincoat.* I do not want them to take prednisone continuously, but I do want them to take it occasionally or periodically, when they need it to get the relief they deserve.

*Incidentally, wearing a raincoat does not necessarily stop it from raining, and the patient must understand this.

Cadillac Motors in Ford Frames

One of the things which happens when people have atopic dermatitis is that, by and large, they are dynamos. Essentially they have 400-horsepower motors in 200-horsepower frames, Cadillac motors in Ford frames. And this dynamism is what makes people who have atopic dermatitis have flare-ups when they get excited, or when they are frustrated. It

can be pleasant excitement, as at a party, that will cause them to itch or break out. It can be exam time. It can be financial difficulty. It can be tension between husband and wife, or boyfriend and girlfriend.

I also have used this analogy: that there are people who have skin that is tuned like the “E” string on a violin and others who are tuned like a “G” string. An “E” string, when plucked, makes a high pinging sound, where a “G” string simply goes “bong” in sort of a dull way. If a person is highly tuned, he is more likely to react to agents in the environment . . . soaps and detergents, and things of that nature.

Causative and Coincidental Agents

Some of the conditions we encounter in the environment with which we are concerned may be causative agents, while others are simply coincidental agents. I have, on occasion, asked a patient to imagine that he and I are riding together in a car. He may be driving, and I may be the rider. We are both in the car, in the front seat, moving in the same direction at the same speed, but movement depends directly upon the driver and not the passenger. Many times, when we find fungi or bacteria on the skin, they actually are causing no difficulty. They are simply there, passengers but not drivers.

A Rose Is a Rose

Certain kinds of skin cancer have a malignant potential for spreading and others don’t, but to some patients the word cancer is overwhelming. To these I point out that a rose bush, if left alone, may, over a period of years, get larger, but that it never sends out roots to make a second rose bush. Similarly a basal cell skin cancer, if ignored or left alone, may get larger with the passage of time, but regardless of whether or not it is treated* it will never metastasize to other parts of the body.

*This does not mean that basal cell carcinomas should not be treated. All skin cancers require appropriate therapy, from simple excisions to repeated curettage, and electrodesiccation or Mohs’ therapy with plastic surgery when appropriate.

I Do Not Shoot a Rabbit with an Elephant Gun

People have come to me with acne and, having heard about Accutane, want me to prescribe it. I explain to them that this is a very potent medication with an associated course of treatment lasting for 20 weeks and that, for the moment, I don’t feel they need it. I point out that I do not shoot

rabbits with an elephant gun. I shoot elephants with elephant guns, but never rabbits with elephant guns. It simply is my judgement that they do not need at this time to be on so potent a medicine as Accutane. But if I do not discuss Accutane, they think that I do not know that it exists. So it is important to explain the reasons for not using it. Similarly with dermabrasion. Here is a person that has some scars from his acne, and he wants to have his face sanded. I just believe that dermabrasion is expensive, often unnecessary and likely to produce as much scarring and other difficulty as he already has. So I make every effort to talk him out of having the dermabrasion done and yet, if after our conversation he still wants the procedure he may have it done — but by some other physician.

Confrontation and Dialogue

It is amazing to me that there are persons who will deliberately destroy their skin. I have seen people who have taken fecal material and put it into a syringe and injected it into their faces and into other areas of their bodies, producing massive foul-smelling abscesses. They do that to get attention. I have seen people who have scarred their skins with razors or burned them with chemicals, also to get attention. I am told by the psychiatrists that I am not to confront them with this because if I do, they may develop problems much more threatening than what is going on with their skin. With these people I say, “You know what is causing this eruption, and I know what is causing it. I am not going to tell this to anybody, and you are not going to explain this to anybody. But since you and I both know what is causing the eruption, why don’t we agree today that we are just going to see that it does not happen again.”

On Compliance

When I was a medical student, I saw a patient in the clinic who had some hemorrhoids and some stomach problems and a cough . . . a variety of things . . . so I gave him four or five medications, among them suppositories which he was supposed to use. When he got these prescriptions filled, all of them were labeled “as directed.” He came back to see me two weeks later, much improved, and said, “Dr. Callaway, I am better than when I saw you before, but those big greasy things that I took, they tasted horrible.” I said, “Don’t tell me that you actually chewed them, that you took those greasy things?” He said, “I certainly did. You didn’t think I was going to shove them up my rectum, did you?”

So I learned early in my life as a medical student that it is important that you give people specific directions and you explain to them exactly what is going on. And that you

pay attention to the whole individual, treating the person who has a medical problem rather than the cutaneous case with an itching spot here or there. Patients get home, and they discover sometimes that they don't remember exactly what I have told them. If on the next day, after they get

home, they get a black and white copy of what I have said, that I want them to take this tablet, use that lotion, avoid strong detergents or drink decaffeinated coffee, they are much more likely to get a good result than if they carry home five medicines to take "as directed."

J. Lamar Callaway, M.D.

J. Lamar Callaway was born in 1911 in Cooper, Alabama. After pre-medical studies at the University of Alabama, he received his M.D. from Duke University School of Medicine in 1932. He trained in dermatology at the University of Pennsylvania, returning to Duke in 1937 to start the Division of Dermatology. In 1946 he was named Professor and Chairman of the Division of Dermatology in the Department of Medicine at Duke and in 1967 James B. Duke Professor of Dermatology. Dr. Callaway is a past president of the American Academy of Dermatology, the American Dermatological Association, the American Board of Dermatology and the Society of Investigative Dermatology. He is author or co-author of some 200 publications.

In 1972 the American Academy of Dermatology awarded Dr. Callaway its Gold Medal, only the eighth

awarded since the founding of the Academy in 1938. Dr. Callaway also has been awarded the Stephen Rothman Award by the Society of Investigative Dermatology. Dr. Callaway has served as president of the Southeastern Dermatological Society, president of the Masters Dermatological Association, chairman of the Section of Dermatology of the North Carolina Medical Society, the Southern Medical Association, and the American Medical Association. Dr. Callaway has served as consultant to the major military services of this country, to the National Serology Council, and for five years as chief consultant in dermatology to the Surgeon General of the United States. Of the more than 75 physicians Dr. Callaway has trained as dermatologists, nine have gone on to become heads of departments of dermatology at other medical schools. ■



Unique Boutique
Pamper Your Femininity

*After Breast
Surgery
Consultants*

If you have had breast surgery, we would like to invite you to the shop that specializes in servicing all of the needs of the mastectomee. We carry a variety of breast forms and bras that enable us to provide a custom fit specifically for each individual. We also have accessory items helpful during stages of reconstruction or after lumpectomy surgery. In a cozy intimate shop with a relaxed environment, you will receive service and understanding from women who have shared your experience.

FOR BETTER SERVICE AND FIT VISIT

UNIQUE BOUTIQUE

1819 E. SEVENTH STREET
CHARLOTTE, NC 28204
(704) 377-4356

HOURS: MON-THURS 10 AM-4 PM
FRIDAY 10 AM-2 PM
SAT. BY APPOINTMENT

The Practice of Radiology in North Carolina, 1979-1989

A Survey of All Practices in the State

Bonnie C. Yankaskas, Ph.D., Edward V. Staab, M.D., and Eilene Z. Bisgrove, MSPH

A survey of all radiology practices in the state yielded information on their distribution, internal characteristics, manpower needs, and predicted changes over the next five years.

The medical community as a whole has voiced much concern recently over physician distribution and projected needs. In 1983, the Graduate Medical Education National Advisory Committee (GMENAC) published a report predicting an excess of 145,000 physicians in the United States by the year 2000.¹ In Diagnostic Radiology, the GMENAC prediction was for an excess of 6,000 by 1990.

The American College of Radiology created a committee on manpower to examine the issue. In the 1970s, the data had suggested that there was a balance, with neither a substantial shortage nor an impending surplus of radiologists. By the mid-1980s the committee found it evident that in radiology, as in most of the other specialties, there would be an oversupply of certain physicians by 1990. The College reported a likely oversupply of radiation therapists, and a more equal distribution of other radiologists.²

Our decision to undertake the current survey of practicing radiologists in North Carolina was based on a need for information on our own state. With the response rate in the College's national study at 50%, and the actual number of North Carolina radiologists in the study extremely small, the results were not thought to be necessarily representative of our state.

Our study used as its sample all practicing radiologists in the state of North Carolina. The specific objectives were

to examine the present distribution of radiologists, their practice structures, and the types of studies they were performing, and to estimate the changes that would occur in the next five years.

Questionnaire Development

The questionnaire was developed to include questions covered both by GMENAC and by the original American College of Radiology study, as well as additional questions proposed by a committee of radiologists from the North Carolina Chapter of the College. The questionnaire was pretested by radiologists in practice at the university as well as physicians in practice in the community, by both private practices and hospital practices, and by radiologists in solo and group practices.

In its final form, the survey consisted of three mail questionnaires: the solo practice questionnaire included questions on the practice and the individual radiologist; the group practice questionnaire included questions on the total group practice; and the individual questionnaire included one page of questions for each individual radiologist within the group practice. The questionnaires are available upon request from Dr. Yankaskas at UNC.

A solo practice was defined as a practice with only one full time-equivalent radiologist. If the responding radiologist considered his or her practice a solo practice, this was not questioned. The individual questionnaires were sent through the group practices. Return-addressed, stamped envelopes were provided, and there was extensive follow-up.

From Department of Radiology, Old Clinic Bldg CB #7510 University of North Carolina School of Medicine, Chapel Hill 27599. Dr. Staab is presently Chairman, Department of Radiology, University of Florida College of Medicine, Gainesville 32610. This research was supported in part by the North Carolina Chapter of the American College of Radiology.

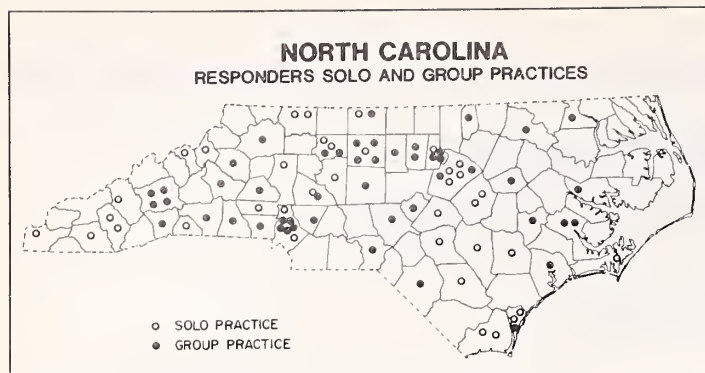


Figure 1. Geographical distribution of practices responding to questionnaire.

Population

Rather than sample the radiologists in the state, the decision was made to include the entire population of radiologists in active practice in the state. The membership list and non-member list of the North Carolina Chapter of the American College of Radiology were used as the base. It was assumed that there were very few, if any, practicing radiologists in the state who were not on these lists. Solo practice questionnaires were mailed to 55 radiologists, and group questionnaires were mailed to 54 group practices along with 285 individual questionnaires for the radiologists associated with these groups. The nonmembers who responded were placed in the appropriate category, group or solo practice.

The final sample included 63 group practices comprised of 318 individual radiologists, and 47 radiologists in solo practice.

The questionnaires were mailed in late August, 1984. Phone follow-up was done to raise the response rate at three different times. The response rates were 78% for the groups, 69% for the individuals within the groups, and 79% for the solo practitioners. Close to 80% response is very high for a mail survey. (In comparison, the American College of Radiology studies had between 50% and 60% response rates.) The non-responders were spread around the state, and were from both solo and group practices. There were no distinguishing factors about the non-responders that should bias our data.

Figure 1 is a map of all of the practices in the state, solo and group, which responded to the mailed questionnaires. Figure 2 is a map of the solo and group practices that did not respond. The spread is relatively even.

Results

Three hundred eighteen radiologists in 110 radiology practices across North Carolina identified themselves to us in 1984. Sixty-three (57%) of these practices were group practices, and 47 (43%) were solo.

The results are presented separately for solo and group practices. The solo practices in North Carolina are predom-

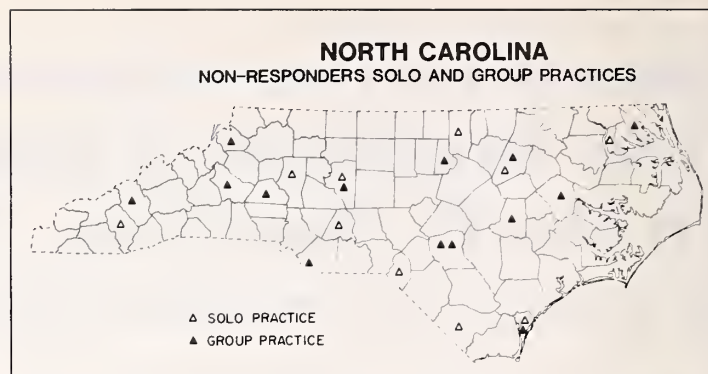


Figure 2. Geographical distribution of practices not responding to questionnaire.

inantly hospital practices, with 75% wholly within hospitals. Nineteen percent of solo practices are office-based only, and two solo practices have hospital and office bases. In comparison, all but one of the group practices are hospital based, with 45% having hospital and office sites, and 53% having hospital sites only. Seventy-two percent of the solo practices are in towns of 50,000 or fewer people, while 56% of the group practices are in areas of greater than 50,000 population (table 1).

The majority of solo and group practices are associated with private non-profit hospitals. Table 2 shows the distribution of hospital types by practice type. Fifty percent of groups and solo practices are in private hospitals.

The average annual numbers of examinations are shown in table 3. Angiography and computed tomography (CT) are done in most group practices, but in less than a quarter of the solo practices. Outside of general x-ray and fluoroscopy, mammography and ultrasound (US) are the most frequently performed studies in solo practices, and nuclear medicine (NM) and CT are the most frequently performed studies in group practices.

The solo practitioners on the average spend 83% of their

Table 1
Population of Geographical Area Served

	Solo		Group	
	n	(%)	n	(%)
< 10,000	10	(27.8)	1	(2.1)
10,000-25,000	10	(27.8)	9	(18.8)
25,000-50,000	6	(16.7)	11	(22.9)
> 50,000	10	(27.8)	27	(56.2)

Table 2
Types of Hospitals Served

	Solo		Group	
	n	(%)	n	(%)
Private non-profit	20	(50.5)	40	(54.0)
Proprietary	7	(17.5)	9	(12.2)
Government	12	(30.0)	19	(25.7)
Other	2	(5.0)	6	(8.1)

Table 3
Average Annual Number of Examinations per Practice

Exam	Solo Practices			Group Practices		
	<i>n</i> *	mean	(range)	<i>n</i> †	mean	(range)
X-ray	28	14,803	(1500-95,000)	36	51,244	(5,500-155,800)
Fluoro	26	1,488	(100- 3,600)	36	6,486	(546- 40,000)
Angio	7	42	(15- 150)	30	1,846	(8- 12,126)
Mammo	17	996	(40- 4,000)	35	1,837	(130- 25,000)
CT	8	527	(15- 2,400)	31	3,736	(230- 12,000)
US	20	908	(30- 4,800)	36	2,088	(500- 6,800)
NM	16	466	(60- 1,500)	29	4,068	(410- 32,734)
MRI	1	900		2	875	(800- 949)

* *n* is number of solo practices responding with values not equal to 0

† *n* is the number of group practices responding with values not equal to 0 (means do not include 0)

time doing clinical work, 11% doing administrative work, 5% doing educational work, and less than 1% in research. Seventy-seven percent of solo practices and 79% of group practices are compensated on a fee-for-service basis. Fourteen percent of solo and group practices are salaried. The remainder are on a percentage basis.

When asked about present size of practice compared to five years earlier, 40.6% of solo practices and 78% of group practices were larger; 31% of solo and 14% of group practices reported being smaller; and the remainder reported no change. Twenty-eight percent of solo practices had lost a radiologist in the past five years, and 45% of group practices had lost at least one radiologist. The reasons for radiologists leaving practice are shown in table 4. Moving and retirement were the main reasons.

When asked to project for the next five years, 42.9% of solo practices and 62.5% of group practices predicted increasing practice size, with only 8.6% of solo practices and 10.4% of group practices predicting a decrease. Nearly twice as many solo practices (48%) as group practices (27%) projected staying the same size.

Table 5 shows the number of radiologists hired by group practices over the past five years, and the number projected to be hired over the coming five years. Over the past five years, and continuing into the near future, both general diagnostic radiologists and radiologists with specialized training are in demand.

Table 4
Reasons for Radiologists Leaving Practice

	Solo		Group	
	<i>n</i>	(%)	<i>n</i>	(%)
Retirement	4	(40.0)	10	(20.8)
Death	1	(10.0)	1	(2.1)
Move	3	(30.0)	25	(52.1)
Change Specialty	2	(20.0)	12	(25.0)

Table 5
Number of Radiologists Hired

Specialty Hired	1978-1984	Projected '85-'88
	<i>n</i>	<i>n</i>
General	30	15
Therapy	6	3
Diagnostic Imaging	10	4
Neurology	2	2
Neurology	6	5
Computed Tomography	8	4
Ultrasound	6	1
Vascular	2	2
GI/GU	1	1
Angio/interventional	5	7
Nuclear medicine	3	1
Total*	79	47

* There were 79 radiologists hired among 35 practices. There were 47 radiologists projected to be hired among 19 practices.

Results: Individual Radiologists

The data from individual radiologists represents all of the 37 radiologists in solo practices and the 218 radiologists from group practices that responded. The great majority of the practitioners are male, 97% of solo and 95% of group practitioners. The mean age is 49.8 for solo and 45.7 for group practicing radiologists.

Ninety-two percent of the solo practitioners and 95% of the group practitioners work full time. Among the solo practice radiologists, 51% are certified in general radiology,

Table 6
Location of Training

	Solo Practice <i>n</i> = 37		Group Practice <i>n</i> = 218	
	<i>n</i>	(%)	<i>n</i>	(%)
North Carolina	8	(26.6)	84	(40.2)
South	9	(30.0)	42	(20.1)
Northeast	3	(10.0)	36	(17.2)
Midwest	5	(16.7)	21	(10.0)
West	2	(6.7)	17	(8.1)

Table 7
Years in Present Practice Position

Years	Solo Practice <i>n</i> = 37		Group Practice <i>n</i> = 218	
	<i>n</i>	(%)	<i>n</i>	(%)
1-5	11	(31.4)	67	(31.0)
6-10	13	(37.1)	70	(32.4)
11-15	5	(14.3)	28	(13.0)
16-20	2	(5.7)	22	(10.2)
> 20	4	(11.4)	29	(13.4)
Mean, (range)	9.8	(1-35)	10.7	(1-41)

31% in diagnostic radiology, 11% in nuclear medicine and 6% in therapy. Among the radiologists in group practices, the specialties are 45% general, 46% diagnostic, and 5% therapy.

Table 6 (previous page) presents the training locations of the radiologists. Fifty-six percent of the solo radiologists were trained in the South (26% in North Carolina), and 60% of the group radiologists were trained in the South (40% in North Carolina). In both groups of radiologists, about 85% had at least one year of clinical training prior to their radiology training, and 22% of the solo and 35% of the group radiologists had done a fellowship.

Table 7 shows the length of time that the radiologists had been in their current practice locations. In both settings the average was 10 years, with 30% having been in their current locations less than five years.

Limitations of the Data

In any survey, the results are only as good as the data collected. Not all practices responded to all of the questions. The answers were most complete to the questions about the present. Answers were least complete in response to questions about the future.

To questions about percent distribution in the future, several of the group practices responded by just indicating arrows of increase or decrease, without indicating a number. While these responses could not be quantified, they followed closely the responses where actual numbers were used, and further support the trends reported.

Because the numbers are small in some of the subdivisions of the data, there is wide variance around the means. This may account for lack of differences in some instances, or vice-versa. This was a complete sample, and should be representative of what is happening in radiology in North Carolina.

Comparisons With Other Studies

This survey should be more useful to North Carolinians than the prior reports. The 1983 GMENAC Report was done

with the Adelphi Method, and not from a collection of raw data. The initial American College of Radiology report was done with a "common sense approach" of collecting data from other published sources. The College task force was formed to address the manpower issue. They have issued three reports to date, all as updates to the original report. The original report was carried out by surveying new members of the American Board of Radiology. The response rate of that first survey was only 42%. In the early 1980s a practice survey was conducted with a random sample of all certified and non-members of the College, this time with a 50% response rate. Our survey is the first to collect data on all practices in one geographical area, and to sample from practices, rather than from radiologists.

The American College of Radiology manpower survey enumerated radiologists. In their 1982 report, based on a 42% response rate, 15% of the radiologists were in solo practice.² In North Carolina, 47 of 318 radiologists in practice in 1984 were from solo practices, also 15%. However, 42% of the practices in North Carolina were solo practices. This seems large, and coincides with the population distribution in the state, where most of the population live in small towns of fewer than 50,000. There are no data for comparison, as other studies have not had practices as their denominators.

Current Practice of Radiology

Geographically, the practices cover most of the state. Solo practices are more abundant in the more rural areas, and group practices in the more urban areas. However, solo practices are also represented in large population areas. The patterns of urban solo practice resemble group practices more than rural solo practices.

Comparing solo practices to group practices statewide, we found that all but one of the group practices have a hospital base, whereas 19% of the solo practices are in offices only. Group practices have multiple offices, whereas solo practices tend to be in one office. Whereas 16% of solo practices serve two or more hospitals, 43% of the group practices serve two or more hospitals. The distributions of types of hospitals are similar.

In solo practices, general x-ray and fluoroscopy accounted for a larger percentage of practice time than they did in group practices, where imaging, neuroradiology and vascular, including interventional, radiology made up a larger percentage of the practice time. Magnetic Resonance Imaging (MRI) is practiced by group and solo practices in urban areas only.

Practice Changes, 1980-1984

Growth is evident in both solo practices and group practices. Over the past five years, solo practices bought on the av-

erage 2.4 pieces of equipment per practice, and group practices bought an average of 2.8 pieces. Ultrasound units were a large item in both settings; computed tomography units were a large item bought by many group practices. Both solo and group practices have seen growth in patient population over the past five years, with 40% of solo practices and 78% of group practices reporting growth.

Future Practice of Radiology

Riemenschneider has said that training residents who are unable to find a place to practice is irrational and a profligate waste of human and economic resources.³ At least in North Carolina, there is a predicted need for more radiologists for the short term. Solo and group practices predict that they will continue to grow over the coming five years. Seventy-seven percent of solo practices and 44% of group practices plan to add to their present office space, and predict hiring

more radiologists. Hiring trends are toward specialty training in group practices and more generalists in solo practices; and specialists in neuroradiology, bone and vascular radiology are to be recruited in solo practices as well. The rate of hiring is predicted to be about 2.5 radiologists per practice over the next five years. ■

References

- 1 Graduate Medical Education National Advisory Committee to the Secretary, DHHS, GMENAC Summary Report. Washington, D.C.: U.S. Government Printing Office, DHHS Publication No. (HCR), 1981, pp.81-651.
- 2 American College of Radiology. Manpower III. A report of the ACR Committee on Manpower. Chicago: American College of Radiology, 1982.
- 3 Reimenshneider PA. Radiology manpower: where are we? AJR 1986;146:172-3.

Personal Computer Software That Let's You Get A Handle On Your Retirement Plan

REACT SYSTEMS software offers an economical and efficient means of preparing accountings, investment performance evaluations, and other plan reports.

It is particularly well suited for plans with segregated accounts, a broad range of investments, multiple investment managers, participant loans, and other difficult characteristics.

*Take charge of your retirement plan. Produce reports
WHEN you want them, AS OFTEN as you want them and
REDUCE plan administrative costs in the process.*

Please send more information to:

Name _____
Address _____

Phone (____) _____

**REACT
SYSTEMS**

P. O. Box 17487
Raleigh, NC 27619
919-787-7310

"High Quadriplegia— The Ultimate Challenge"

Plan to attend:

**A two-day symposium
at Colony Square
Atlanta**

April 7-8, 1988

Registration: \$225

Symposium
Co-Chairmen

David F. Apple, Jr., M.D.
Medical Director

Donald P. Leslie, M.D.
Medical Director
High Quadriplegia Program

A medical symposium addressing the acute and rehabilitative care of the C-1 through C-4 high quadriplegic. Hosted by Shepherd Spinal Center in Atlanta, now the nation's largest dedicated spinal cord injury hospital. Issues to be investigated include: medical, psychosocial and high tech approaches to care and rehabilitation. Special emphasis on ventilator weaning, the interdisciplinary care approach, phrenic nerve pacer implants and community reintegration.

Symposium Preview:

High Quadriplegics: They Can Go Home Again

With high quadriplegics surviving at unprecedented rates, quality of life issues and discharge planning are of paramount importance from the first

day of admission to the specialty setting. The philosophy of treatment at SSC will be covered, including the referring physician's role in long-term medical management.

Medical Overview: Care of the High Quadriplegic

The potential for complications such as deep vein thrombosis, stress ulceration, decubitus, pneumonia, urinary tract infections and sepsis poses a serious threat to high quadriplegic patients. Prevention strategies, the benefits of early mobilization of ventilator dependent patients and medical management of complications are covered.

Ventilator Weaning

All high quadriplegics at Shepherd Spinal Center are evaluated to determine their candidacy for phrenic nerve pacer implants and their potential for weaning from mechanical ventilation. The pulmonary evaluation studies performed at SSC and protocols for weaning are included.

Panel and Concurrent Session Topics:

- Pulmonary Issues
- Social Work: Discharge Planning, Peer Support, Sexuality
- The Therapeutic Value of Sensory Experience
- The Biofeedback Program at SSC
- Ventilator Home Care
- Focus On: Phrenic Pacer Implantation
- Departmental Presentations by O.T., P.T., Recreation Therapy, Social Work, Respiratory Care, Education, Nutritionists
- Emphasis on specialized equipment

For Physicians Only:

Grand Rounds at Shepherd Spinal Center

REGISTRATION IS LIMITED. Reserve your space today, by sending a check for \$225, payable to Shepherd Spinal Center, to: Lesley M. Hudson, Symposium Registrar, Shepherd Spinal Center, 2020 Peachtree Road, N.W., Atlanta, GA 30309. Confirmations of early registrations and a symposium information packet will be mailed in October.

High Quadriplegia— The Ultimate Challenge

Name _____

Specialty _____

Address _____

City _____ State _____ Zip _____

Check one: ☐ Check enclosed.
Reserve my space now.

☐ Please send a
complete information
packet.

Case Study: Larry McAfee

Diagnosis: C-1 Complete

Prognosis: Promising

Contact the Admissions Office for routine information. A physician is on 24-hour call to assist in emergency arrangements.

When 28 year-old Larry McAfee was brought to Shepherd Spinal Center as a result of a motor-cycle accident in late 1985, he was classified as a C-1 complete spinal cord injury. He was suffering from severe burns on his right ankle, massive atelectasis, pneumothorax and pneumonia. Paralyzed instantly at the first cervical vertebrae below the brain stem, he required mechanical ventilation for breathing.



The road to a meaningful quality of life has been a long one for Larry, requiring intensive medical care, rehabilitation, counseling—and Larry's own unsinkable spirit.

We couldn't promise Larry miracles, but we could promise him the care of the largest rehabilitation hospital in the nation specializing in paralyzing spinal cord disorders, Shepherd Spinal Center in Atlanta. With the help of various adaptive devices and skilled attendants, it is possible for Larry to live independently

in an apartment since his discharge from Shepherd. He now actively pursues his goal of a career as a computer programming consultant.

At Shepherd Spinal Center, our ultimate challenge is to assist patients like Larry in a comprehensive High Quadriplegia Program, (C 1-4). We involve referring physicians in all aspects of discharge planning for follow-up medical supervision with the hope that patients like Larry will go home again.

Your patients count on you. Accept the challenge and work with us...for them.

The Georgia Regional Spinal Cord Injury Center/Fully Accredited by CARF and JCAH/Designated "Model Spinal Cord Injury Program" by U.S. Dept. of Ed./Now offering a comprehensive Spina Bifida Program/Nation's Largest Dedicated Spinal Cord Injury and Disease Treatment Facility.

 **Shepherd
Spinal Center**

2020 Peachtree Road, NW
Atlanta, Georgia 30309
(404) 352-2020

Letters to the Editor

What's the left hand doing the right doesn't know? To the Editor:

The September 1987 North Carolina Medical Journal published an article entitled "AIDS" as an excerpt of the Interim Report of the AMA on the prevention and control of AIDS (48:433-8). It says the prevalence and expected growth of AIDS has been severely underestimated. This corresponds with a recent media report which stated there was evidence government figures had purposefully been underreported in order to minimize alarm to the general public. By the mid 1990s one in ten of U.S. deaths will be AIDS related according to a speaker I recently heard.

The NCMJ article is interesting but if one believes that the medical profession and social planners don't know how to approach this dilemma the article only reinforces that view. The article gives few specifics of how to control or prevent. It speaks to possible infringements of civil rights of the AIDS group but little about the rights of the general public to be protected from this public health dragon. About the legal issue (tort as well as criminal) which arises when a person who knows himself to be infected does not advise or warn his sex partner, it recognizes the problem but offers no recommendation other than one of consideration. The article then says, "Pre-emptive sanctions are not being endorsed by this recommendation."

It recommends the convening of a major forum to begin the discussion of the planning of an educational format for AIDS control. One only needs to recall the dubious advice given to the N.C. General Assembly earlier this year about mandatory testing for targeted categories and how MDs and Public Health spokespersons railed against them. Their advice was rather for education with no real plan in hand. As shown in the AMA report, there is no plan and so the advice was without basis or experience; it represented to me opinion based on a hunch and the hope of being right. One has to worry about the logic that says the innocent and not-so-innocent will completely change their sex habits and mores based on AIDS education. Many parents won't even allow or acknowledge the need of discussion of sex or safe-sex with their own children. Equally adult sexual attitudes are just as recalcitrant in many adults who find nebulous reasons for continuing their sexual practices unchanged; only the specter of disabling disease and death, or fear of the law, will reach most of these people.

Illinois and Louisiana have passed mandatory laws. N.C. Medicine is going to have to be aware that the public is not stupid and is aware that nothing is being done. Here again we will probably see the medical profession having to catch up with public and political attitudes — not an unusual position of reacting rather than showing early and out-front leadership.

The article states forthrightly that "those who are infected must be identified so that they will not unknowingly transmit the disease to others." However, there is no call for mandatory testing in any category. Further it states, "the key to changed behavior is public education coupled with counselling which must be given by physicians and other health care counsellors." Yet it appears to me that the onus of required testing would be a major educational factor due to the awareness that would go with it. This message would tell the public that testing has government sanction and the government is serious about controlling a deadly disease whose victims are highly infective and are also walking time-bombs.

Much has been written about various reasons for not testing and emphasizing education. It appears strange that the medical profession is delaying knowing all it can about the epidemiology of this disease, and at the same time willing to justify their position by using "cost-effectiveness" as the reason. It gives one concern about care and procedures — many certainly not "cost-effective" — that are defended regularly as ethically justified and our responsibility. In fact, I can't recall organized medicine ever going on record as saying that any substantive category of health care cost too much.

My greatest disappointment in the article was the absence of spirit for action of the medical community. Where are the zeal, lack of intimidation, and willingness to make the hard decisions that were present in earlier decades when syphilis, polio, smallpox, leprosy, malaria, and typhoid were prevalent?

Recently an AIDS testing facility was placed at UNC-CH for students, faculty, and community. This appears incongruous as we are told N.C. is a low incidence state; and that there are far too many false-positive and false-negative results — which cause apprehension. In fact, it seems that the cost and the questionable results of testing causes it to be of limited value. So why turn loose a testing facility in a university community?

After much thought on this I have come to the conclusion that something is missing — we aren't told all of it. I felt much the same way when the specious explanations of the Bay of Pigs fiasco were given. Why the cover-up and delays? Is medicine a part of it? If it is not bureaucratic inefficiency hidden behind "cost effectiveness," then it is probably of a more serious concern.

The worse case (and it may have plausible deniability) I can imagine is that certain cultural, governmental, and scientific groups may have special biases that would surreptitiously influence public policy to protect against the revelation of the propensity to AIDS in certain groups. If one considers this possibility then the political impact of testing

becomes obvious if it showed AIDS prevalence in not only the already identified groups but also in the governmental, artistic, scientific, academic, and wealthy groups. Are special interests keeping us from our intended role? Hopefully our credibility is not being placed at risk.

John R. Gamble, Jr., M.D.
108 Doctor's Park, P.O. Box 250
Lincolnton 28092

A comment on Dr. Dykers's article

To the Editor:

I have just finished re-reading the article by Dr. Dykers (NCMJ 1987;48:661-3). Initially I chose to ignore this compilation of fear and paranoia. However, the more I read certain of his phrases the more concerned I became lest the rest of North Carolina's citizens assume that he speaks for all of their doctors.

I have more fear that Dr. Dykers may be able to establish his approach to this terrible disease than I have of the disease itself. His article contains enough panic to completely preclude any rational belief that society is "civilized sufficiently" to function within the bounds of his proposed model. His model has been proposed and used once in this century already. The "FINAL SOLUTION" of NAZI Germany.

This article did not speak to any medical issues except as could be described as a function of a police power. Other than creating a world divided as to persons testing either positive or negative, Dr. Dykers has not addressed even the issue of simply offering care to those sick with AIDS. Perhaps he will extend his remarks in a later issue as to how the numbers of persons he suggests be tested be done in the most expeditious and cost effective manner and with a test that does not create false information.

Jack A. Koontz, M.D.
1919 Sherwood Drive
Greenville 27858

A whale of a buy! Catch 22 anyone?

To the Editor:

Anyone anticipating a change (or modified retirement) in their medical practice should have a close look into their liability coverage and its effect on that change — or subsequent changes.

Imagine that someone is a class 5 policyholder (general surgeon or a higher risk), eligible for the free buy out, and is planning to retire — closing his office. Then or later this person wishes to obtain a lower class policy in order to do administrative work with minimal patient care requirements, stay on the staff of his hospital, do an occasional general practice procedure, fill in for someone, take hospital call for someone, do some free work — write an Rx — for an old patient friend, or do free work in an indigent clinic. In order to do any of this, this person must have insurance that is prohibitively expensive.

On numerous occasions I telephoned the office of Medical Mutual Insurance Co. of N.C. and consistently was told

that one could not move downward in coverage unless one paid a two-year premium buy out on the class 5 policy, and then bought the policy he needed to cover the lesser level of practice. I have since been told by letter (as the result of a company executive's seeing a draft of this statement) that one may buy the Class 5 coverage for two years and perform only the lower level of practice for those two years. In doing this, however, there is no premium credit or rebate for not using that part of what was originally presented as free coverage at the end of the higher exposure. This position exists although a spokesman states, a physician "... continuing practice even though it may be at significantly reduced exposure dictates that we continue to charge a 'regular' (my word) premium . . ." Regardless of the route chosen, there is no escape from paying for two years of higher premium malpractice insurance before one may buy the lower level of coverage at the going rate. If one buys the lesser policy and plans to practice less than 20 hours a week, after the two-year wait, there is a moderate discount on the premium of the lesser policy.

In other words, by choosing a lesser insurance category one actually loses the monetary value of the free tail-end of the Class 5 or that part which is above the level at which you wish to practice. There appears to be no reduction in the premium for a tail-end two-year Class 5 policy although one would have discontinued Class 5 (and Class 4, 3, or 2 if one chooses Class 1 coverage) activity. If one does not purchase both policies — I was told — he cannot engage in any activity that requires a license to practice medicine. Even buying coverage in another company would nullify the status for the free tail-end coverage because in order to get the free tail-end one has to certify that he or she is not engaging in medical practice. It appears that this condition would even limit one's ability to become employed where malpractice is furnished.

What makes the paying for the free tail-end incongruous is that any claim (claims made) arising out of the time-frame of the Class 5 coverage is distinctly identified and as such is covered by that entitlement; while any claim (claims made) that arises out of the later and lesser coverage is also identifiable by the time-frame and the liability for it covered by that policy.

I do not know the industry-wide policy. I do feel that policyholders who are approaching age 60 or considering a practice change need to be aware of their company's guidelines affecting it. Medical Mutual needs to take another look at the rationale of their rules affecting these situations and to furnish their clients an updated printed explanation of all the terms affecting these situations.

I appreciate any problems you may have understanding all of this, for I did too. I offer what I have determined after a number of telephone conferences and having received a lengthy letter of explanations of the protocol and reasons for these rules of getting coverage after the tail-end period. Indeed, it appears that one has to buy a whale before he can buy a fish. I have paid my Class 5 premium under protest and am asking for a hearing.

John R. Gamble, Jr., M.D.
P.O. Box 250
Lincolnton 28092

Bulletin Board

New Members

Linda Jean Williamson, P.O. Box 35171, Greensboro 27425

Buncombe

Stephen Eugene Buie (P), 49 Zillico St., P.O. Box 1101, Asheville 28804

William Raymond McKenna (ID), 445 Biltmore Center, Ste. 404, Asheville 28801

Keith Richard Olbrantz (R), 445 Biltmore Ctr., Ste 301, Asheville 28801

Eric David Reines (ID), 445 Biltmore Ctr., Ste. 404, Asheville 28801

Steven David Roos (AN), 104 Windward Dr., Asheville 28803

Glenn Norman Seigel (P), P.O. Box 1101, Highland Hospital, Asheville 28802

Catawba

Jeffrey Alan Baum (ORS), 250 18th St. Cir. SE, Hickory 28602

Michael Bradford Huggins (GS), 610 4th Ave., NE, Concord 28613

Cleveland

Steven Allison Chamberlain (OBG), 110 W. Grover St., Shelby 28150

Paul Douglas Johnson (OBG), 110 W. Grover St., Shelby 28150

Davidson

James Edward Reid, Jr. (AN), 103 W. 6th Ave., Lexington 27292

Durham-Orange

Lee Farrel Allen (RESIDENT), 5519 Wescott Place, Durham 27712

James Andrew Alspaugh, II (STUDENT), 101 Homestead Rd., Apt. 1113, Chapel Hill 27514

Douglas Carter Anthony (PTH), Box 3712, DUMC, Durham 27710

Frank Hugo Biscardi (RESIDENT), Laurel Ridge Apts., #29K, 54 Bypass, Chapel Hill 27514

John David Buckwalter (AN), Rt. #7, Box 60, Durham 27707

Stefano Luca Cazzaniga (STUDENT), 1611 Duke Univ. Rd., Apt. 1-E, Durham 27701

Charleen Tan-Ching Chu (STUDENT), 1913 Erwin Rd., Apt. A, Durham 27705

Ralph Gerard Dacey, Jr. (NS), UNC 148 Burnett-Womack Bldg., Div. of Neurosurgery 229-H, Chapel Hill 27514

Thomas Craig Derian (ORS), 101 Conner Dr. Ste. 200, Chapel Hill 27514

David Barkley Farris (STUDENT), 311 S. Lasalle St. Apt. 4A, Durham 27705

Mark William Featherston (STUDENT), 134 Landsbury Dr., Durham 27707

Pamela Ann Geertgens (STUDENT), 311 S. Lasalle St, Apt. 47B, Durham 27705

William Paul Hummel (RESIDENT), Dept. of OBG-UNC, CB #7570, MacNider Bldg., Chapel Hill 27514

Jerome Hahn Kim (IM), 202-11 Pinegate Circle, Chapel Hill 27514

Thomas Lee Mason (STUDENT), 20-H University Lake Apts., Carrboro 27510

Charles Henry McDonnell, III (RESIDENT), 2G River Birch Rd., Durham 27705

Stephen Russell Nash (STUDENT), 311 S. Lasalle St, Apt. 310, Durham 27705

Shafqat Shah (STUDENT), 1911 Erwin Rd, Apt. L, Durham 27705
Deborah Pei-Yu Shih (STUDENT), 1315 Morreene Rd. #17E, Durham 27705

Jon Gregory Staffel (RESIDENT), 605 Jone Ferry Rd. FF-8, Carrboro 27510

Kaveri Suryanarayan (STUDENT), Box 2800, DUMC, Durham 27710

Dennis George Vollmer (NS), UNC, 148 Burnett-Womack Bldg., Chapel Hill 27514

Roger Charles Young, Box 3463, DUMC, Durham 27710

Forsyth-Stokes-Davie

Charles Scott Clark (STUDENT), 516 Irving St., Winston-Salem 27103

Brian Scott Cope (STUDENT), 4755 Country Club Rd., Apt. 109-E, Winston-Salem 27104

William Gregory Ferrell (RESIDENT), 707 Gales Ave., Winston-Salem 27103

Mary Leigh Forehand (PD), 3318 Healy Dr., Winston-Salem 27103

Linda Ellen Hertz (STUDENT), 2513-A Miller Park Circle, Winston-Salem 27103

Debra Chih-Fen Liu (D), 250 Executive Park Blvd., Winston-Salem 27103

Douglas Bert Shellhorn (STUDENT), 1715 Elizabeth Ave., Winston-Salem 27103

Margaret Fraser Tomlinson (STUDENT), 324 Crafton St., Winston-Salem 27103

Keith Bergen Van Zandt, 2805 Lyndhurst Ave., Winston-Salem 27103

Greensboro Society of Medicine

Richard Mark Holland (OBG), 522 N. Elam Ave., Greensboro 27401

Johnston

Nitzan Daniel Catz (OTO), 607 Berkshire Rd., Smithfield 27577

Lenoir-Greene

Leonor Casas Carrasco (A), 1306 N. Herritage, Kinston 28501

Mecklenburg

Mary Nolan Hall (FP), PO Box 32831, Charlotte Mem. Hospital, Charlotte 28232

William Mauney Herndon, Jr., (CD), 1350 S. Kings Dr., Charlotte 28207

Jack Alan Lucas (OBG), 1608 E. Barden Rd., Charlotte 28226

Marshall Poulnot McMillan (FP), 6900 Farmingdale Dr., Charlotte 28207

Onslow

Ralph Joseph Difiore (ORS), 200 Doctors Dr. Ste.J, Jacksonville 28540

Wesley Francis Hambright (OBG), 245 Memorial Dr., Jacksonville 28540

Russell Chester Lowery III (GS), 224 Memorial Dr. Ste. B, Jacksonville 28540

Pasquotank-Camden-Currituck-Dare

John David Marquardt (ORS), 1134 N. Road St., Elizabeth City, 27909

Surry-Yadkin

Richard Joseph Preske (OPH), 1008 Old Rockford Rd., Mt. Airy 27030

Wayne

Howard Wilson Newell, Jr. (IM), 2400 Wayne Mem. Dr., Goldsboro 27530

Continuing Medical Education

Please note: The Continuing Medical Education Programs at Bowman Gray, Duke (DUMC), East Carolina (ECU) and UNC Schools of Medicine, and Dorothea Dix are accredited by the American Medical Association. Therefore CME programs sponsored or cosponsored by these schools automatically qualify for AMA Category I credit toward the AMA's Physician Recognition Award, and for North Carolina Medical Society Category A credit. Where AAFP credit has been obtained, this also is indicated.

January 18-22

Diagnostic Ultrasound (physicians and non-physicians)

Place: Winston-Salem

Credit: 7 hours/day Category I AMA

Info: Registrar, Ultrasound Center, Bowman Gray School of Medicine, 300 S. Hawthorne Rd., Winston-Salem 27103. 919/748-4505

January 22-May 20 (5 components)

Gerontology for Nurse Educators

Place: Greensboro

Credit: 4 CEUs

Fee: \$25

Info: UNC-CH School of Nursing Continuing Education Program, Carington Hall, 214H, Chapel Hill 27514. 919/966-3638

January 24-27

Skills for Curriculum Design and Negotiation

Place: Rougemont

Credit: 20 hours Category I AMA

Info: Cindi Easterling, Office of CME, Box 3108 DUMC, Durham 27710. 919/684-6878

January 25-29

Diagnostic Ultrasound

(See January 18-22 for information)

January 29

Neurology for the Primary Care Practitioner: Stroke

Place: Greenville

Credit: 6-7 hours Category I AMA

Info: Mary C. Valand, MSW, ACSW, Office of CME, ECU, P.O. Box 7224, Greenville 27835-7224. 919/551-5200

February 1-5

Diagnostic Ultrasound

(See January 18-22 for information)

February 10

Current Issues in Child Psychiatry

Place: Greenville

Credit: 6-7 hours Category I AMA

Info: Mary C. Valand, MSW, ACSW, Office of CME, ECU School of Medicine, P.O. Box 7224, Greenville 27835-7224. 919/551-5200

February 19-21

Family Physicians Weekend

Place: Raleigh

Credit: 12 hours AAFP

Info: Lois Voelker, Meeting Coordinator, NCAFP, P.O. Box 18469, Raleigh 27619, 919/781-6467

February 26

Pediatrics Day 1988

Place: Greenville

Credit: 6 hours Category I AMA

Info: Mary C. Valand, MSW, ACSW, Office of CME, ECU School of Medicine, P.O. Box 7224, Greenville 27835-7224. 919/551-5200

March 6-9

Administrative Skills I: Power, Leadership and Authority
(See January 24-27 for information)

March 19

Pulmonary Disease Update

Place: Greenville

Credit: 6 hours Category I AMA

Info: Mary C. Valand, MSW, ACSW, Office of CME, ECU School of Medicine, P.O. Box 7224, Greenville 27835-7224. 919/551-5200

April 5-8

Diagnostic Ultrasound

(See January 18-22 for information)

April 7-8

Rehab Medicine Workshop: Prosthetics/Orthotics

Place: Greenville

Info: Mary C. Valand, MSW, ACSW, Office of CME, ECU School of Medicine, P.O. Box 7224, Greenville 27835-7224. 919/551-5200

April 10-13

Administrative Skills II: Planning Change and Conflict Resolution
(See January 24-27 for information)

April 11-15

Diagnostic Ultrasound

(See January 18-22 for information)

April 18-22

Diagnostic Ultrasound

(See January 18-22 for information)

There's Somewhere To Turn When Someone Turns To You

*When someone turns to you
for advice on drug or alcohol dependency,
turn to the professionals at
Carolina Manor Treatment Center.*

Carolina Manor
TREATMENT CENTER

1100 Pine Run Drive, Lumberton, NC 28358
1-800-445-7595 In NC (919) 738-1191

Operated By Southeastern General Hospital

Classified Ads

CONSIDER the cost-effective potential of adding a physician assistant to your practice. The North Carolina Academy of Physician Assistants will help you advertise to a large pool of qualified PAs at no cost to you. For information on how you can advertise your PA employment opportunity, contact: Bob Franks, PA-C, NCAPA Employment Chairman, 206 Camelia Dr., Goldsboro 27530. 919/731-3225 (work); 919/734-4657 (home).

NORTHEASTERN OHIO - Seeking director and full time emergency department physician for busy 200 bed facility. Residency training in emergency medicine or primary specialty preferred. Excellent salary, malpractice insurance provided, full benefit package available. Contact: Emergency Consultants, Inc., 2240 South Airport Road, Traverse City, MI 49684. 1-800/253-1795 or in Michigan 1-800/632-3496.

FAMILY PRACTITIONER to join four man Family Practice group in Southern Piedmont area, 20 miles south of Charlotte, NC. 160 bed community hospital. New office with full lab and x-ray facilities. Please contact William Deskins, M.D. or Paul Kitchin, M.D. at Monroe Family Medical Center, P.A., 1420 E. Franklin St., Monroe, NC 28110. 704/289-8427.

DISCOUNT HOLTER SCANNING: starting at \$35.00. Spacelab Holters available at \$1275.00. Turn over time is 24-48 hours. Hook up kits available at \$4.95. Stress test electrodes available at 29¢. Scanning paper available at \$18.95. One free test is offered at no obligation on trial basis. Cardio Care, Inc. La Plata Professional Center, P.O. Box 1528, La Plata, MD 20646. 301/870-3626

MEDSTAT — Discover why we are the most respected physician staffing service in the East for locum tenens and permanent placements. We can provide you with coverage or work as our staff physician. Call US 800/833-3465 (NC 800/672-5770); or write Medstat, Inc., P.O. Box 15538, Durham 27704.

FAMILY PRACTITIONER NEEDED for full-time solo practice in progressive community in Troutman, NC near beautiful Lake Norman. Guaranteed income plus benefits. Please send CV to Richard Blackburn, Executive Director, Lake Norman Regional Medical Center, P.O. Box 360, Mooresville, NC 28115. 704/663-1113.

UROLOGIST NEEDED for private practice in progressive community in Mooresville, NC, near beautiful Lake Norman. Guaranteed income plus benefits. Please send CV to Richard Blackburn, Executive Director, Lake Norman Regional Medical Center, P.O. Box 360, Mooresville, NC 28115. 704/663-1113.

PSYCHIATRIST NEEDED for private practice in progressive community in Mooresville, NC, near beautiful Lake Norman. Guaranteed income plus benefits. Please send CV to Richard Blackburn, Executive Director, Lake Norman Regional Medical Center, P.O. Box 360, Mooresville, NC 28115. 704/663-1113.

OTORHINOLARYNGOLOGY: ENT PHYSICIAN NEEDED for private practice in progressive community in Mooresville, NC, near beautiful Lake Norman. Guaranteed income plus benefits. Please send CV to Richard Blackburn, Executive Director, Lake Norman Regional Medical Center, P.O. Box 360, Mooresville, NC 28115. 704/663-1113.

ORTHOPEDIC SURGEON NEEDED for partnership or associate practice in progressive community in Mooresville, NC, near beautiful Lake Norman. Guaranteed income plus benefits. Please send CV to Richard Blackburn, Executive Director, Lake Norman Regional Medical Center, P.O. Box 360, Mooresville, NC 28115. 704/663-1113.

URGENT CARE/FAMILY PRACTICE - Immediate opening in the Piedmont area of North Carolina for aggressive physician interested in long term career commitment. Excellent salary, fringes, plus a progressive profit sharing plan. Call or send C.V. to: Phillip Greene, M.D., 613 E. Roosevelt Blvd., Monroe, NC 28110. 704/283-8193.

NON-INVASIVE CARDIOLOGIST to join multi-specialty group of eight internists to practice clinical and non-invasive cardiology in the Piedmont area of North Carolina. Excellent salary and benefits in a well established aggressive medical group. Reply to Code 35, NCMJ, Box 3910 DUMC, Durham 27710.

MOUNTAIN LIVING! Family Practice Physician needed for dynamic group practice in Cuba, New Mexico. Board Certified or Board Eligible with OB desired. Competitive salary and benefit package offered. Malpractice provided. Mountain living! Our unique climate allows you to ski in the morning and golf in the afternoon! Write or call: Mary Consie, Recruiter, New Mexico Health Resources, P.O. Box 27650, Albuquerque, NM 87125, 505/242-0633.

PRACTICE SALES, mergers, equity associate-ships, or appraisals from the nation's oldest practice transition firm. Aftco Associates — Practice Transition Consultants, since 1968. 454 S. Anderson Road, Rock Hill, SC 29730. 803/329-9655. Charlotte Metropolitan Area.

OTOLARYNGOLOGIST: Develop practice for small community in scenic mountains of south-west Virginia. Supported by 150+ bed community hospital with drawing area of 75K. Area known for outdoor recreational activities and excellent living conditions. Strong net guarantee plus benefits. Contact Jim Davis, Tyler & Co., 9040 Roswell Rd., Atlanta, GA 30350. Call 404/641-6411.

FAMILY PHYSICIAN BC/BE needed to replace retiring member of four physician F.P. group. OB not required. Available 1-88 or after. Pine Ridge Family Practice, PA. 147 Columbine Drive, Winston-Salem 27106.

1,500 SQ. FT. OFFICE SPACE for sale in Hickory, NC. Designed for family practice: 10 rooms and 3 toilets. Thriving community, next door to pharmacy, 10 minutes to two modern hospitals. Call Jim Goforth at Shook & Tarlton Realtors, 704/322-8655.

ACTIVE AND WELL ESTABLISHED work-compensation, personal injury practice in Los Angeles. We need one Orthopedic Surgeon and one Neurologist, Board Eligible. Please contact Gloria Gravino at 213/557-2743 from 10am to 5pm PST.

VERY BUSY TWO-MAN OB-GYN office seeks physician. BE/BC preferred. Located in the foothills of beautiful North Carolina, county popu-

lation of 70,000 and town 18,500. Participating hospital located across the street is undergoing additions now. New OB facility almost complete. Reply to P.O. Box 2640, Lenoir, NC 28645.

ACTIVE AND WELL ESTABLISHED work-compensation, personal injury practice in Los Angeles. We need one orthopedic surgeon and one neurologist, B/E. Please contact Gloria Gravino at 213/557-2743 from 10:00am to 5:00pm PST.

GENERAL INTERNIST with general or subspecialty interest wanted to join group of three in Winston-Salem, NC. Practice largely fee for service oriented. Please send qualifications to Code 55, NCMJ, Box 3910 DUMC, Durham 27710.

PEDIATRICIAN, FAAP, M.D., '63 Duke. Personable, versatile. Desire association or position; prefer Raleigh, Greensboro, or Charlotte. Please call A. Kramer, M.D. 919/783-4802.

JACKSONVILLE, Onslow County, North Carolina 28540 — Doctors' offices/medical suites, most upfitting complete, 1500 to 5100+ square feet, exceptional location, Memorial Drive, adjacent to Onslow Memorial Hospital. Contact Robert E. Lock 8:30-5:00 weekdays, 919/347-3200; after 6:00 p.m. and on weekends, 919/346-8093. Post Office address: P.O. Box 592, Jacksonville, NC 28540.

NCMJ Classified Ads . . .

Send your ad to:

Managing Editor
Box 3910
Duke University Medical Center
Durham 27710

Please specify the number of issues in which you'd like it to appear. Include your name, address, and phone number.

Closing date is the 25th of the second prior month. For cost and billing information, call 919/684-5728.

FP, GP, PED

Needed now to work with a unique, internationally respected rural health system network in Kentucky which includes a hospital, satellite clinics, a home health agency and a school of advanced nursing. A regional medical center is within 20 miles. The practice environment is stimulating — physicians and Advanced Registered Nurse Practitioners work in joint practice teams; interaction with students is encouraged; the rural population presents a wide range and intensity of medical problems.

The FP or GP will be expected to share call with specialists and consequently must have particular strength in one of the following areas: Pediatrics, Obstetrics, Emergency Medicine or Internal Medicine.

The setting is in heavily-wooded mountains with a moderate 4-season climate. Seven state parks are within 80 miles.

Superior compensation/benefits package includes a guaranteed salary with incentives and malpractice. Call Deborah Pennington COLLECT at 1-502-897-2556. This is an Equal Opportunity Employer.



Index to Advertisers

Baron Advisory Services, Inc.	7	Medical Protective Company	19
B & B X-Ray, Inc.	1	Palisades Pharmaceuticals	42
Burroughs Wellcome Co.	27	React Systems	55
Campbell Laboratories, Inc.	38	Republic Health Corp.	40
Carolina Manor	61	Roche Laboratories	24, 39-40, Cover 3-4
Charter Northridge Hospital	4	Shepherd Spinal Center	56-57
Crumpton Company	Cover 2	Smith Kline and French Laboratories	20a-b
Eli Lilly & Company	8, 9	Unique Boutique	50
Focus: Healthcare	63	The Upjohn Company	4b
Hinrichs Financial Group	2	U.S. Army	20
Marion Laboratories	4, 4a, 64a-b	Virginia Health Council	40
Med-Care	10	Winchester Surgical Supply Co.	64
Medical Mutual Insurance Company of N.C.	28		

Winchester®

"CAROLINAS' HOUSE OF SERVICE"

Winchester Surgical Supply Company

200 South Torrence St. Charlotte, N.C. 28204

Phone No. 704/372-2240

Winchester Home Healthcare

Medical supplies and equipment for your patients at home

Charlotte, N.C. Greensboro, N.C. Hickory, N.C.

704/332-1217 919/275-0319 704/324-0336

704/547-0708

**Serving the MEDICAL PROFESSION of NORTH CAROLINA
and SOUTH CAROLINA since 1919.**

We equip many physicians beginning practice each year and invite your inquiries.

Our salesmen are located in all parts of North Carolina.

*We have DISPLAYED at every N.C. State Medical Society Meeting since 1921
and advertised CONTINUOUSLY in the N.C. Journal since January 1940 issue.*

**The benefit of antianginal
protection plus safety...**



CARDIZEM®
diltiazem HCl/Marion

A FULLER LIFE

A remarkable safety profile^{1,6}

The low incidence of side effects with Cardizem allows patients to feel better.

Protection against angina attacks^{1,5,7-9}

The predictable efficacy of Cardizem in stable exertional* and vasospastic angina allows patients to do more.

A decrease in myocardial oxygen demand

Resulting from a lowered heart rate-blood pressure product.⁵

Compatible with other antianginals^{6†}

**Safe in angina with coexisting hypertension,
COPD, asthma, or PVD^{1,3,5,6}**

*CARDIZEM® (diltiazem HCl) is indicated in the treatment of angina pectoris due to coronary artery spasm and in the management of chronic stable angina (classic effort-associated angina) in patients who cannot tolerate therapy with beta-blockers and/or nitrates or who remain symptomatic despite adequate doses of these agents.

†See Warnings and Precautions

Please see brief summary of prescribing information on the next page.

0453S7

60 mg **GREATER**
90 mg/120 mg **DOSAGE**
FLEXIBILITY



CARDIZEM[®] ANTIANGINAL PROTECTION

diltiazem HCl/Marion PLUS SAFETY

Usual maintenance dosage range: 180-360 mg/day

Brief Summary

Professional Use Information

CARDIZEM[®]
(diltiazem HCl) 30 mg, 60 mg, 90 mg, and 120 mg Tablets

CONTRAINDICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

- Cardiac Conduction.** CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1,243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.
- Congestive Heart Failure.** Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt). Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
- Hypotension.** Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.
- Acute Hepatic Injury.** In rare instances, significant elevations in enzymes such as alkaline phosphatase, CPK, LDH, SGOT, SGPT, and other symptoms consistent with acute hepatic injury have been noted. These reactions have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in most cases, but probable in some. (See PRECAUTIONS.)

PRECAUTIONS

General. CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies,

oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.

Drug Interaction. Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility.

A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in *in vitro* bacterial tests. No intrinsic effect on fertility was observed in rats.

Pregnancy. Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences as well as their frequency of presentation are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%). In addition, the following events were reported infrequently (less than 1%):

Rx

Cardizem[®]
(diltiazem HCl)

☐ 60 mg ☐ 90 mg

☐ 120 mg

Sig: tid

Cardiovascular:	Angina, arrhythmia, AV block (first degree), AV block (second or third degree — see conduction warning), bradycardia, congestive heart failure, flushing, hypotension, palpitations, syncope.
Nervous System:	Amnesia, gait abnormality, hallucinations, insomnia, nervousness, paresthesia, personality change, somnolence, tinnitus, tremor.
Gastrointestinal:	Anorexia, constipation, diarrhea, dysgeusia, dyspepsia, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase.
Dermatologic:	Petechiae, pruritus, photosensitivity, urticaria.
Other:	Amblyopia, dyspnea, epistaxis, eye irritation, hyperglycemia, nasal congestion, nocturia, osteoarthricular pain, polyuria, sexual difficulties.

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established.

Issued 9/86

See complete Professional Use Information before prescribing.

References: 1. Schroeder JS: *Mod Med* 1982;50(Sept):94-116. 2. Cohn PF, Braunwald E: *Chronic ischemic heart disease*, in Braunwald E (ed): *Heart Disease: A Textbook of Cardiovascular Medicine*, ed 2. Philadelphia, WB Saunders Co, 1984, chap 39. 3. O'Rourke RA: *Am J Cardiol* 1985;56:34H-40H. 4. McCall D, Walsh RA, Frohlich ED, et al: *Curr Probl Cardiol* 1985;10(8):6-80. 5. Frishman WH, Charlap S, Goldberger J, et al: *Am J Cardiol* 1985;56:41H-46H. 6. Shapira W: *Consultant* 1984;24(Dec):150-159. 7. O'Horo MJ, Khurmi NS, Bowles MJ, et al: *Am J Cardiol* 1984;54:477-481. 8. Strauss WE, McIntyre KM, Paris AF, et al: *Am J Cardiol* 1982;49:560-566. 9. Feldman RL, Pepine CJ, Whittle J, et al: *Am J Cardiol* 1982;49:554-559.

Another patient benefit product from



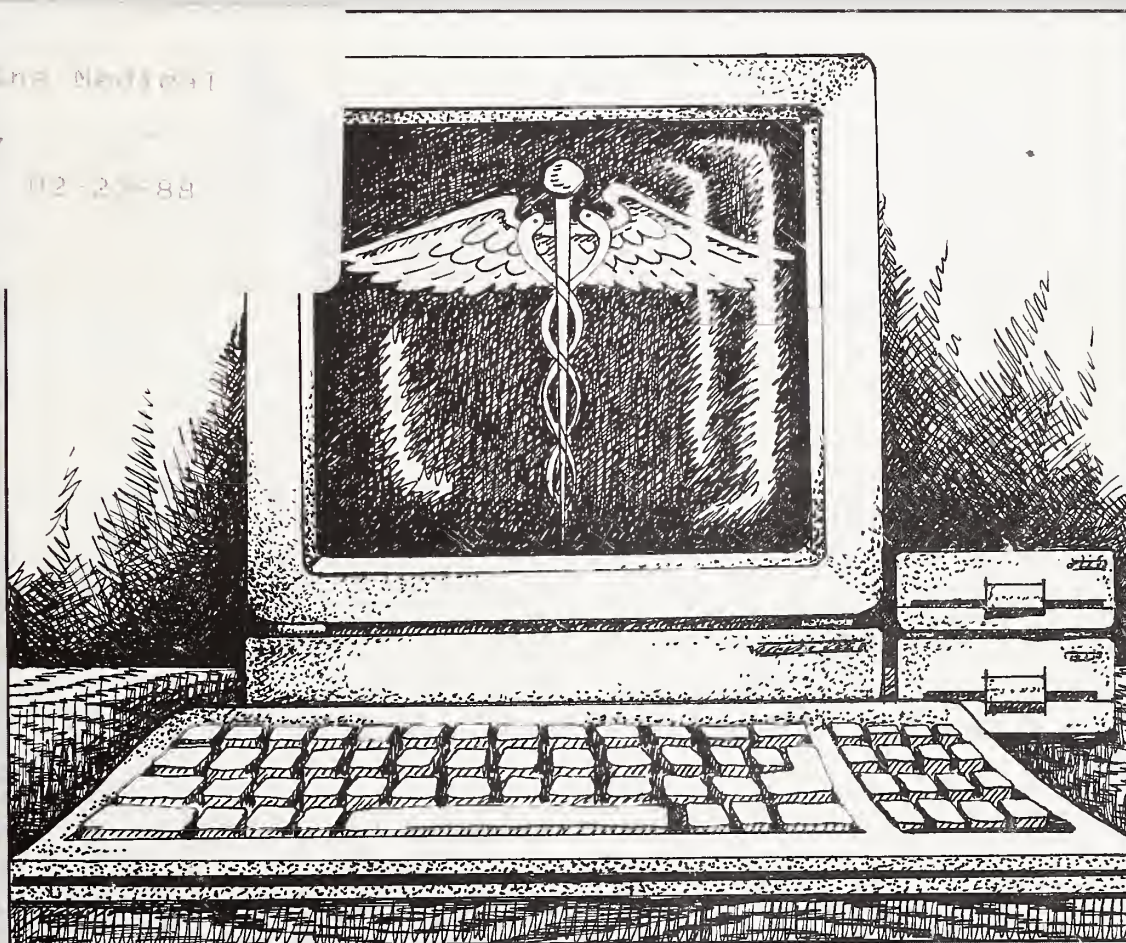
PHARMACEUTICAL DIVISION
MARION
LABORATORIES, INC.
KANSAS CITY, MO 64137

al Journal
of the
North Carolina
Medical Society
February 1988
Volume 49
Number 2

North Carolina Medical Journal

For Doctors and their Patients

North Carolina Medical
Journal
CSF LIBRARY
received on: 02-25-88



Computers in the Office

Colin P. Kerr, M.D.

Tuberculosis: New Facets of an Old Disease

Janet J. Fischer, M.D.

Low Vision

Banks Anderson, Jr., M.D.
Joanna Francis, R.N., C.O.T.

Joint Conference with
N.C. Bar Association
March 18 • Raleigh

THERE IS
SOMETHING
IN OUR NAME
THAT BRINGS YOU
A FEELING OF
SECURITY.

CRUMPTON COMPANY.

Why do so many NC physicians participate in the Crumpton Plan of Disability Income Protection?

THE ANSWER is the 47 years of successful relationship and personal service at claim time!

Yes, the feeling of security as well as economic advantage in knowing the program is a plan of carefully designed benefits.

The plan is not filled with a lot of "purple duck feathers," but provides income when you are unable to produce — not promises, but performance.

Why not call us today to obtain the latest details for your group practice? We are delighted to offer our broadened portfolio of professional insurance.



Commercial Insurance Company

Crumpton Company
Box 8500 Academy Center, Durham 27707
800/672-1674 919/493-2441

NORTH CAROLINA MEDICAL JOURNAL

For Doctors and their Patients

February 1988, Volume 49, Number 2

Published Monthly as the Official Organ of The North Carolina Medical Society

(ISSN-0029-2559)

STAFF

Eugene A. Stead, Jr., M.D.
Rt. 1, Box 194, Bullock
EDITOR
919/693-4531

Francis A. Neelon, M.D.
Durham
ASSOCIATE EDITOR

F. Maxton Mauney, Jr., M.D.
Asheville
ASSOCIATE EDITOR

George E. Moore
Raleigh
BUSINESS MANAGER

Laurel Ferejohn
Durham
MANAGING EDITOR
919/684-5728

Jane Whalen
Durham
EDITORIAL ASSISTANT

EDITORIAL BOARD

Charles W. Styron, M.D.
Raleigh
CHAIRMAN

Edwin W. Monroe, M.D.
Greenville

Robert W. Prichard, M.D.
Winston-Salem

Louis deS. Shaffner, M.D.
Winston-Salem

Jay Arena, M.D.
Durham

Jack Hughes, M.D.
Durham

William B. Blythe, M.D.
Chapel Hill

Margaret C. Swanton, M.D.
Clinton

The appearance of an advertisement in this publication does not constitute any endorsement of the subject or claims of the advertisements.

The Society is not to be considered as endorsing the views and opinions advanced by authors of papers delivered at the Annual Meeting or published in the official publication of the Society. — *Constitution and Bylaws of the North Carolina Medical Society*, Chapter IV, Section 3, page 4.

NORTH CAROLINA MEDICAL JOURNAL, P.O. Box 3910, Duke University Medical Center, Durham, NC 27710 (919/684-5728), is owned and published by The North Carolina Medical Society under the direction of its Editorial Board. Copyright © The North Carolina Medical Society 1988. Address manuscripts and communications regarding editorial matters to the Durham address. Questions relating to subscription rates, advertising, etc., should be addressed to the Managing Editor at the Durham address. All advertisements are accepted subject to the approval of a screening committee of the State Medical Journal Advertising Bureau, 711 South Blvd., Oak Park, Illinois 60302 and/or by a Committee of the Editorial Board of the North Carolina Medical Journal in respect to strictly local advertising. Instructions to authors appear in each issue (see table of contents). Annual Subscription, \$12.00. Single copies, \$2.00. Publication office: The Ovid Bell Press, Inc., 1201-05 Bluff St., Fulton, MO 65251. *Second-class postage paid at Raleigh, North Carolina 27611 and additional mailing offices.* Postmaster: Send address changes to North Carolina Medical Society, 222 N. Person St., Raleigh NC 27611.

THE ULTIMATE TAX SHELTER - POST TRA 1986

- Fund your pension plans at 25% at a cost of only 5-11% staff employees.
- Add a Supplemental Income Plan (SIP) for key employee physicians only and spend no additional funds for staff.
- Result: 85-95% of all retirement funding benefits allocated to key employee physicians.

CALL OR WRITE FOR INFORMATION:

Joseph M. Gordon, CLU, ChFC, CFP
BARON ADVISORY SERVICES, INC.
Registered Investment Advisor
4110 Wake Forest Road, #211
Raleigh, NC 27609
790-9904/(800) 222-8783

The Number Of Blue Cross and Blue Shield Subscribers Is Reaching Epidemic Proportions.

More and more people are signing up for Blue Cross and Blue Shield coverage at a faster and faster rate. Today we have over a million subscribers in North Carolina.

And when you include subscribers' family members, the number is closer to two million. There are a lot of reasons for that success. But a large part of it is attributable to the variety of plans we offer. We provide a greater choice of group plans than any other carrier in the state. And we're giving



employers the opportunity to let each employee pick a plan that suits him or her best. We also offer coverage to people who don't qualify for group.

So next time you peek into your waiting room, chances are you'll be looking at a room full of our subscribers. Subscribers who have come to us for quality coverage and to you for quality care.



**Blue Cross.
Blue Shield.**
of North Carolina

The Choice Of Nearly
Two Million North Carolinians.
©1988 Blue Cross and Blue Shield of North Carolina



North Carolina Medical Journal

F O R D O C T O R S A N D T H E I R P A T I E N T S

Contents / February 1988, Volume 49, Number 2

Cover drawing by Irene Roderick, Durham

SCIENTIFIC ARTICLES

- 69 Tuberculosis: New Facets of an Old Disease *Janet J. Fischer*
75 The Management of Clinically Localized Prostate Cancer: A Summary of the Consensus Statement of the National Institutes of Health *Edward C. Halperin, Robert W. Fraser, and Jack Hughes*
81 Another Look at Thyroid Nodules *Emile E. Werk, Jr., Jorge J. Gonzalez, and Peter C. Ungaro*
85 Isolated Superior Gluteal Neuropathy Due to Intramuscular Injection *Michael D. Kaufman*

FOR PATIENTS

- 89 Low Vision *Banks Anderson, Jr., and Joanna Francis*
91 The Osler Tradition at Duke *George T. Harrell*

TECHNOLOGY AND MEDICINE

- 99 Computers in the Office: Who, What, and Why? *Colin P. Kerr*

EDITORIAL

- 105 The "Noisesome" Hospital Chart *Banks Anderson, Jr.*

BULLETIN BOARD

- 97 Instructions to Authors
108 Letters to the Editor
113 Continuing Medical Education
118 Classified Advertisements
120 Index to Advertisers

Are You Only Smiling For The Camera?



Or do you know someone who is?

Saint Albans Psychiatric Hospital in Radford, Virginia has been helping people deal with life since 1916. We offer comprehensive programs for adults and adolescents in chemical dependency, eating disorders, depression, out-of-control behavior and other life problems — all supervised by a skillful and compassionate staff.

When you know someone in need of psychiatric help, call Saint Albans.

We build real smiles.

*In Virginia: 1-800-572-3120
Outside Virginia: 1-800-368-3468
P.O. Box 3608 Radford, Va., 24143*

 **Saint Albans
Psychiatric Hospital**
Radford, Virginia

Tuberculosis: New Facets of an Old Disease

Janet J. Fischer, M.D.

The number of new cases reported annually and the mortality due to tuberculosis have been steadily declining from 1910 to 1985. There has been an even steeper decline in the case rates because the U.S. population has been enlarging.¹

Case rates in North Carolina have shown a similar decline. In 1985, there were 669 new cases of tuberculosis in the state of North Carolina. Tuberculosis is a spotty disease. Several maps have been published showing the distribution by county in the United States, and in some areas tuberculosis is a much more significant problem than in other areas. This is true for the eastern part of North Carolina where case rates are three times those for the United States as a whole.

Where do these cases come from? If you look at the overall figures for the United States as a whole, 22,200 cases of active tuberculosis came from among the 10 million people estimated to be tuberculin reactors, while only 1,800 came from the 36,000 people (tuberculin converters) who were newly infected in 1983.¹ Although cases come from those who are newly infected and those who have had unrecognized chronic disease and have been infected for a number of years as judged by the tuberculin test, the largest number of cases come from patients who have had a positive tuberculin test for years and whose disease reactivates.

The large pool of tuberculin-positive people in the United States is decreasing because the curve of the number of cases in children under the age of 15 has steadily declined until around 1982.¹

The declining number of cases of tuberculosis in the United States is paralleled by a similar decline in the number of cases of pulmonary tuberculosis. While this has been going on, the number of cases of extrapulmonary tuberculosis has remained constant, as shown in this figure. Hence, an increasing number of cases of infection with mycobacterium tuberculosis are presenting with extrapulmonary disease.^{2,3} This fact has led to a number of different articles in the literature emphasizing unusual presentations of infection due to mycobacterium tuberculosis.⁴⁻⁹ This whole process of

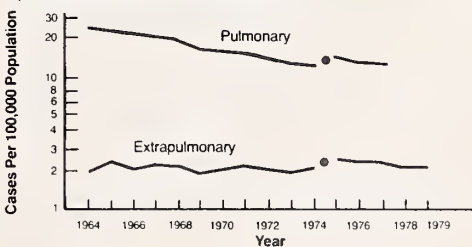
decline came to a halt in 1985 and, actually, the rates for tuberculosis have increased slightly in 1986, due entirely to mycobacterium tuberculosis infections among patients with the acquired immunodeficiency disease.¹⁰ Thirty-one percent of consecutively admitted tuberculosis patients in Dade County, Florida, tested positive for human immunodeficiency virus (HIV).¹¹

Tuberculin Testing

Tuberculin testing has been used for years as a method of ruling in the consideration of tuberculosis disease when people have unknown illnesses. The early reports of the reliability of positive tuberculin tests consist of data from relatively young people with pulmonary tuberculosis who were in sanatoria. These people, in general, had a relatively good immune response and most of them were reported as being tuberculin-positive. In fact, it was reported that the tuberculin test, in the early studies, was about 99% positive in cases with tuberculosis.¹²

This, unfortunately, is an overestimate. Several things recently have called this claim into question. Tuberculin testing on patients at the time they were admitted to the medical service, and then repeated two weeks later, documented a 20% increase in tuberculin positivity. Hence, as a screening device, tuberculin testing needs to be done when the patient is relatively well.¹³ It is recognized that 40% to 50% of people with miliary tuberculosis are tuberculin-negative.³ Recent data from tuberculin tests done very early in

Pulmonary and extrapulmonary tuberculosis case rates (United States, 1964 to 1979).



Tuberculosis in the United States, 1980. US Department of Health and Human Services Publication NO. (CDC) 83-8322. Atlanta, Centers for Disease Control, 1983. Case data subsequent to 1974 are not comparable to prior years because a change in reporting criteria became effective in 1975.

From the Division of Infectious Diseases, the University of North Carolina School of Medicine, Chapel Hill 27514.

the clinical disease show that the tuberculin reaction tends to be negative at that point,¹³ and then, as the disease progresses and the body's immune forces are mobilized, the tuberculin reaction becomes positive. Hence, the percentage of people who are positive to tuberculin testing depends on the stage of the disease. In addition, there is the booster phenomenon: people whose first tuberculin test is negative and who are positive one week later.^{14,15} This does not really represent a conversion of tuberculin test within one week, but rather a recall of tuberculin sensitivity which had waned. These people should be regarded as tuberculin-positive. Finally, in the literature, there were a number of tuberculin tests done with a tuberculin preparation that was not stabilized.^{16,17} Tuberculin for testing was not stabilized until about the end of the 1960s and there were a number of falsely negative tuberculin tests secondary to absorption of tuberculo-protein on the glass of the syringes. With the availability of stabilized tuberculins, first put out by Connaught Laboratories, the product is reliable.^{18,19}

Extrapulmonary Tuberculosis

As has been commented, there has been a decline in the number of new cases of tuberculosis and a parallel decline in pulmonary tuberculosis, while the number of cases of extrapulmonary tuberculosis has remained relatively stable from 1975 to 1983.³ This, of course, means that an increasing percentage of the cases of tuberculosis who present to the practicing physician present as extrapulmonary tuberculosis. An excellent review of this problem outlines the experience at Boston City and other hospitals.³ Alvarez and McCabe in this review discuss each one of the forms of the extrapulmonary tuberculosis, and this is not gone into in detail here.

In summary, 22% of the patients had lymph node tuberculosis, 20% had involvement of the genitourinary tract, 19% had involvement of the bone and spine and 16% had miliary tuberculosis. The remaining 23% of the cases included all the other forms of extrapulmonary tuberculosis. Hence the practicing physician needs to be on the lookout for lymph node, genitourinary tract, bone and spine, and miliary tuberculosis. Eighty-six percent to 88% of the genitourinary, lymphatic, and bone and joint tuberculosis cases have a positive tuberculin test, but only 54% of the cases with miliary disease have a positive skin test. Sixty-seven percent of the cases with meningitis have a positive skin test as do 64% of the cases with peritonitis. Hence, it is miliary tuberculosis, tuberculous meningitis and tuberculous peritonitis that are likely to present with a negative tuberculin and thus present a diagnostic dilemma for the practicing physician.

With the advent of adequate anti-tuberculous therapy the outlook for pulmonary tuberculosis is relatively good. The same cannot be said for extrapulmonary tuberculosis. Ten percent of the series described died and twenty-four percent were lost to follow-up.

Classification of Tuberculosis (1981)

Class	
0	No tuberculosis exposure; not infected (no history of exposure, reaction to tuberculin skin test not significant).
1	Tuberculosis exposure; no evidence of infection (history of exposure, reaction to tuberculin skin test not significant).
2	Tuberculous infection; no disease (significant reaction to tuberculin skin test; negative bacteriologic studies [if done]; no clinical and/or roentgenographic evidence of tuberculosis).
3	Tuberculosis infection with current disease (<i>M tuberculosis</i> cultured [if done]; otherwise, both a significant reaction to tuberculin skin test and clinical and/or roentgenographic evidence of current disease).
4	Tuberculosis; no current disease (history of previous episode(s) of tuberculosis, or abnormal stable roentgenographic findings in a person with a significant reaction to tuberculin skin test, negative bacteriologic studies [if done]; no clinical and/or roentgenographic evidence of current disease).
5	Tuberculosis suspect (diagnosis pending).

American Thoracic Society: Diagnostic standards and classification of tuberculosis and other mycobacterial diseases. Am Rev Respir Dis 1981;123:343.

CURRENT CDC DATA

TUBERCULOSIS

	Cases	Case Rates (per 100,000 population)
1985		
USA	22,768	9.4
NC	722	11.4
1986		
USA	22,201	9.3
NC	669	10.7

Clinical Tuberculosis

A review of the pathology of tuberculosis as seen in the pre-antibiotic and the antibiotic eras is described by Slavin Walsh and Pollock.²⁰ Within the past three decades there has been a radical change in the presentation of acute miliary tuberculosis. In the past, miliary tuberculosis was seen as a post-primary tuberculosis, i.e., spread of infection with the disease occurring shortly after the acquisition of the infection. Now there are an increasing number of elderly patients with miliary tuberculosis. Often the diagnosis is made only at autopsy since many of the patients have concomitant illnesses which mask the clinical picture. These cases have been called "cryptic tuberculosis" and are believed to be derived principally from a long smoldering or re-awakened primary complex.

A primary focus is established which drains into the local lymph node forming a Ghon complex. This is followed by early hematogenous dissemination of the organism. When the tuberculin test becomes positive, two things occur, hypersensitivity and immunity, and there is a tendency to healing and calcification. A small number of patients go on and get either progressive primary pulmonary tuberculosis

or acute miliary tuberculosis which may result in organ tuberculosis. The vast majority of lesions go on to fibrosis and calcification. Re-activation can occur at any time. Chronic pulmonary tuberculosis develops either from endogenous re-activation of tuberculous foci in the lung or adjacent lymph nodes or from exogenous re-infection (which is hard to document and is presumed to be rare).²¹ Fibrocaseous pulmonary tuberculosis, which represents longstanding, chronic pulmonary tuberculosis, remains, as a rule, confined to the lung. Large, caseous extrapulmonary foci, which have lain dormant for a period of time, usually serve as sources of the hematogenous spread. These foci are often clinically silent because they are located in covert sites. Hence, there is an increased clinical presentation of late, generalized tuberculosis in the elderly. The clinical presentation of late, generalized tuberculosis is frequently non-distinctive. Its increasing frequency in the elderly is related to the very high incidence of childhood, primary tuberculosis in this group. This liability is compounded by defects in cellular immunity which occur with age.

Tuberculosis is now seen and cared for in general hospitals, and late, generalized tuberculosis poses diagnostic difficulties because 20% of patients exhibit no constitutional symptoms prior to hospitalization. Findings are non-specific and chest x-rays are non-diagnostic in about 50% of the cases, and anergy is likely to occur, particularly in the elderly. The caseous foci of tuberculosis responsible for this hematogenous spread are generally derived from re-activated, old caseous lesions which are located principally in the lungs, the lymph nodes, the bones, the central nervous system, the adrenals and the genitourinary tract.

When the early post-infectious (prior to immunity) hematogenous spread occurs, organisms are deposited in the upper lung zones, in the renal parenchyma, in the epiphyseal lines, in the cerebral cortex, and in the regional lymph nodes. These sites permit much bacterial multiplication before immunity develops; therefore, if extrapulmonary tuberculosis develops from these silent foci years later it very often develops in these particular organ sites.

The Pathogenesis of Tuberculosis

In primary tuberculosis the neutrophils are an important first line of defense, followed by macrophages which ingest the organisms.^{12,22,23} However, virulent strains of *Mycobacterium tuberculosis* may survive and multiply within the phagocytic cells until cell-mediated immunity develops. When this occurs, there is an attendant activation of macrophages which permits them to kill ingested bacilli. Like other antigens there is a macrophage T-lymphocyte interaction leading to immune responsiveness and, at the same time, antibody production by B-lymphocytes is triggered. The interaction of immune T-cells with tubercle bacilli or antigens results in the release of a number of mediators (lymphokines). Those which mobilize and activate macrophages

are the most important in destruction of tubercle bacilli and recovery from the disease. Suppressor T-lymphocytes have been demonstrable in advanced tuberculosis.¹²

Immunity to tuberculosis is complex because with the advent of a positive tuberculin test there is a specific T-cell mediated immunity that is acquired, and also a hypersensitivity. The hypersensitivity is responsible for tissue destruction. Newer studies suggest that circulatory antibodies and antigen-antibody complexes may be abundant. There is an obvious comparison of tuberculosis to leprosy.²⁴

Anergy occurs in 10% to 25% of people with active pulmonary tuberculosis. During the first six weeks after infection, before the tuberculin test becomes positive, there is marked multiplication of the bacilli, few epithelioid cells are formed, there is diffuse disease and the disease in the lung is best described as exudative pneumonia. There is no evidence of healing. Once the tuberculin test becomes positive, there are fewer bacilli, multiple epithelioid cells, and localized disease. On pathology, caseous necrosis is found with marked evidence of healing. This latter state is similar to that in tuberculoid leprosy, where the lepromatous reaction is positive and there are few bacilli and many epithelioid cells; whereas the former state, prior to tuberculin sensitization and also in people who are anergic, is similar to lepromatous leprosy, where the lepromin reaction is negative and there are many bacilli and few epithelioid cells. The immune spectrum of tuberculosis has been outlined by Lenzini as RR (reactive) micronodular, localized tuberculosis; RI (reactive intermediate) nodular or micronodular, localized tuberculosis with cavitation, lymphadenopathy and serositis; UI (unreactive intermediate) nodular or micronodular, chronic, diffuse tuberculosis with cavitation, fibrosis, lymphadenopathy, complicated by fistulae formation; UU (unreactive) acute, miliary tuberculosis; and the rare syndrome of disseminated nonreactive tuberculosis.²⁵

It is this latter disease which resembles lepromatous leprosy and used to occur very rarely in infection with mycobacterial tuberculosis. We are now seeing this much more frequently because of the increased incidence of *Mycobacterium tuberculosis* infection in people who have immune deficiencies, particularly those with acquired immunodeficiency disease. Hence, the general physician needs to be aware of the form that tuberculosis takes in the absence of immunity.^{10,26-28}

The Centers for Disease Control's (CDC) Revised Case definition recommends reporting to the CDC as AIDS any cases of HIV-infected persons with "disease caused by *Mycobacterium tuberculosis* that involves at least one extrapulmonary site, regardless of whether there is concurrent pulmonary involvement."²⁹ Delayed hypersensitivity and immunity in tuberculosis can be differentiated although they usually develop at the same time in patients.³⁰

Therapy of Tuberculosis

No attempt will be made to list all of the various courses

of therapy that have been tried for tuberculosis. This has been done exhaustively in other publications. It is important to emphasize the reasons for therapy.³¹ Prior to rifampin the high risk of failures during treatment resulted from the selection of drug-resistant mutants, and the high rate of relapse after treatment was due to regrowth of viable organisms that had persisted in a latent state. To overcome these problems, administration of three drugs (or surgical removal) was necessary if large cavities were present, and treatment had to be continued 18 to 24 months to affect the latent organisms.

It has become known that there are three different populations of mycobacteria in humans infected with *Mycobacterium tuberculosis*. Cavities contain 10^8 organisms under conditions (high oxygen tension) that permit intense extracellular multiplication of bacilli, and hence drug-resistant mutants are frequently present. A second population of organisms (approximately $\leq 10^5$) inside macrophages are presumably growing very slowly. They are coated with antibody inside phagolysosomes at an acid pH. Third, bacilli within solid caseous areas are $\leq 10^5$ and multiply slowly or intermittently. This environment is very unfavorable, although at a neutral pH. Streptomycin is very active against actively multiplying (cavitary) bacilli, and isoniazid and rifampin have moderate effect. Against slowly multiplying bacilli at acid pH pyrazinamide is very active, and isoniazid and rifampin have some activity. At neutral pH only rifampin is active.

Several different short-course chemotherapy regimens have been recommended. A four-month course of chemotherapy is unacceptable (high relapse rate).³² A six-month course is commonly used in developing countries. The current recommendation (American Thoracic Society) is for a nine-month course for pulmonary or extrapulmonary tuberculosis.³³⁻³⁵ In the initial phase (six to eight weeks), isoniazid and rifampin and one other agent (streptomycin, ethambutol, or pyrazinamide) are administered daily, followed by a continuation phase of isoniazid and rifampin daily (300 mg and 600 mg respectively) to complete nine months of therapy. (If organisms are susceptible, the third drug is not necessary in the initial phase). Short-course chemotherapy should not be used if isoniazid or rifampin or both cannot be used, in the presence of moderate to severe hepatic disease when these agents should be avoided, or if sputum cultures are still positive during the fourth month of treatment. Immunosuppressed patients should receive at least 12 months of isoniazid and rifampin.

Problems Remaining

1 Compliance with long-term drug regimens is always a problem. This is also true for isoniazid prophylaxis. Also, physician-patients are not always cooperative.³⁶

2 Drug resistance is much more of a problem in some third-world countries.

3 Often tuberculosis is seen in patients with cirrhosis and

other forms of liver disease where isoniazid and rifampin use may present difficulties.

4 Tuberculosis is often not recognized until an autopsy is performed.

5 Tuberculosis is now managed by general physicians without specific training in the field of tuberculosis.

6 Organ tuberculosis may mimic other problems.

7 Late generalized tuberculosis is difficult to recognize.

8 A negative intermediate tuberculin (Mantoux) test is reliable in ruling out tuberculosis only in young people with chronic, relatively stable pulmonary disease.

9 Clinical tuberculosis is different in a population with acquired immunodeficiencies.

10 Tuberculosis can be a major problem in nursing homes now that an increasing number of the elderly are cared for in such institutions.³⁷

Newer Developments

Many changes in laboratory methods are under investigation (microtiter system, Bactec, Isolator cultures, gene probes for *M. tuberculosis* group organisms). Eventually cultures for tuberculosis will be processed more rapidly, and the results of sensitivities available more quickly. Also, sensitivities can be done on a much wider range of drugs. Some newer antibiotic drugs do have anti-mycobacterial activity. Careful follow-up of contacts of cases with tuberculin testing and chest x-rays is still essential. Prophylactic therapy should be used wherever it is indicated. Primary care physicians should follow these patients for compliance with this regimen. ■

References

- 1 Farer LS. The current status of tuberculosis control efforts. *Am Rev Respir Dis* 1986;134:402-7.
- 2 Farer LS, Lowell AM, Meador MP. Extrapulmonary tuberculosis in the United States. *Am J Epidemiol* 1987;109:205-17.
- 3 Alvarez S, McCabe WR. Extrapulmonary tuberculosis revisited: a review of experience at Boston City and other hospitals. *Med* 1984;63:25-55.
- 4 Meltzer RM, Deehl LJ, Karlin JM et al. Tuberculous arthritis: a case study and review of the literature. *J Foot Surg* 1985;24:30-34.
- 5 Lee KE. Tuberculosis presenting as carpal tunnel syndrome. *J Hand Surg* 1985;10A:242-5.
- 6 Palmer KR, Patil DH, Basran GS, et al. Abdominal tuberculosis in urban Britain — common disease. *Gut* 1985;26:1296-1305.
- 7 Gorse GJ, Belshe RB. Male genital tuberculosis: a review of the literature with instructive case reports. *Rev Infect Dis* 1985;7:511-24.
- 8 Damte B, Frengley D, Wolinsky E, Spagnuolo PJ. Esoph-

ageal tuberculosis: mimicry of gastrointestinal malignancy. *Rev Infect Dis* 1987;9:140-6.

- 9 Skolnik PR, Nadol JB, Baker AS. Tuberculosis of the middle ear: review of the literature with an instructive case report. *Rev Infect Dis* 1986;8:403-10.
- 10 CDC. Tuberculosis — United States in 1985. *MMWR* 1986;35:699-703.
- 11 Pitchenik AE, Burr J, Suarez, et al. Human T-cell lymphotropic virus-III (HTLV-III) seropositivity and related disease among 71 consecutive patients in whom tuberculosis was diagnosed. *Am Rev Respir Dis* 1987;135:875-9.
- 12 Daniel TM. The immunology of tuberculosis. *Clin Chest Med* 1980;1:189-201.
- 13 Rooney JJ, Crocco JA, Kramer S, et al. Further observations on tuberculin reactors in active tuberculosis. *Am J Med* 1976;60:517-22.
- 14 Thompson NJ, Glassroth JL, Snider DE, Farer LS. The booster phenomenon in serial tuberculin testing. *Am Rev Respir Dis* 1979;119:587-97.
- 15 Snider DE, Cauthen GM. Tuberculin skin testing of hospital employees: infection, "boosting," and two-step testing. *Am J Infect Control* 1984;12:305-11.
- 16 Holden M, Dubin MR, Diamond PH. Frequency of negative intermediate-strength tuberculin sensitivity in patients with active tuberculosis. *N Engl J Med* 1971;27:1506-9.
- 17 Landi S, Held HR, Tseng MC. Disparity of potency between stabilized and non-stabilized dilute tuberculin solutions. *Am Rev Respir Dis* 1971;104:385-93.
- 18 Chaparas SD, Vandiviere HM, Melvin I, et al. Tuberculin test: variability with the Mantoux procedure. *Am Rev Respir Dis* 1985;132:175-7.
- 19 Comstock GW, Woolpert SF. Tuberculin conversion: true or false? *Am Rev Respir Dis* 1978;118:215-7.
- 20 Slavin RE, Walsh TJ, Pollack AD. Late generalized tuberculosis: a clinical pathologic analysis and comparison of 10 cases in the pre-antibiotic and antibiotic years. *Med* 1980;59:352-66.
- 21 Stead WW. Pathogenesis of the sporadic case of tuberculosis. *N Engl J Med* 1967;277:1008-12.
- 22 Chaparas SD. Immunity in tuberculosis. *Bull World Hlth Organization* 1982;60:447-62.
- 23 Daniel TM, Oxtoby MJ, Pinto E, Moreno E. The immune spectrum in patients with pulmonary tuberculosis. *Am Rev Respir Dis* 1981;123:556-9.
- 24 Daniel TM. Circulating immune complexes in tuberculosis. *Am Rev Respir Dis* 1986;134:199-200.
- 25 Lanzini L, Rottoli P, Rottoli L. The spectrum of human tuberculosis. *Clin Exp Immunol* 1977;27:230-7.
- 26 CDC. Tuberculosis — United States, 1985, and the possible impact of human T-lymphotropic type III/lymphadenopathy-associated virus infection. *MMWR* 1986;35:74-5.
- 27 CDC. Diagnosis and management of mycobacterial infection and disease in persons with human lymphotropic type III/lymphadenopathy-associated virus infection. *MMWR* 1986;35:448-50.
- 28 Sunderam G, McDonald RJ, Maniatis T, et al. Tuberculosis as a manifestation of the acquired immunodeficiency syndrome (AIDS). *JAMA* 1986;256:362-6.
- 29 CDC. Revision of case definition for AIDS for surveillance purposes. *MMWR* 1987;36:3S-9S.
- 30 Youmans GP. Relation between delayed hypersensitivity and immunity in tuberculosis. *Am Rev Respir Dis* 1975;3:109-16.
- 31 Grosset J. Bacteriologic basis of short-course chemotherapy for tuberculosis. *Clin Chest Med* 1980;1:231-241.
- 32 Singapore Tuberculosis Service/British Medical Research Council. Long-term follow-up of a clinical trial of six-month and four-month regimens of chemotherapy in the treatment of pulmonary tuberculosis. *Am Rev Respir Dis* 1986;133:779-83.
- 33 CDC. Guidelines for short-course tuberculosis chemotherapy. *MMWR* 1980;29:97-100,105.
- 34 CDC. Follow-up guidelines for short-course tuberculosis chemotherapy. *MMWR* 1980;29:183-4,189.
- 35 Snider DE, et al. Standard therapy for tuberculosis. *Chest* 1985;87:117S-24S.
- 36 Barrett-Connor E. The epidemiology of tuberculosis in physicians. *JAMA* 1979;241:33-8.
- 37 Stead W, Lofgren JP, et al. Tuberculosis as an endemic and nosocomial infection among the elderly in nursing homes. *N Engl J Med* 1985;312:1483-7.



If you want to
practice medicine,
not paperwork...
Talk To Me

I'm Lieutenant Ron Boatright. I've worked in the Navy medical profession for over ten years. In Navy Medicine the emphasis is on patients, not paperwork. Highly trained Physicians' Assistants, Hospital Corpsmen, Nurses, and Health Care Administrators not only provide medical support, but they attend to all the paperwork. As a result you are free to make medical decisions based solely on the needs of your patients.

The U.S. Navy is currently seeking qualified physicians in specialty areas to provide medical care for its servicemembers. As a Navy doctor you will work with state of the art equipment in the best facilities available. Along with your professional development, you will enjoy the lifestyle and fringe benefits of being a Navy officer, including:

- 30 days paid vacation annually
- Recreation facilities
- Veteran's benefits
- Annual salary starts between \$40,000-\$60,000
depending on experience
- Navy guarantees the location of your choice and
pays relocation costs.

If you are interested in more information, call me at 1-800-662-7568.

The Management of Clinically Localized Prostate Cancer

A Summary of the Consensus Statement of the National Institutes of Health

Edward C. Halperin, M.D., Robert W. Fraser, M.D.,
and Jack Hughes, M.D.

In most developed countries of the world, adenocarcinoma of the prostate is the second most common malignancy in males. It is estimated that between 75,000 and 100,000 new cases of prostate cancer will be diagnosed this year in the United States.¹ Although prostate cancer is rare in men below the age of 40, the mortality rate increases nearly logarithmically with age. The crude annual mortality rate is approximately 18.8 deaths per 100,000 males per year in the United States. It is estimated that between 24,000 and 26,000 Americans die of prostate cancer each year.^{1,2}

Prostate cancer is most commonly detected at a rectal examination performed during a physical examination. It may also be diagnosed, incidentally, in the histologic material obtained from a transurethral prostatectomy (TURP) performed for presumed benign prostatic hypertrophy.

Once the diagnosis of prostatic carcinoma is confirmed, each individual patient is staged with careful tumor palpation, blood chemistry studies, and a radiographic evaluation. The most commonly used staging system for prostate carcinoma was introduced by Whitmore and modified by Jewett.^{3,4} This system groups patients into four categories, denoted by the letters A through D. Stage A prostate cancer includes tumors that were unsuspected on rectal examination but were discovered on histologic evaluation of a prostatectomy specimen. Stage A is subdivided according to whether the tumor is focal (A1) or diffuse (A2). Stage B prostate cancer includes those tumors evident on rectal examination but confined to the prostate gland. These tumors may be subclassified into those involving only one lobe of the prostate (B1) and those involving both lobes (B2). Stage C tumors extend beyond the prostatic capsule but have not

produced distant metastases. They may be subgrouped into those with minimal palpable extracapsular extension (C1) or those with bulky tumors producing obstruction of the bladder or urethral orifice (C2). Stage D tumors have metastasized distantly. These patients may be subgrouped into those with localized disease but persistently elevated serum acid phosphatase (DO); those who, in terms of digital rectal examination, have stage A through C disease but are found to have pelvic lymph node metastases (D1); or those with metastases to bones or other organs (D2).⁵

The Whitmore-Jewett staging system is not the only system for the staging of prostatic cancer. Irrespective of the staging system used, however, it is generally accepted that "local" prostate cancers are those confined to the prostate and/or surrounding tissues. The percentage of new cases which are localized varies widely in reported series. It may be as low as 50% to 60% or as high as 90%.⁵⁻⁹

A radical prostatectomy has been generally accepted as definitive management for local carcinoma of the prostate. The operation, with or without a staging lymphadenectomy, is defensible on the basis of a long history as well as recent randomized clinical trials.^{5,10} Radiation therapy is an alternative form of definitive treatment with many proponents.¹¹ Palliative treatment with hormones and cytotoxic chemotherapy also plays a role in the management of patients with prostatic carcinoma.

Summary of the NIH Consensus Statement

It is clear that the choice of treatment for prostatic carcinoma affects not only life expectancy but also the quality of life. To evaluate the various choices for treatment, the National Cancer Institute and the office of Medical Applications of Research of the National Institutes of Health (NIH) convened a Consensus Development Conference on the man-

From the Division of Radiation Oncology, Department of Radiology, Box 3085, Duke University Medical Center, Durham 27710; Southeastern Radiation Oncology Group, Charlotte Memorial Hospital and Medical Center, Charlotte (RWF); Coppridge Urologic Group, Durham (JH).

agement of clinically localized prostate cancer in June, 1987. The Panel consisted of 14 individuals — principally physicians and biostatisticians. Dr. James Jones of East Carolina University served as one of the members. After listening to presentations by a series of experts, the panel drafted a consensus statement.¹²

The Consensus Panel agreed that an accurate histologic diagnosis of prostatic carcinoma was essential prior to the planning of treatment. While the diagnosis is usually obtained by core biopsy or TURP, it may be obtained by aspiration cytology. Several systems exist for histologic grading of prostate carcinoma. They are all based upon the degree of tumor differentiation and tumor growth patterns. Histologic grading correlates well with the biologic degree of malignancy — that is, the risk of tumor invasion, metastases, and mortality. An aspiration cytology allows grading based on nuclear anaplasia but precludes grading on the basis of tumor growth patterns. Further work on the role of cytologic grading is required. Flow cytometry used to measure DNA content may also prove to be of value and remains under active investigation.

The Panel felt that biochemical evaluation of serum alkaline phosphatase, acid phosphatase, and prostate-specific antigen were worthwhile. Radiographic studies crucial to staging evaluation include a nuclear medicine bone scan, chest x-ray, and an imaging evaluation of the upper urinary tract. There are proponents of the use of transrectal ultrasound, abdominal and pelvic computerized tomography, and magnetic resonance imaging. These imaging modalities for prostate cancer are under active investigation.

A surgically performed pelvic lymphadenectomy is appropriate, in the Panel's opinion, "when clinical decisions depend on accurate knowledge of the presence or absence of metastatic tumor in the pelvic lymph nodes. It is performed most commonly prior to a planned radical prostatectomy. Pelvic lymph node dissection continues to provide staging information that can be obtained by no other method."

In considering the optimal candidate for radical prostatectomy vs. definitive radiation therapy, the Panel adopted an evenhanded approach. They agreed that an appropriate candidate for a definitive primary radical prostatectomy should have tumor localized to the prostate (stage A2, B1, or B2), that the patient should be an acceptable candidate for surgery without significant comorbid disease, and that the evaluation for distant metastases should be negative. The panel commented that radical prostatectomy is associated with both perioperative morbidity and the risk of late side effects. These side effects include the risk of urinary incontinence, urethral stricture, and impotence. The Panel took note of the existence of newer surgical techniques which can preserve nerves necessary for erection. This surgery may be appropriate in certain instances. The surgical cancer-free survival rate at 15 years for patients with tumor limited to one lobe of the prostate approached the expected survival of men in the general population in a comparable

age group. Disease-free survival rates decrease as the tumor size increases.

Candidates for definitive radiotherapy, the Panel agreed, include those with stage A2, B, and C disease. These patients should also have a negative staging evaluation for distant metastases. In most cases, effective radiotherapy requires a high energy external beam source. There are selected instances where interstitial radioactive seed implantation of the prostate, with or without external beam radiotherapy, may be valuable. The risks of radiotherapy include acute proctitis, enteritis, and cystitis. In the majority of patients treated with radiotherapy potency is preserved. It was difficult to agree on the role of a post-radiation therapy biopsy. The existence of persistently positive biopsy following radiotherapy may be predictive of subsequent tumor recurrence. The ten-year actuarial survival rate of patients with stage A2 or B disease, treated with irradiation, is expected to be equivalent to the survival of men in comparable age groups. Similar to surgery, survival rates decrease as the size of the primary tumor increases.

In considering the use of adjuvant therapy for high-risk patients, the Consensus Panel stated that there were no data "available to support the routine use of adjuvant therapy after definitive surgery or irradiation." The panel did accept, however, that adjuvant hormone manipulation and postoperative irradiation were worth studying in patients with locally advanced cancer.

The Panel called for improvement in histologic grading, the definition of appropriate diagnostic imaging studies, the identification of pertinent new prognostic variables, and assessment of the influence of treatment upon the quality of life. The Panel concluded:

Radical prostatectomy and radiation therapy are clearly effective forms of treatment in the attempt to cure tumors limited to the prostate for appropriately selected patients. Comparisons of cross studies suggest comparable ten year survival rates with either form of management. What remains unclear is the relative merit of each in producing lifelong freedom from cancer recurrence. It is known that traditional radical prostatectomy can provide 15 year cancer free survival, in appropriately selected patients, equivalent to that of a comparably aged control population. On the other hand, sufficient long term follow-up does not yet exist to permit a conclusion about the ability of radiation therapy to eradicate such cancer in an equivalent proportion of patients.

After appropriate primary irradiation, the long term complication rate is now well defined and appears acceptable. The new approach to prostatectomy is clearly associated with reduction in postoperative impotence. The true comparative incidence of impotence over time, however, awaits prospective evaluation. While impotence may result from the alteration of normal anatomy, the psychological consideration should not be over-

looked. Sexual rehabilitation should address both medical and psychological needs. Information that a patient should have available when considering with his physician the choice of treatment includes: (1) Probability of cure, mortality, complications, and other side effects of radical prostatectomy and radiation therapy. (2) Risk of impotence and incontinence for either treatment. (3) Psychosocial consequences of either choice. (4) Extent and risk of pretreatments staging assessment tests. (5) Economic consequences of each form of treatment.

As competing, non-cancer related causes of death (e.g. cardiovascular disease) may be expected to decrease for men over the age of 50, the issue of cure will become more important in low stage disease. Properly designed and completed randomized trials that evaluate both disease control and quality of life after modern radiation therapy compared with radical prostatectomy are essential.¹²

Faced with a difficult task, the Consensus Panel did an admirable job in providing the primary care physician as well as the specialist with guidance in the management of clinically localized prostate cancer. "The one mark of maturity, especially in a physician, and perhaps it is even rarer in a scientist, is the capacity to deal with uncertainty."¹³ The Panel synthesized a large amount of data, dealt with uncertainty, and provided physicians with valuable guidelines.

Comments

I have invited comments on the Consensus Report from two colleagues, Dr. Robert W. Fraser and Dr. Jack Hughes.

Dr. Robert W. Fraser

I can't dispute the desirability of a "properly designed and completely randomized trial to compare modern radiation therapy . . . with a radical prostatectomy" — but when will the results of such a study be available to help clinicians? Although randomized studies have been attempted, the Consensus Panel did not feel that these trials were adequate to settle the question of prostatectomy vs. radiotherapy. With the long natural history of prostate carcinoma, a proper randomized study would take 10 to 15 years to fully evaluate. Many of us will be fondly looking forward to retirement by that time. The clinician's problem is: What treatment do I recommend today? For localized prostate carcinoma, is radiation therapy as reasonable an option as radical prostatectomy? Which patient should receive which therapy? What is the role of staging lymphadenectomy?

Inherent case selection is the major pitfall in comparing selective surgical and radiation series. Surgically staged and

treated stage B patients (with the node-positive D1 patients weeded out) will always compare favorably with nonsurgically assessed stage B patients treated by radiotherapy. The Consensus Panel concludes that both radiation and surgery offer comparable 10-year survival rates, although 15-year results are not yet available for radiotherapy.

Is radical prostatectomy or surgery better for a given patient? Well-staged patients with stage A or B well-differentiated adenocarcinoma do relatively well whether treated with surgery or radiation. In my opinion, the ideal patient for radical prostatectomy is under 70 years of age (or the biologic equivalent) with a 10- or 15-year life expectancy. He needs to be a good anesthesia candidate. If the patient has significant lymph node involvement with tumor, the radical prostatectomy should not be carried out. Similar criteria pertain for selecting patients for treatment with radioactive gold or iodine seed implants. Large stage B lesions, in patients who have had a prior TURP, are not well suited for such implants. In the selection of patients for external beam radiation treatment, age and concurrent medical conditions are less significant limiting factors. Stage C patients are best treated with radiotherapy. Patients found, after prostatectomy, to have positive resection margins require postoperative irradiation.

There is obviously a large overlap of patients eligible for radioactive seed implantation, surgery, or external beam irradiation. Without hard data to prove or disprove the superiority of a given modality of treatment, other issues need to be considered. Erectile potential is maintained in about 90% of patients treated with radioactive seed implants, 50% to 60% of externally irradiated patients, and no patients treated with a traditional radical prostatectomy. In the last several years there has been an increased interest in a "potency preserving" radical prostatectomy which allows preservation of sexual function in about 50% of patients. The follow-up in these patients is under five years and the ultimate effect of this surgery on local control of tumor and survival is unknown. The 5% to 10% incidence of chronic radiation proctitis following external beam irradiation approximates the incidence of chronic urinary incontinence following radical prostatectomy. Surgery entails a 1% mortality rate while radiation has a 1% risk of severe rectal injury requiring a colostomy. External beam irradiation requires five days per week out-patient therapy for seven weeks while surgery requires a hospitalization of at least a week with a catheter for another two weeks. The overall financial cost to the patient of radiotherapy (without staging lymphadenectomy) is, on average, half that of radical prostatectomy.

Explaining the various treatment choices to an anxious patient is a difficult but necessary task. Ideally the patient should be presented to a tumor board or see both a urologist and a radiation oncologist. Since, typically, a urologist first discusses these issues with the patient, it is his or her responsibility and challenge to present treatment options to the patient in an unbiased manner.

Pelvic lymph node dissection, indeed, does "provide staging information that can be obtained by no other method." Node-positive patients are almost all (over 90%) destined to develop distant metastases. Whether such surgery ought to be done, though, depends on whether pathologic assessment of lymph nodes will influence therapy. For the patient who had already elected radical prostatectomy for primary treatment, a staging lymphadenectomy makes good sense. If the nodes are positive, many urologists would not go ahead with the prostatectomy. For a patient who is to have radiotherapy, there is little to be gained and something to be lost by such a procedure. We can define subsets of patients, using tumor size and histologic grade, who have less than a 10% risk of nodal involvement at surgery. This subset would be ill-served by a staging operation. For patients with larger tumors, and/or more poorly differentiated tumors, who are known to have a high risk of node involvement, the question becomes: Which is the less onerous procedure for the patient — the staging lymphadenectomy or definitive radiation therapy? If the patient is operated on, and his nodes are negative, then subsequent radiation treatment is undertaken with an increased risk of lower extremity and genital lymphedema. Staging surgery has adversely effected this subset of node-negative patients. If the lymph nodes are positive, then the treatment options are observation, irradiation, or immediate orchiectomy. There is no evidence that immediate orchiectomy for node-positive patients provides improved survival or quality of life over delaying orchiectomy until metastases have appeared.

One urologist friend of mine believes that all patients who are to be referred for radiation should have staging surgery first in order to "save" the node-positive subset from radiation. I could equally well argue that radiation therapy without surgery "saves" the patient from the staging operation that will only increase his morbidity if his nodes are negative. If nodes are positive, surgery would spare him the morbidity of large field radiation therapy but he would trade that for the morbidity of an operation. While local radiotherapy to the prostate would not prolong life for the node-positive patient, it would give him a decent chance for local tumor control with preservation of normal sexual functioning — a combination that neither observation nor immediate orchiectomy can provide. To know the future yet be unable to influence it is an ancient dilemma, the basis of several Greek tragedies. Until an effective adjuvant treatment for node-positive patients is found, a staging lymphadenectomy prior to planned radiation treatment is of benefit to the patient only in his estate planning.

Treatment options and strategies for patients with early prostate cancer are controversial. It is important to understand that both urologists and radiation oncologists have a role to play in the treatment of this disease. It is also crucial that the patient be well informed of his treatment options and participate in choosing among them.

Dr. Jack Hughes

Among physicians who treat carcinoma of the prostate there are differences of opinion about how best to establish the diagnosis of clinically localized lesions, as well as the appropriate management. These differences are reflected in the statement published recently by the Consensus Development Conference of the NIH. The statement is more of a consensus on the identity of the missing parts of the equation for proper diagnosis and management than on guidelines for dealing with the disease. The natural history of prostate carcinoma, and the lack of well controlled long-term clinical studies, make it impossible to determine which, if any, of the methods currently employed is significantly better than all others. The treatment method selected is apt to be based on the clinician's current bias, arrived at by his or her knowledge and experience, and the patient's choice of the alternatives offered.

Currently most, but not all, urologists agree that radical prostatectomy is the procedure of choice for a truly localized prostate cancer in a patient who has a life expectancy of about 10 years. There is less agreement about techniques for staging, indications for a nerve sparing operation to try to preserve potency, which patient should receive radiation therapy, when to use hormone manipulation, and a host of other questions.

Hopefully, the Consensus Panel's proposals for future research will fall upon receptive minds and some of our better institutions will begin to undertake well-designed studies that will permit a true consensus in 15 or 20 years.

■

Acknowledgments

Dr. Halperin is a recipient of an American Cancer Society Clinical Oncology Career Development Award. Ms. Cheryl Wallace typed the manuscript.

References

- 1 Silverberg E, Lubera JA. A review of American Cancer Society estimates of cancer cases and deaths. *Ca - A Cancer J Clin* 1983;33:2.
- 2 Young JL Jr., Percy CL, Asire AJ. Cancer incidence and mortality in the United States. 1973-1977. *NCI Monog* 1981;57:1.
- 3 Whitmore WF, Jr. Hormone therapy in prostatic cancer. *Am J Med* 1965;21:697.
- 4 Jewett HJ. The present status of radical prostatectomy for stages A and B prostatic cancer. *Urol Clin N Am* 1975;2:105.
- 5 Catalona WJ. Prostate cancer. Orlando, FL: Grune & Stratton, 1984.
- 6 VACURG. Treatment and survival of patients with cancer of the prostate. *SGO* 1967;124:1011.

- 7 Murphy GP, Nataragan N, Pontes JE, et al. The national survey of prostate cancer in the United States by the American College of Surgeons. *J Urol* 1984;127:928.
- 8 McMillen SM, Wettlaufer J. The role of repeat transurethral biopsy in stage A carcinoma of the prostate. *J Urol* 1976;116:759.
- 9 Donohue RE, Fauver HE, Whitesel JA, et al. Staging prostate cancer: a different distribution. *J Urol* 1979;122:327.
- 10 Paulson DF, Lin HG, Hinshaw W, et al. Radical surgery versus radiotherapy for adenocarcinoma of the prostate. *J Urol* 1982;128:502.
- 11 Pilepich MV, Bagshaw MA, Ausbell SO, et al. Definitive radiotherapy in resectable (stage A2 and B) carcinoma of the prostate — results of a nationwide overview. *Int J Rad Oncol Biol Phys* 1987;13:659.
- 12 National Institutes of Health Consensus Development Conference Statement. The management of clinically localized prostate cancer. 1987;6:1-6.
- 13 Bean WB. Quoted in Strauss MB (ed), *Familiar medical quotations*. Boston: Little, Brown and Company, 1968, p. 404.



THE FUTURE IS NOW WITH THE ELIMINATOR

"Eliminator" is a fairly harsh word to describe an x-ray generator. However, the Compu-mAs system from Bennett X-Ray Corp. and B & B X-Ray does so many things for you, there's no other word to explain it. The generator automatically calculates the next available mAs from the 34 time stations and the 7 mA stations, therefore eliminating many of the steps that were once necessary in taking x-rays.

The Compu-mAs:

- Eliminates setting major and minor kVp tap switches
- Eliminates setting high and low range for kV selectors
- Eliminates calculating mA \times time to find mAs
- Eliminates checking and adjusting line compensation
- Eliminates the need to set both mA and time

By eliminating all of these steps, the Eliminator moves into the future without sacrificing dependability and accuracy. Dependability has been a benefit of owning a Bennett Radiographic System for over 30 years. And now, by automatically selecting the next available mAs combination of mA and time, Compu-mAs provides accuracy to almost infinite resolution. The Compu-mAs Eliminator—just another way B & B X-Ray is working for your end result, optimum quality radiographs.

B & B X R A Y

working for the end result—optimum quality radiographs

P.O. Box 802 Matthews, NC 28105

In NC Call 1-800-222-9262
In SC Call Collect 704-847-8521

For professionals, a major disability or illness can be financial disaster.

A disability income protection plan from Connecticut Mutual replaces earnings lost because of disability.

Our plan includes:

- high benefit limits that replace more of your income;
- special reduced rates for non-smokers;
- proportionate benefits when you can only work part-time but still

need a full-time income;

—the ability to increase your basic policy benefit as your income increases, regardless of your health;

—reimbursement for vocational and educational expenses during rehabilitation;

—an "Own Occupation" rider that pays full benefits if you are unable to perform the main duties of your own occupation, even if you earn income from a different job or business;

—we can also pay dividends that

reduce the cost of your coverage.

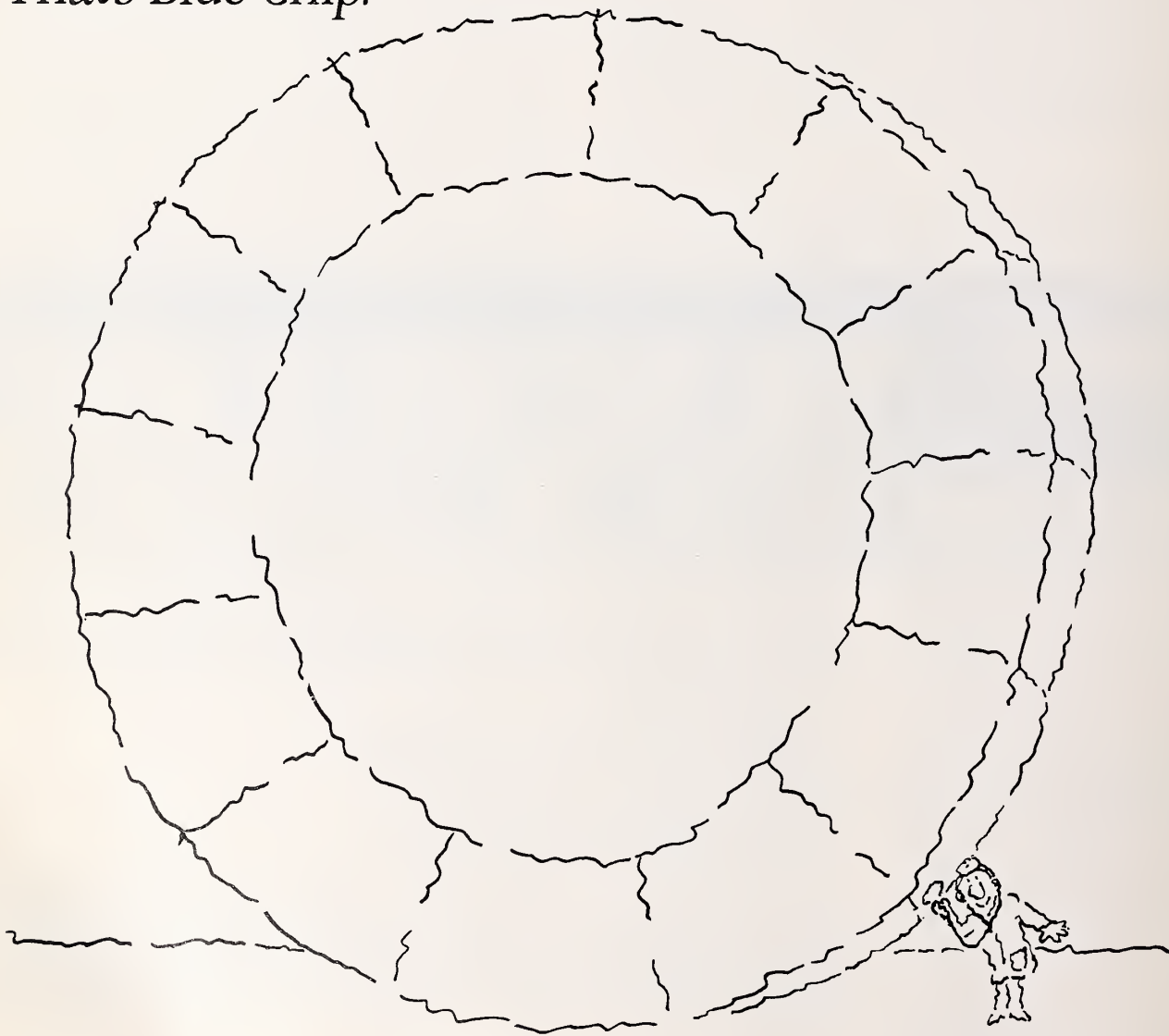
Call today to find out how we can custom design a Blue Chip protection plan to keep your income healthy.

The Hinrichs Financial Group

1600 Charlotte Plaza
Charlotte, NC 28244
(704) 371-8600

An affiliate of the  Alliance

*Disability insurance that keeps your income healthy.
That's Blue Chip.*



Connecticut Mutual Life Insurance Company (Hartford CT)

Before prescribing, see complete prescribing information in SK&F LAB CO. literature or PDR. The following is a brief summary.

Contraindications: There are no known contraindications to the use of 'Tagamet'.

Precautions: While a weak antiandrogenic effect has been demonstrated in animals, 'Tagamet' has been shown to have no effect on spermatogenesis, sperm count, motility, morphology or in vitro fertilizing capacity in humans.

In a 24-month toxicity study in rats at dose levels approximately 9 to 56 times the recommended human dose, benign Leydig cell tumors were seen. These were common in both the treated and control groups, and the incidence became significantly higher only in the aged rats receiving 'Tagamet'.

Rare instances of cardiac arrhythmias and hypotension have been reported following the rapid administration of 'Tagamet' HCl (brand of cimetidine hydrochloride) injection by intravenous bolus.

Symptomatic response to 'Tagamet' therapy does not preclude the presence of a gastric malignancy. There have been rare reports of transient healing of gastric ulcers despite subsequently documented malignancy.

Reversible confusional states have been reported on occasion, predominantly in severely ill patients.

'Tagamet' has been reported to reduce the hepatic metabolism of warfarin-type anticoagulants, phenytoin, propranolol, chlordiazepoxide, diazepam, lidocaine, theophylline and metronidazole. Clinically significant effects have been reported with the warfarin anticoagulants; therefore, close monitoring of prothrombin time is recommended, and adjustment of the anticoagulant dose may be necessary when 'Tagamet' is administered concomitantly. Interaction with phenytoin, lidocaine and theophylline has also been reported to produce adverse clinical effects.

However, a crossover study in healthy subjects receiving either 'Tagamet' 300 mg. q.i.d. or 800 mg. h.s. concomitantly with a 300 mg. b.i.d. dosage of theophylline (Theo-Dur®, Key Pharmaceuticals, Inc.),

demonstrated less alteration in steady-state theophylline peak serum levels with the 800 mg. h.s. regimen, particularly in subjects aged 54 years and older. Data beyond ten days are not available. [Note: All patients receiving theophylline should be monitored appropriately, regardless of concomitant drug therapy.]

Lack of experience to date precludes recommending 'Tagamet' for use in pregnant patients, women of childbearing potential, nursing mothers or children under 16 unless anticipated benefits outweigh potential risks; generally, nursing should not be undertaken in patients taking the drug since cimetidine is secreted in human milk.

Adverse Reactions: Diarrhea, dizziness, somnolence, headache, rash. Reversible arthralgia, myalgia and exacerbation of joint symptoms in patients with preexisting arthritis have been reported. Reversible confusional states (e.g., mental confusion, agitation, psychosis, depression, anxiety, hallucinations, disorientation), predominantly in severely ill patients, have been reported. Gynecomastia and reversible impotence in patients with pathological hypersecretory disorders receiving 'Tagamet', particularly in high doses, for at least 12 months, have been reported. Reversible alopecia has been reported very rarely. Decreased white blood cell counts in 'Tagamet'-treated patients (approximately 1 per 100,000 patients), including agranulocytosis (approximately 3 per million patients), have been reported, including a few reports of recurrence on rechallenge. Most of these reports were in patients who had serious concomitant illnesses and received drugs and/or treatment known to produce neutropenia. Thrombocytopenia (approximately 3 per million patients) and a few cases of aplastic anemia have also been reported. Increased serum transaminase and creatinine, as well as rare cases of fever, interstitial nephritis, urinary retention, pancreatitis and allergic reactions, including hypersensitivity vasculitis, have been reported. Reversible adverse hepatic effects, cholestatic or mixed cholestatic-hepatocellular in nature, have been reported rarely. Because of the predominance of cholestatic features, severe parenchymal injury is considered highly un-

likely. A single case of biopsy-proven periportal hepatic fibrosis in a patient receiving 'Tagamet' has been reported.

How Supplied: Tablets: 200 mg. tablets in bottles of 100; 300 mg. tablets in bottles of 100 and Single Unit Packages of 100 (intended for institutional use only); 400 mg. tablets in bottles of 60 and Single Unit Packages of 100 (intended for institutional use only), and 800 mg. Tiltab® tablets in bottles of 30 and Single Unit Packages of 100 (intended for institutional use only).

Liquid: 300 mg./5 ml., in 8 fl. oz. (237 ml.) amber glass bottles and in single-dose units (300 mg./5 ml.), in packages of 10 (intended for institutional use only).

Injection:

Vials: 300 mg./2 ml. in single-dose vials, in packages of 10 and 30, and in 8 ml. multiple-dose vials, in packages of 10 and 25.

Pre-filled Syringes: 300 mg./2 ml. in single-dose pre-filled disposable syringes.

Plastic Containers: 300 mg. in 50 ml. of 0.9% Sodium Chloride in single-dose plastic containers, in packages of 4 units. No preservative has been added.

ADD-Vantage® Vials: 300 mg./2 ml. in single-dose ADD-Vantage® Vials, in packages of 25.

Exposure of the premixed product to excessive heat should be avoided. It is recommended the product be stored at controlled room temperature. Brief exposure up to 40°C does not adversely affect the premixed product.

'Tagamet' HCl (brand of cimetidine hydrochloride) injection premixed in single-dose plastic containers is manufactured for SK&F Lab Co. by Travenol Laboratories, Inc., Deerfield, IL 60015.

* ADD-Vantage® is a trademark of Abbott Laboratories.

BRS-TG-L73B

Date of issuance Apr. 1987

SK&F LAB CO.

Cidra, P.R. 00639

© SK&F Lab Co., 1988

In peptic ulcer:

**RELIEF
REASSURANCE
REWARD**



Tagamet®
brand of cimetidine
First to Heal

You'll both feel good about it.

RESULTS

Motrin[®] 800mg

ibuprofen



Extra strength
Convenience
Economy



A Century
of Caring
1886-1986

A better alternative for hypertensives who are going bananas...

Spare your patients the extra cost—
in calories, sodium and dollars.

Spare your patients the rigors of
dietary K⁺ supplementation.

DYAZIDE[®]

25 mg Hydrochlorothiazide/50 mg Triamterene/SKF

Effective antihypertensive*
therapy...without
the bananas

DAW
'DYAZIDE' AS WRITTEN.

* Not for initial therapy. See brief summary.

Before prescribing, see complete
prescribing information in
SK&F CO. literature or PDR.
The following is a brief summary.

* WARNING

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K⁺ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K⁺ intake. Associated widened QRS complex or arrhythmia requires prompt additional therapy. Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or

without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.

Precautions: The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of triamterene and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Angiotensin-converting enzyme (ACE) inhibitors can elevate serum potassium; use with caution with 'Dyazide'. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin [ACTH]). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias. Liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The

following may occur: transient elevated BUN or creatinine or both; hyperglycemia and glycosuria (diabetic insulin requirements may be altered); hyperuricemia and gout; digitalis intoxication (in hypokalemia); decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function. Thiazides may add to or potentiate the action of other antihypertensive drugs. Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth, anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.

Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak[™] unit-of-use bottles of 100.

BR5-DZ-L45

a product of
SK&F CO.
Citra, PR. 00639

© SK&F Co., 1987

TODAY.

Tax laws have changed this year. And tax forms are different.
So it's smarter than ever to file now and file accurately. If you need help,
call or visit your local IRS office. And make your taxes less taxing.

Make your taxes less taxing. Do them today.

A Public Service of This Publication &



Internal
Revenue
Service



Another Look at Thyroid Nodules

Emile E. Werk, Jr., M.D., Jorge J. Gonzalez, M.D., and Peter C. Ungaro, M.D.

In 1984 we published in this journal a five-year survey of the management of thyroid nodules in this community hospital.¹ We stressed several points: (1) The percentage of cancer index (PCI), which is the percentage of operated patients in whom cancer is found, should be reviewed periodically in each hospital to evaluate the efficacy of management of thyroid nodules. The goal is to achieve a sufficiently high PCI so that all cancers are detected and at the same time unnecessary operations are minimized. (2) Fine needle aspiration (FNA) should have a central role in the evaluation of nodules. This is in accordance with the growing body of literature which supports the application of this technique.²⁻⁸ (3) We recommended, after an extensive literature survey, that a PCI of at least 50% be considered reasonable when FNA was routinely employed in nodule evaluation.

In this article we report a three-year followup.

Results

Figure 1 shows the total thyroid and nodule operations performed, the PCI, and the deaths due to thyroid cancer. It includes data for the first five-year study, 1979 through 1983, and for the current three-year followup period, 1984 through 1986. The PCI showed a progressive increase in the years 1984, 1985, and 1986: the PCI in 1986 was 14%, compared to the average of 5.6% for the years 1979 through 1983. The number of nodule operations as well as the total thyroid operations decreased in 1983 and appeared to plateau for the next three years. Thus, nodule operations per year for the four years 1979 through 1982 at this hospital averaged 50, and for the four years 1983 through 1986, 33. The number of thyroid cancers found at surgery increased slightly during the last three years, averaging about 4.3 per year compared to 2.6 during the first five years. There were no deaths from thyroid cancer in the hospital for the entire eight-year period.

From the New Hanover Memorial Hospital and the Wilmington AHEC, and the Department of Medicine, School of Medicine, University of North Carolina at Chapel Hill 27514.

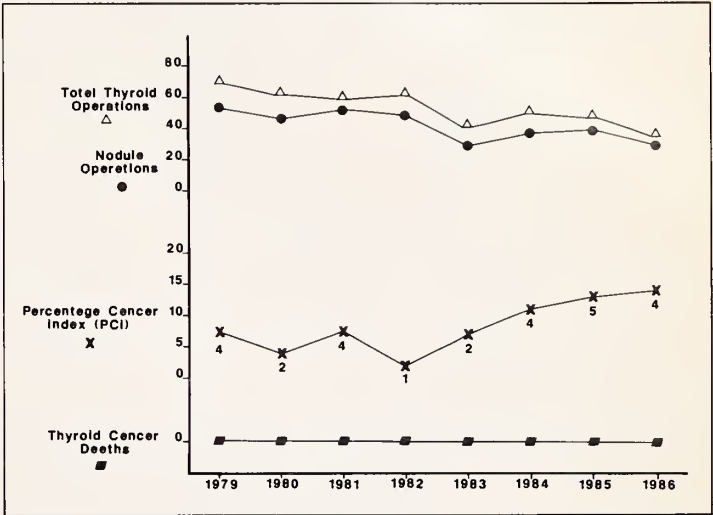


Figure 1. Total thyroid and nodule operations, percentage cancer index and cancer deaths for each year 1979 through 1986 at New Hanover Memorial Hospital. The numbers below the PCI line represent the actual number of cancer cases per year. The data from 1979-1983 are those reported previously;¹ the data for 1984-1986 are new.

Table 1 presents the PCI, the number of nodule operations done, the FNAs performed on those patients and the total FNAs examined by the hospital pathology department. Prior to 1984 thyroid FNAs were not done. During 1984 and 1985 there were very few FNAs performed, but this increased considerably during 1986, so that 25% of the operated patients had received diagnostic FNAs. Since only 10 patients received FNAs prior to surgery, a statistical evaluation of the accuracy of FNA is not appropriate. It can be said, however, that the FNA results agreed appropriately with the

Table 1
Relation of the PCI and Thyroid Nodule Operations to Diagnostic Thyroid Fine Needle Aspirations (FNAs) Performed 1984-1986

Year	PCI %	Nodule Operations Performed	FNA on Patients Operated	Total FNA Examined by Path Dept.
1984	11	36	1	12
1985	13	38	2	11
1986	14	28	7	35

surgical pathology results in all 10 cases, three of which were cancer. The number of thyroid FNAs read by the pathology department increased substantially from 11 in 1985 to 35 in 1986.

Comment

The findings of this additional three-year survey are encouraging in that the PCI had more than doubled since the initial five-year observations. Moreover, the annual number of nodule operations has remained lower since 1983, suggesting that physicians have been more discriminating in recommending surgery for thyroid nodules. Alternatively, it is unlikely that the prevalence of nodules abruptly decreased. The application of FNA cannot be held responsible since none were done in 1983 and very few in 1984 and 1985.

Employment of FNA for the diagnosis of thyroid nodules appears to be very slowly accepted in this community despite the enthusiastic reports in the literature.²⁻⁸ Our own limited experience so far suggests that patients accept it very well, that it is feasible to do on a conservative basis and that interested, capable pathologists can become adept at interpreting the cellular preparations. Although there has been published criticism,⁹⁻¹¹ we would expect the use of FNA to continue to increase slowly in the community hospital setting.

Despite the favorable trends which the results indicate, it might be considered discouraging that the results have not been more pronounced. As stated earlier, a reasonable goal for the PCI is about 50%. Taken in this perspective, the PCI of 14% in 1986 still has a long way to go. We believe that the continued monitoring of the PCI will be useful.

Finally, it must be stated that we cannot be assured of the reasons for the gradual improvement in the PCI during 1984, 1985, and 1986. We would like to believe that our

monitoring process and recommendations¹ played a role, but other factors such as the new Medicare regulations, cost containment and the policy of second opinions undoubtedly have influenced medical and surgical practice habits. ■

References

- 1 Werk EE, Vernon BM, Gonzalez JJ, et al. Solitary thyroid nodules in the community hospital: use of the percentage cancer index. *NC Med J* 1984;45:642-4.
- 2 Van Herle AJ, Moderator. The thyroid nodule. *Ann Intern Med* 1982;96:221-2.
- 3 Gharib H, Goellner JR, Zinsmeister AR, et al. Fine-needle aspiration biopsy of the thyroid. *Ann Intern Med* 1984;101:25-8.
- 4 Reeve TS, Delbridge L, Sloan D, Crummer P. The impact of fine-needle aspiration biopsy on surgery for single thyroid nodules. *Med J Australia* 1986;145:308-11.
- 5 Nishiyama RH, Bigos ST, Goldfard WB, et al. The efficacy of simultaneous fine-needle aspiration and large-needle biopsy of the thyroid gland. *Surgery* 1986;100:1133-7.
- 6 Hamburger JJ. Consistency of sequential needle biopsy findings for thyroid nodules. *Arch Intern Med* 1987;147:97-9.
- 7 Watts NB. Carcinoma metastatic to the thyroid: prevalence and diagnosis by fine-needle aspiration cytology. *Am J Med Sci* 1987;293:13-7.
- 8 Torres Olivera A, Torres Olivera FJ, Galera H, Duran Garcia S. La puncion-aspiracion con aguja fina en el nodule fria tiroides. II: correlacion citohistologica, criterios de intervencion quirurgica y repercusion sobre el gasto sanitario. *Med Clin* 1987;88:49-51.
- 9 Ramacciotti CE, Pretorius HT, Chu EW, et al. Diagnostic accuracy and use of aspiration biopsy in the management of thyroid nodules. *Arch Intern Med* 1984;144:1169-73.
- 10 Blum M. The diagnosis of the thyroid nodule using aspiration biopsy and cytology. *Arch Intern Med* 1984;144:1140-2.
- 11 Molitch ME, Beck JR, Dreisman M, et al. The cold thyroid nodule: an analysis of diagnostic and therapeutic options. *Endocr Rev* 1984;5:185-99.



Sudafed[®]

(Pseudoephedrine HCl)
Nasal Decongestant

Stops Symptoms Fast, But Won't Stop Her.



Today's active woman can't let cold symptoms slow her down. Recommend SUDAFED when she comes to you seeking relief from sinus congestion — the most uncomfortable cold symptom.

- Fast, effective relief from nasal and sinus congestion
- No antihistamines that can cause drowsiness
- The nasal decongestant most recommended by physicians*
- SUDAFED 12 Hour available for convenient, twice-a-day dosage

Recommend SUDAFED, the dependable decongestant that will stop her symptoms but won't stop her.



SUDAFED Tablets
SUDAFED 12 Hour Safety-Sealed Capsules

Med-Care

The Office Management System

6512 Six Forks Road, P.O. Box 19701
Raleigh, North Carolina 27615
NC 1-800-634-8016; USA 1-800-247-6094
919-847-5110

Med-Care's Software

Our software has been in development for over 11 years. It has been in use by private practice and community health centers for over 8 years.

Over these years, we have received a tremendous amount of suggestions from administrators, physicians, office staff, and accountants. The result? A system that is extremely flexible with a wide comprehensive data base.

Yet, it is efficient and simple enough to be used by staff without prior computer education or experience.

Med-Care reduces paperwork:

- automatic insurance processing includes refiles, aged claims, and C.O.B.
- alternate fee and coding schedules
- **paperless claims to Medicare and major carriers**
- family or patient billing option
- **clinical tracking with mailing labels**
- on-line help messages and scroll/file maintenance from any entry screen
- on demand patient statements, cycle billing, year-end statements, reminders
- appointment scheduling, encounter form printing, chart pull list, daily patient list
- general ledger, payroll, accounts payable, and word processing

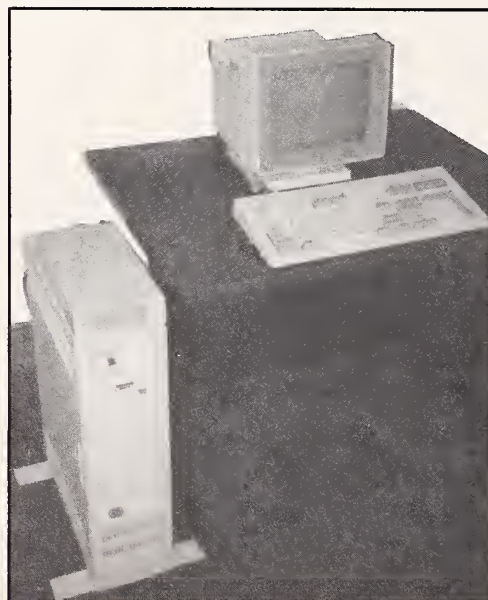
- referral utilization reporting
- **HMO processing and management made easy**

Starting with the encounter form, the appropriate plan will be identified by patient. The proper information from that point on will be handled automatically. By tracking patients on each plan and doing the cross-referencing **Med-Care** can help evaluate the efficiency of your health care plans.

Med-Care is developing a new fourth generation cobol that allows more flexibility, such as windowing, etc.

Med-Care's Support

At **Med-Care** we understand, first and foremost, that support is critical to the successful installation and



IBM Personal System/2™

operation of a computer system. This was confirmed recently in a **Computer World** article which surveyed 350 computer users.

Supporting over 100 private and CHC offices, as a **single-source** vendor **Med-Care** provides installation, training, hardware and software maintenance, updates and enhancements, and on-going technical assistance and consultation.

Med-Care's Hardware

We feature T.I. and I.B.M. computers. This gives us and our customers a complete range of compatible, upgradeable computers for growth — 1 to 128 terminals. The **Med-Care System** is also available on Unix or Xenix based systems.

At Med-Care

Our Customers Are Important!

*"In my opinion, **Med-Care** has everything I would want in a company — excellent products, a well-trained staff, professional sales and service and good response time."*

Loraine McCaskill
Business Manager
Raleigh Ear, Nose & Throat,
Head & Neck Surgery, Inc.

*"I would highly recommend **Med-Care** and their system to any practice considering automation. Their continued commitment to customer satisfaction has earned for them a reputation matched by none."*

Donald B. Campbell, M.D.
Wake Internal Medicine Consultants, Inc.

Isolated Superior Gluteal Neuropathy Due to Intramuscular Injection

Michael D. Kaufman, M.D.

A mononeuropathy of the superior gluteal nerve secondary to intramuscular injection is rarely reported.¹⁻⁶ This syndrome was observed in my 57-year-old patient, who incidentally, at the age of six, contracted poliomyelitis, leaving the left leg atrophied, particularly from the knee down.

Several operations stabilized the left knee and ankle so that despite his handicap, the patient was able to work as a maintenance man, a job which required that he climb ladders and be freely ambulatory. In March, 1983, before undergoing duodenoscopy for suspected peptic ulcer, he received an injection into the left buttock of 75 mgms of meperidine hydrochloride (Demerol). Immediately upon injection he felt severe pain and tightness in the buttock and was unable to abduct his left leg. He required the help of his daughter and his wife to walk following the procedure. He reported continued pain from the buttock into the top of his knee, and continued weakness of the left leg. There were no sensory symptoms.

Examination showed marked wasting of the left leg below the knee and mild distal wasting of the right leg. Muscle weakness extended into proximal muscles on the left, and he was unable to abduct the leg. Straight leg raising produced pain in the buttocks. There was tenderness over the left gluteus medius muscle. Sensory examination was normal. Electromyogram showed normal nerve conduction studies except for reduced motor amplitudes, which were attributed to remote poliomyelitis. A needle examination of the left leg showed chronic, moderately severe denervation without fibrillations in most muscles. The gluteus medius and tensor fascia lata muscles, however, were found to have abundant fibrillation potentials and no motor units under voluntary control.

Over the next eight months the patient's hip stability improved so that he could walk without a cane, but he could no longer climb steps leading with his left leg, and felt too unstable to climb a ladder. He was unable to continue to work in his former capacity.

Discussion

Injection-related isolated palsy of the superior gluteal nerve is a rare condition with current injection techniques. I could find only two briefly-described cases in the English language.⁵

The superior gluteal nerve supplies the gluteus minimus, gluteus medius and tensor fascia lata muscles which are activated to abduct the hip. The nerve lies beneath the piriformis, gluteus maximus and gluteus medius muscles but superficial to the gluteus minimus muscle. It branches into numerous twigs after exiting from under the superior border of the piriformis muscle, and injections lateral to this branching would be unlikely to result in severe nerve damage. In this patient an injection may have been given improperly more toward the midline in the buttocks due to atrophy of hip abductor muscles. Alternately, but less likely, loss of alpha motor neurons from previous poliomyelitis may have resulted in diminished numbers of superior gluteal nerve branches and abnormal susceptibility of these few branches to trauma by a properly placed injection.

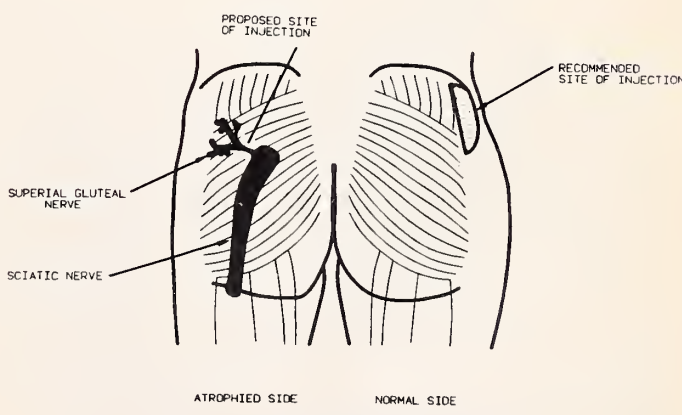


Figure 1. Representation of patient's hip and proposed site of injection into the left hip.

From Mecklenburg Neurologic Associates, 126 Cottage Place, Charlotte 28207.

The immediate onset of symptoms is typical of injection-related injury. Most patients experience intense pain and immediate weakness after such injury, although occasionally weakness occurs without pain or is delayed.⁶ Impairment of hip abduction without sensory loss due to superior nerve injury must be differentiated from dehiscence of the gluteus medius and minimus muscles from their attachments to the ilium. Electromyographically demonstrated denervation in the muscles innervated by the superior gluteal nerve substantiated the existence of a nerve injury in this patient.

This case demonstrates the importance of careful administration of intramuscular injections in patients with reduced muscle mass or compromised nerve function. To my knowledge, this is the first detailed English-language account of injury to the superior gluteal nerve by injection. ■

References

- 1 Bourrel P. Deux cas de paralysie due nerf fessier supérieur par injection. Médicamenteuse intra-fessiere. Ann Chir 1967;21:461-2.
- 2 Joergensen G. Spritzenschädigung des Nervus gluteus cranialis. Aerztl Wochenschr 1957;12:115-7.
- 3 Kountouris D, Okur H. Isolierte nervus-gluteus-superior-spritzenschädigung. Z Allg Med 1982;58:1155-6.
- 4 Luethy F. Die Nervenschädigungen nach intraglutealer Injektion von Irgapyrin und ein Vorschlag zu ihrer Verhuetung. Schweiz Med Wochenschr 1955;85:1065-70.
- 5 Obach J, Arangones JM, Ruano D. The infrapiriformis foramen syndrome resulting from intragluteal injection. J Neurol Sci 1983;58:135-42.
- 6 v.Hochstetter A. Veber Probleme und Technik der intraglutealen Injektion. Schweiz Med Wochenschr 1955;85:1138-44.

MICRO OR MINI?

Why Not Ask the Professional With Both?

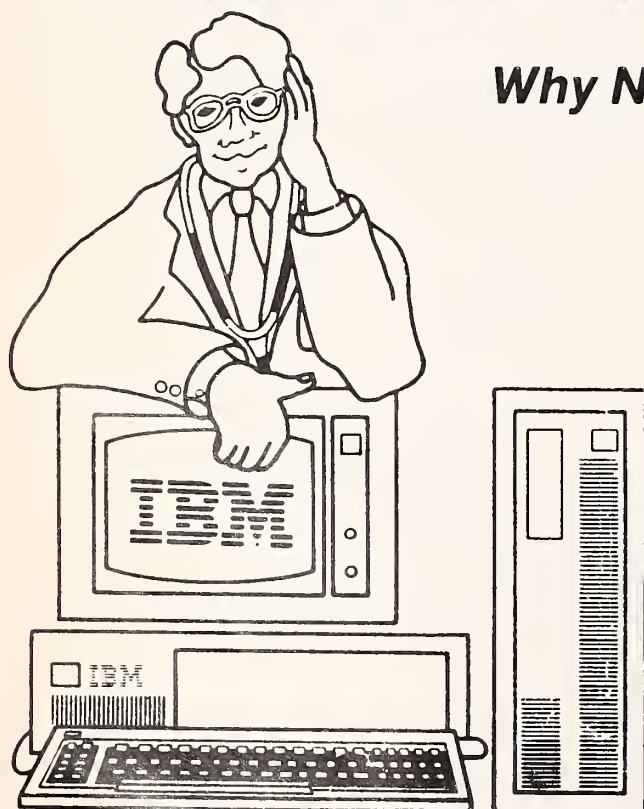
MANAGEMENT SYSTEMS, INC.

2022 Vail Avenue
Charlotte, N.C. 28207
704/377-6907

Jacqueline Rion or Tug Tugwell

**MEDICAL & DENTAL SYSTEMS
SINCE 1966**

In House Systems
Time Sharing & Billing Service
Pegboard & Medical Record Systems



NORTH CAROLINA MEDICAL JOURNAL

For Patients

VOLUME 49 / NUMBER 2 / FEBRUARY 1988

Low Vision

**BANKS ANDERSON, JR., M.D.,
AND JOANNA FRANCIS, R.N., C.O.T.**

When those of us in the eye care field use the term "low vision" we have a specific disability in mind. Obviously, individuals with low vision do not see normally. Neither are they blind. Most typically they have good enough vision to get about without assistance, but they have a defect in the straight-ahead field of vision which makes them unable to drive or to read normally. Often they meet the definition of "legal blindness"; that is, their best corrected vision is 20/200 or worse in the better eye. In our society that means they are eligible for visual disability benefits.

Most of us are familiar with this problem because we know of someone who has macular degeneration — by far the most common cause of low vision.

Macular Degeneration

The macula lutea of the eye is that portion of the lining of the back of the eye which is centrally located and specialized for fine vision and color vision. When this macular part of the retina degenerates, one can no longer resolve fine detail and everything one sees has a defect at its center. It is just as if you were to go to a movie where someone had cut out the center of the screen. Although you could probably follow the plot of the story and tell where the action was occurring, the really in-

teresting objects at which the camera was aimed would disappear in that central hole.

Those with macular degeneration can walk around without a white cane or leader dog, but when they try to read, the center of the word just disappears. In this country macular degeneration is one of the most common causes of acquired legal blindness. It could possibly be related to chronic light damage. It is much more common among the elderly, and because of increased life spans it has become much more prevalent. Some forms of it seem to have a hereditary component; there are families in which almost everyone aged seventy or more seems to have it. It is much more common in whites than in blacks.

Magnifying Devices Can Help

What can be done to help the many thousands with this condition? From the medical standpoint there is unfortunately very little. About one in 50 patients with macular degeneration will have a collection of abnormal leaking blood vessels near but not under the central macula which can be closed with laser photocoagulation. Laser treatment will help about 70% of this small group for a few years. For the rest there remains only the use of aids and appliances to compensate for the deficit. The mainstay of low vision compensation in the macular degeneration group of patients is the use of magnifying devices.

Imagine that you are back in our theater with the hole in the middle of the screen. The camera is aimed at a road with a billboard in the distance. It is impossible for

From the Department of Ophthalmology, Duke University Medical Center, Durham 27710. Reprints: Ms. Francis.

you to read the billboard, indeed you can't even see it because its projected image falls in the hole in the screen. Now let the camera zoom in on it, magnifying its image. When the entire screen is filled with the billboard only the very central part is missing and its message can be deciphered. This is just what magnifying devices do. They enlarge the image projected on the retina to the point where what is missing takes up only a small part of the image you want to see. They do not make the image normal.

There are various kinds of magnifiers available, each serving a different purpose. The most helpful are magnifying glasses worn on the face allowing the hands to be free to hold reading material, sign a check, or thread a needle. The stronger the prescription required, however, the closer the material must be held in order to focus; and this can be frustrating for some people who need higher magnification. These glasses are available in strengths from + 4.00 (1 power) to + 32.00 (8 power). Most persons with visual problems from macular degeneration require a glass somewhere in the mid-range.

Another useful item is a flashlight magnifier for situations where lighting and magnification are needed, as for example in setting the thermostat in the hallway or looking up phone numbers. These range from 2 power to 6 power and use regular flashlight batteries.

Easier to carry around, but without the extra light, are pocket magnifiers usually ranging from 3 power to 4 power. These magnifiers are compact, handy and can be carried shopping to spot check price tags and other small print.

Small binoculars made with glasses frames may improve television viewing, and pocket telescopes are useful for seeing objects in the distance. None of these items enables a person to drive, because magnification is not possible without narrowing the field of view.

Evaluation by a professional trained in low vision problems who is not involved in selling is the best approach to obtaining these devices. In his or her office, you can be tested and fitted with trial devices. Afterward, the appropriate devices and powers can be prescribed and information provided about sources for the devices.

The Importance of Light

The correct light source is very important, and can often improve one's ability to read if used properly. The most recommended light source for reading is a gooseneck or drafting type of lamp, which should be set up to illuminate only the reading material. The head on the lamp should be moveable so it can be adjusted at various angles to prevent glare. Bright light and magnification are the two best aids to vision in patients with macular degeneration and most other central vision problems.

Larger Print

Another way to approach the low vision reading problem is to start with larger print. Two periodicals with large

print editions are *The New York Times* (New York Times Large Type Weekly, 229 West 43rd Street, New York, NY 10036) and *Reader's Digest* (Readers Digest Large Type, Box 241, Dept. AL17, Mt. Morris, IL 61054). The Bible and thousands of other books have been specially printed in large letters for the visually impaired. It is also possible to approach the reading problem by having someone else do the reading — on tape. The North Carolina Library for the Blind and Physically Handicapped (1811 North Blvd., Raleigh 27635) maintains a lending library of cassette magazines and books and slow-speed players for visually impaired patients (those who present a letter from a professional). The slow-speed tapes allow six hours of reading to be recorded on one cassette.

There are many other devices that make life more pleasant for those with low vision; among them, large-dial watches, telephones with preprogrammed numbers, talking calculators that speak the numbers and functions as their keys are pressed, magnifying lenses mounted to lights that allow those with low vision to use both hands (as for example in cutting fingernails), insulin syringes that can be preset to deliver only a metered amount, and closed circuit television cameras that can be set to magnify on the screen anything placed on the reading platform.

Patients with low vision often purchase very expensive telescopes or other devices with the faint hope that their vision can be normalized. Many of these devices end up in the desk drawer gathering dust after a few weeks. As in any condition for which there is no cure, bogus remedies, devices, treatment programs, vitamin supplements, and diets abound. Most only serve to enrich their purveyors by marketing hope to the vulnerable.

There is hope, however. Vision is in the brain, not the eyes. The brain's computer analyzes the information it receives, even if imperfect, and constructs a picture of the world. With practice, most low vision patients find that more of life is open to them than they believed possible.

If you think an evaluation for low vision aids would be of benefit for someone you know, it is best to contact your ophthalmologist's office. Low vision aids are not of benefit unless there is useful retinal function, and your ophthalmologist is in the best position to make this judgment. Patients who have no ophthalmologist, and who are 65 years of age or older and U. S. citizens, may call the National Eye Care Project to arrange an appointment for a free examination (1-800/222-3937).

There are many low vision clinics around the country. Some are located in university medical centers such as the Duke Eye Center (919/684-3343), and the University of North Carolina Eye Center (919/966-5509). Most low vision clinics do require prior examination and referral from an ophthalmologist. Vision should be stable prior to fitting low vision aids to prevent purchasing aids that soon become useless. A list of facilities for the visually impaired throughout the U. S. is available from the American Foundation for the Blind, 15 W. 16th Street, New York, NY 10011. Ask for "Directory of Agencies Servicing the Blind and Physically Handicapped in the United States." ■

The Osler Tradition at Duke

GEORGE T. HARRELL, M.D.

At its founding in 1930, the Duke medical school listed only two faculty members who had had personal contact with William Osler. Their roles in perpetuating the Osler traditions and precepts were very different over the years.

Professor Hanes and Dean Davison contributed to the continuation of the Osler influence into the next generation through bedside teaching, building of libraries, and love of history as written in medical and classical books. This influence can be traced in the later careers of various individuals who spent time at the Duke University School of Medicine in its early days. Some were students, others residents or young faculty who then scattered over the country in a variety of professional roles.

Professor Hanes

Frederick Moir Hanes was a first-year medical student at Johns Hopkins in 1904-05. That was the last year Osler was in Baltimore before leaving for Oxford. After graduation in 1908, Hanes was a resident physician at the Hopkins but the service was not recorded in those days. It probably was pathology since his first academic appointment was in that discipline. The extent of his direct association with Osler is difficult to determine. Class records of the year do not show him enrolled in Osler's fourth-year class in clinical pathology, but students often attended classes or clinics for which they were not registered. Hanes had received his AB from the University of North Carolina and an AM degree from Harvard the spring before he entered Hopkins, so he was more advanced than most students. He wrote no thesis but took graduate courses in history and zoology. Whether he ever was invited to 1 West Franklin Street for a Saturday night session when Osler showed some of his books to his students could not be determined. He probably was not far enough advanced to have been a "latchkeyer" and no list of them was found. Hanes obviously was aware of Osler's 1901 paper on telangiectases and gives him credit

for calling attention to the disease.¹ He may have talked to Osler or heard one of his clinics or lectures on the subject. Hanes published his own extensive review as the lead article in the Hopkins Hospital Bulletin in 1909.² He reviewed Osler's case summaries of 1901 in edited form and ascribes another case to Osler under the date of 1907.³ There may have been correspondence about it. Hanes's paper is illustrated by the first biopsy section and a color plate, which was unusual at the time. He borrowed it from a Scotch author, Brown Kelly, who had also loaned it to Osler in 1907. Hanes never published on the subject again.

As many recent graduates — including Osler — had done for years, Hanes went abroad. His family was of German descent. He was greatly impressed with Friedrich Muller's medical clinic in Munich and often mentioned it later in his teaching. His ultimate specialty, neurology, was decided when he worked at Queens Square Hospital in London. No record was found of a contact with Osler in Oxford. Hanes was the first North Carolina physician to restrict his practice to neurology when he returned to Winston-Salem. During World War I he helped to organize, and with the rank of Lieutenant Colonel, he commanded, Base Hospital No. 65 staffed by North Carolinians. Hanes worked actively in the hospital whereas Osler spent his few remaining years traveling and lecturing at Allied hospitals in England, most often Canadian ones since his commission as temporary colonel and his citizenship were from that country. In anticipation of entrance into World War II in 1940 the 65th General Hospital was organized at Duke with Hanes's encouragement. In 1942, he was nominated by the faculty to organize and command an Office of Civilian Defense Reserve Unit of the United States Public Health Services with the title, Chief of Medical Services. It was disbanded after his death in 1946 at age 63.⁴

In the 1930 original announcement of the Duke faculty, Hanes was given an appointment, the title of which varied from Lecturer to Associate Professor of Medicine, though Dean Davison later said, "He had been our professor of

From 2010 Eastridge Road, Timonium, MD 21093. This paper was read in part before the American Osler Society, Philadelphia, PA, April 29, 1987.

neurology from the beginning."^{5,6} It apparently was on a courtesy basis, since he remained based in Winston-Salem and served as the regional member of the admissions committee.⁴ He did come to Durham at intervals to teach. In 1933 he came permanently as the Florence McAllister Professor of Medicine, a title he retained until his death.

In personality, Hanes was quite different from Osler. He was more private, formal, cool, somewhat distant but always very professional. In public, he was meticulously dressed and each day at the school wore a fresh, starched long white coat. Like Osler at Oxford he had a chauffeur, but Hanes's chauffeur also served as butler. Hanes was married to a charming woman who had been a nurse. They had no children. He required formal well-appointed settings befitting his family background. For his office suite he was given the dean's large one, and Davison moved into a smaller one that was nearer the entrance and more accessible to students. Hanes took over the large stone house built by the University for the vice-president and ideally suited for large-scale entertaining. It had no tennis court or greenhouse as did Osler's Oxford home at 13 Norham Gardens, but it did have billiard and card rooms which were used during parties. Hanes took a great interest in the University's Sarah Duke gardens and grew prize irises at his home. It is said that, in order to retain some independence, Hanes accepted a salary of only one dollar per year. It could not be determined whether the Haneses paid rent for the house or whether it was a perquisite in view of his salary.

Hanes did not make daily rounds for teaching on the wards as Osler did at Hopkins, but came weekly. He demanded equal treatment for all patients and insisted on respect for their dignity. He admitted few to himself, but would consult on others. His "grand rounds" were formal, weekly classroom conferences in which he gave the chief resident much responsibility for selection of patients, as he did for the medical cases chosen for weekly school-wide amphitheater clinical pathologic conferences, some of which he gave. No one now remembers him ever mentioning Osler in his teaching.

His published papers were always clinical in nature on a variety of subjects, but few were in neurology. He recognized a public health problem in bromide intoxication from excessive use of widely available over-the-counter powders. He became very interested in sprue, wrote repeatedly on it and supported laboratory research on the role of liver in therapy. He encouraged others' research on nutritional problems, which included early work on pellagra and other vitamin deficiencies. He backed and defended the early laboratory research of Kempner whom he, with help from Mrs. Hanes, had brought from Germany. That work developed into the rice diet which brought much publicity and many famous or wealthy people as patients. The only reference to Osler found in Hanes's publications was the quotation of an aphorism: "One thing a consultant can do that has not been done

is a rectal examination." A rare paper of a more classical nature was on Samuel Johnson's congenital tics in relation to his eccentric personality and outstanding scholarship.

Hanes was interested in libraries, both the facilities and the books. He maintained one in his home where he is reported to have shown books to students.⁵ This activity must have occurred irregularly, perhaps during large parties, since no one recalls regular small sessions like those Osler had held on Saturday evenings. Hanes's personal library contained some valuable historical books, but there was no central theme. On his death Mrs. Hanes gave most to the University of North Carolina. Some were given to the Perkins Library at Duke and others to the medical school. Hanes was responsible for roofing a courtyard which greatly expanded the school's library and reading area. It was the first student-used space to be air-conditioned and was handsomely furnished. He was successful in enlisting help from friends for paneling, pictures, and furniture.

Hanes gave generously to the school as shown also by the construction of a large, needed parking lot. Occasionally he would give a resident a book or a piece of his own clothing. He set up a research fund in honor of his mother, and left his estate to the department and school equally for the promotion of teaching and research.⁴ Osler apparently had not supported research financially. After Hanes's death, Mrs. Hanes gave a building for the nursing program; Lady Osler on her death willed their home, "The Open Arms," to Oxford University for future use of the professor of medicine.

Hanes liked to take long summer vacations away from the school, as had Osler. He had a second home with a separate guest house in the mountains at Roaring Gap which he used for personal relaxation. It was there he met Dean Davison in 1927. Hanes did not use his vacation time to attend meetings as had Osler. He was not an organizer of societies as Osler had been and did not seek offices in them. He worked over the years with the North Carolina Medical Society and supported its efforts to pass health legislation. On several occasions he sent a resident to serve as locum tenens for the society's secretary who had been elected a state senator. He once sent a resident from another service to serve for six months as pathologist in the city hospital of his home town. He would bend rules as Osler had at Oxford. He was not interested in personal income from practice, but initiated a departmental plan to funnel funds back into research, expansion of staff, or future construction.

Hanes set a tone for his department as a general one, and for student attitudes and decorum directly by his actions with patients. His standards of teaching and care followed Osler's, even though he probably had little personal contact and rarely, if ever, referred to him. Students and residents thought of Hanes more with respect than with affection. He was not a warm or charismatic person, as was Osler, and his social contacts with stu-

dents were less frequent and more formal. His influence was great on the school and university as a whole. He was remembered more for his administrative skills than for his actual teaching. As Regius Professor, Osler had had less contact academically and administratively with the university. Like Osler, Hanes did little himself that would be considered research today. His writing was less classical in style than Osler's, but he could be very forceful in making some points. It is difficult to trace directly the extent and manner of Hanes's influence on the later careers of those who became members of the Osler Society after being at Duke, even those who worked in the Department of Medicine.

Dean Davison

Wilburt Cornell Davison had an unconventional education to prepare him for medicine.⁶ He referred to it as flexible. He was the son of a Methodist minister, as Osler was the son of an Anglican priest, but Davison never considered preparing for the church as had Osler. He decided on medicine as a career at age three after being accidentally burned. He entered Princeton with the goal of earning Phi Beta Kappa and becoming a Rhodes scholar, both of which he achieved. His first break with tradition came when he applied and, with some persuasion, was admitted by the dean to Columbia University School of Medicine after only two years of accelerated college work. His father objected and insisted he complete his B.A. degree which he did and received cum laude in 1913. The tendency to break with tradition persisted throughout his life.

Davison arrived in Oxford in October. He had quarters in Merton College and was assigned an elderly chemistry don as his tutor. Their only meeting was an unpleasant one which ended with a mutual decision that Davison would pursue his work untutored. Nevertheless, he was admitted to the university as a foreign senior student, which gave him permission to visit the basic science laboratories and arrange a course schedule. He signed up to complete the first two years in one, and was told without explanation, "It isn't done." He was advised to select courses under the supervision of Sir William Osler, the Regius Professor of Medicine. That position is appointed by the king and not the university, so Osler technically was not Davison's tutor. Davison made an appointment and was met at the door of "The Open Arms" by a small man who said "he had heard of his request which he thought was very foolish, but, of course, he could do whatever pleased him, so let's have tea." Osler introduced him to Lady Osler as "an American colt wrecking medical school tradition." Both were charming, friendly and turned his apprehension into lifelong adoration and devotion. Osler never again mentioned the schedule. Davison called Osler the dean of the medical school, but

administratively the school did not exist. Davison attended basic science lectures, which were taught by university professors, and Osler's rounds at Radcliff infirmary for practitioners in the area. He admitted later he learned little and, as a Rhodes Scholar, put sports ahead of laboratory work. He was a good athlete, as Osler had been as a schoolboy.

At the end of the year the college dons reviewed each student's work with the student and his tutor, and made comments. Davison was the only student they had ever seen who never had a tutor to report on his progress, so they asked him to evaluate himself. The entry on the college books reads, "Mr. Davison says he has done very well." He never again attended a session with the dons.

Davison spent most of the summer of 1914 touring the continent. He was in Switzerland when World War I broke out. With the help of the U.S. Government, he traveled by a special train to Le Havre and from there the battleship Tennessee took the Americans to England. Davison went to Edinburgh to make up the dissection he had avoided at Oxford, but returned for the autumn term. He found conditions much changed and most of his English friends already in the military. Though Davison actually had had no formal clinical training, Osler gave him a letter to the chief of the American Ambulance Corps hospital near Paris. Davison started as orderly, progressed to catheter specialist on a paraplegic ward, then to anesthetist. In the winter of 1915 he went to Serbia as anesthetist for a surgical base hospital. The fighting there was over when he arrived, but typhus was epidemic. Though friends died every day, he avoided contracting the disease by bathing daily in a log pig trough and carefully searching for lice. Scurvy also broke out, but was controlled by a diet heavy in onions and paprika. By the end of February, the typhus epidemic was over.

His Serbian experience eased many academic and bureaucratic stumbling blocks for Davison in coming months. He returned to England through Germany and Holland. He found only 37 students still at Merton. A new tutor was appointed, and he was passed in his oral examination in physiology without knowing the answers to the questions asked. Late in the summer Osler, who always encouraged students to do research, arranged for Davison to work on paratyphoid vaccine. Davison wrote a thesis and received a B.Sc. without taking any courses. Later he applied for and received an M.A. without further work. Osler wanted his students to publish clinical papers so Davison wrote one on the vaccine, but it was rejected by JAMA. Osler sent a letter to the editor and the paper was published. Though there were no formal clinical classes, as a third-year student Davison served as intern at the Radcliff Infirmary and did hernia operations, appendectomies, and tonsillectomies, but most importantly he wrote Osler's dictated notes on rounds. He, like many other students over the years, was greatly impressed by Osler's critical observations, astute diagnoses and bed-

side teaching focusing on the patient alone. When Osler would go to army hospitals, Davison carried the stack of journals for him to read. The car broke down so frequently Lady Osler began to call Davison Jonah.

After a month of obstetrics in Dublin, arranged by Osler, Davison applied to Hopkins for admission as a third-year student. Osler objected, so he was accepted into the fourth year starting in September 1916. The clinics with Howland settled Davison on a career in pediatrics. The U.S. entered the war and he volunteered two months short of graduation in 1917. He nearly had completed a most untraditional medical education, but Welch agreed to graduate him early, so he was promised a commission as first lieutenant for duty in France. While waiting for it, he married a fellow medical student whom he had courted for years. He spent most of the war doing bacteriologic work, often with his wife who also had gotten to France. He used every opportunity to visit Oxford and continue his contacts with the Oslers.

On discharge from military service, he returned to the Hopkins pediatric service. He spent a short time as a clinical resident, then became an instructor doing bacteriologic research. He finally was persuaded to become assistant dean in addition to his pediatric appointment. It was in that role that Welch recommended him to President Few as the dean to start the new school in Durham. He was appointed by exchange of short telegrams in January 1927 and moved to Durham that summer.

Davison's first office was in the old one-story Bivins building on the original Trinity College east campus where the construction of the new Women's College buildings was nearly completed. He moved to the medical school on the west campus in the summer of 1930 before the hospital opened in July. Osler had come to Hopkins with the hospital completed, but with no clinical laboratory included. He apparently had little to do with the design of the medical school still under construction. Davison was shown the plans for the medical complex and could suggest the location of departments within the existing design. Working with university officials, he was able to have the height of the medical buildings increased. The architect had complete control of all details of the magnificent gothic quadrangle, but the small windows and interior courts of the school and hospital did not lend themselves well to medical functions.

Davison used some of his own experiences as he initiated policies in the early years, policies such as admission after two years of college, and completion of work for the M.D. in three years by attending classes around the calendar. He convinced Trinity College to award a B.S. degree on completion of the basic science courses by those accelerating. From the beginning he made ward visits whenever he was in town. Because infant diarrhea was such a major problem in Durham, Davison never took long summer vacations. He used his house in Roaring Gap for regular weekends as Osler sometimes had

used the almshouse, Ewelme, for an occasional retreat. His relations with students always were informal. In his office he usually was in shirtsleeves, and in the summer his collar was open and his tie askew. He would add a white coat when seeing patients. Osler had always been formally dressed with students. Davison's social contacts were not regularly scheduled, as were Osler's, and were informal in his home off campus, in summer at Roaring Gap, or at a wooden barbecue stand near Durham. Barely a day went by without some reference to Osler in his teaching.

Davison encouraged student research though the original animal quarters in the tower were totally inadequate in size and design. Scattered rooms throughout the building were improvised. He wrote a unique small text, *The Compleat Pediatrician*, organized around symptoms and signs rather than diseases. No publisher would touch it, so he had it printed privately and it was very successful. It went through eight editions written entirely by him, as had Osler's text. It earned him a tidy sum. He always kept the manuscript near him and updated it continuously. He maintained only a small library in his home, a mix of current and old medical books, in contrast with Osler's extensive one which included classics. When Davison died, he left his library to the school.

With the exception of Hanes, all the original faculty were young. The average age was 35. Most came from Hopkins, with some of junior rank, not having completed a full residency. The majority served out their careers at Duke. The faculty referred to Davison as Dave, rarely by his formal title. He inspired tremendous loyalty in students, residents, faculty and staff, especially those in pediatrics, and in his black handyman whom he called facetiously "the assistant dean." The feeling persisted over the years as shown by the tremendous outpouring of affection by former students on his retirement. He knew almost all by their first names.

The opening of the medical school at Duke was the time of the Great Depression, so Davison was able as soon as he arrived to begin acquisitions for the library at low cost. In response to a letter offering a very old unnamed surgical book, Davison offered \$50, and the offer was accepted. The book was later identified by a student working the night shift in the library as only the eighth copy of the complete works of Ambroise Pare in the U.S. The acquisition reflected Osler's interest in classic medical books. Davison added to the historical collection by random purchases on his trips abroad.

To encourage tradition, Davison named the women's medical ward for Osler, but it now is used for physical therapy. He secretly brought back ivy from Osler's home and planted it near the entrance. It died, but later one of his favorite students brought more, and it flourishes still.

Davison recognized the need for an insurance program to provide hospitalization for the needy. His early effort

failed, but later the first successful plan in the U.S. was organized. Osler had never attempted a venture in the financing of health care. In anticipation of the U.S. entry into World War II, Davison helped organize the 65th General Hospital staffed by Duke faculty, graduates, former house staff and nurses. During the war he traveled incessantly as a civilian consultant to the military, both in this country and abroad, as well as to innumerable other governmental or voluntary health agencies. In 1948, he was commissioned for five years as colonel in the Army Medical reserve and continued his consulting.

After the war, the school and clinics grew and prospered. Current research was recognized, was well funded by grants, and attracted young faculty. The faculty began to agitate for drastic revision of the curriculum with much more emphasis on science and training for research careers. Davison became concerned and, in an interview, decried a relative reduction in emphasis on patient care and training for practice in the area. He wanted to see more humanism in medicine with time to treat patients and students with compassion and dignity.

Davison continued active till he reached the required retirement age of 69. He spent his retirement between Roaring Gap in the summers and the Caribbean in the winters. He died in 1972, at age 80, in the hospital he had opened.

Davison spent his career at Duke building the medical reputation of the institution rather than himself as an individual. Osler had done the same at Hopkins, but at Oxford the focus had been on his personal position with broader interests in history and philosophy. Dave's style was much more informal, almost folksy at times. His relations with students and faculty were on a first-name basis (he had no problem with his patients since they were children). He was the personification of the school in its formative years. Almost single-handedly he introduced and promoted the Osler tradition through his teaching and informal personal contacts. No Osler Society, Club or other organized activity ever was started. With the death of Dean Davison, the Osler tradition gradually withered, and today the name is almost never heard in the Duke medical complex except to refer to the ward space. Whether any of the Osler tradition at Duke will survive in the present, more scientifically-oriented, third generation of students remains to be seen.

The Second Generation

Many students, residents, postdoctoral fellows, and young future faculty from other universities passed through Duke over the years. Davison was proud of the number of graduates who became deans or senior faculty elsewhere. That some were imbued with the Osler spirit is shown by those elected to the American Osler Society.

At the founding of the Society, Wilburt Davison was

elected an Honorary Member. G.S.T. Cavenagh, curator of the Trent Collection at Duke, is a charter member. The following are Duke graduates who were charter members (alphabetically):

Martin Cummings trained in internal medicine. He was first introduced to medical history as a student by a visiting foreign professor. He became interested in libraries and computers for information retrieval. He rose to be the world-renowned director of the National Library of Medicine. He received numerous honorary degrees here and abroad and gave the annual oration of the Osler Club of London in 1965.

George Harrell, after reading the eighth edition of Osler's text while a resident, began to use it in teaching pathology and internal medicine. He served as professor of medicine at Bowman Gray School of Medicine of Wake Forest University, became founding dean of the new University of Florida Medical School at Gainesville, and later of The Pennsylvania State University Medical School at Hershey. Since retirement, he has written on aspects of Osler and his family not covered in Cushing's biography, and on the course of the Tudor and Stuart Club endowed by the Oslers at Hopkins. He has received awards and honorary degrees for innovations in curriculum and facilities for medical education, focusing on students and incorporation of the humanities as part of their professional training.

John McGovern, during his admission interview with the dean, noticed one of the pictures on the wall. It was a photograph of a man with piercing eyes and a walrus mustache. McGovern asked who the man was and received an hour's lecture on Osler. He remained close to Davison, and along with Arena, a student in the first class and later a faculty member, was selected to write Davison's reminiscences. He trained in pediatrics and has held faculty positions in major schools. He established a large allergy clinic and foundation. He has received many honorary degrees for his interest in education generally as well as in medicine. He was an organizer of the Osler Society and endowed its annual lectureship, as well as others in humanities and history elsewhere. He has co-edited books with members of the Society, reproducing papers given at meetings, repeating some of Osler's essays with comments by current authors, and printing essays on humanism in medicine today. With others he has fostered clubs, libraries and lectures in the Gulf area to keep the Osler tradition alive.

Grant Taylor, after training in pediatrics, spent his academic career in the field and in administration at Duke, the University of Texas, and Baylor in Houston. He has written papers on Osler.

Of these charter members, Cummings, Harrell, and McGovern have served as president of the Society.

Billy Andrews, another Duke graduate elected later, trained in pediatrics and has been the longtime professor at the University of Louisville. He was active along with

Cummings in a short-lived history of medicine club at Duke named for Davison, and later in a continuing one in Louisville.

James Knight graduated from Duke Divinity School. After World War II military service as a chaplain on a hospital ship in the Pacific, he changed his goal toward medicine, thinking of becoming involved in mission work abroad. He was an intern in pediatrics at Duke, and Davison had a profound influence on him. Later he completed a residency in psychiatry and is a professor in the Louisiana State University Medical School in New Orleans. He has written on Osler and received awards for his furtherance of human values in medicine.

James Warren, as a first-year student at Harvard, drove to Montreal and went through the Osler library. His interest in Osler began then. Since completing his training in medicine, Warren has spent his career in academic settings, as professor of physiology and medicine at Emory, and for six years as a professor of medicine at Duke, where he interacted with Davison. Since then he has had a distinguished career with many honors at Ohio State. He has maintained an interest in medical history.

Theodore Schwartz graduated from Hopkins and interned on the Osler service, where his interest originated. He came to Duke as a fellow in endocrinology and rose to assistant professor of medicine. He was clinical professor of medicine at the University of Washington and later, at Rush Presbyterian-St. Luke's Medical Center, became professor emeritus of Medicine. He has maintained an interest in the history of medicine, especially Osler. He now conducts a practice in Boise, Idaho.

The record of the Osler tradition at Duke would not be complete without recognizing the role and contributions of **Josiah Trent**. He became interested in medical history while a student at the University of Pennsylvania. His wife, a Duke undergraduate, gave him a first edition of Gray's Anatomy followed by editions of Osler's text. This modest beginning grew into a magnificent collection. Trent trained in surgery at Duke and stayed on the faculty, but died prematurely at age 34 in 1948, before the Osler Society was organized. He was influenced by the Bibliotheca Osleriana and his library included first editions of major books, some depth in certain authors or subjects, first editions of a few modern authors, and some incunabula. The collection was donated to Duke in 1956. It is housed in a beautiful set of rooms provided when the medical library moved into a new building in 1976. A charter member of the Society is curator there, and supervises continuing acquisitions. In addition to the medical collection, Mary Trent gave to the general university library a collection of Walt Whitman's works in which she was particularly interested. Osler had treated Whitman

for several years while Osler was professor at the University of Pennsylvania. Trent probably was aware of the Oslers's endowment of the Tudor and Stuart Club, and its collection oriented toward English Literature and located on the liberal arts campus at Hopkins. He did not pattern his own after it. The Trent collection's location in the medical school complex, open to all students, with the classical books about Whitman on the same campus, is more effective than the Tudor and Stewart Club collection's location on the Hopkins Homewood campus. There it is locked and restricted largely to English majors, and it is across town from medical students who rarely, if ever, use it.

The decline of interest in Osler by students and faculty at Duke since Davison's death illustrates how evanescent the almost evangelical influence of one individual can be in a single institution. It appears the more lasting influence at Duke will be the Trent collections. The experience in other schools seems to indicate that an organized club named for Osler or medical history in general will reinforce the efforts of a dedicated faculty member. This approach promises a better chance for survival of Oslerian traditions than individual efforts alone. ■

Acknowledgments

The Archives of Duke University, the Duke Medical School, the University of North Carolina, and The Johns Hopkins Medical Institutions, Drs. G.S.T. Cavanagh, Jay Arena, and Lamar Calloway, and Mrs. Mary Trent Semans gave invaluable help.

References

- 1 Osler W. On a form of recurring epistaxis, associated with multiple telangiectases of the skin and mucous membranes. *JHH Bull* 1901;12:333-7.
- 2 Hanes FM. Multiple hereditary telangiectases causing hemorrhage (hereditary hemorrhagic telangiectasia). *Bull JHH* 1909;20:63-73.
- 3 Osler W. On multiple hereditary telangiectases with recurring hemorrhages. *Quart J Med* 1907;1:53-60.
- 4 The First Twenty Years. A history of the Duke University Schools of Medicine, Nursing and Health Services, and Duke Hospital 1930-1950. *Bull Duke Univ* 1952;24.
- 5 Gifford JF. The evolution of a medical center: a history of medicine at Duke University to 1941. Durham: Duke University Press, 1972.
- 6 Arena JM, McGovern JP. Davison of Duke: his reminiscences. Fulton, MO: The Ovid Bell Press, 1980.

AUTHORS

INSTRUCTIONS FOR SUBMITTING PAPERS

Copyright of an article published in the *North Carolina Medical Journal* is retained by the author, but the copyright to each entire issue is the property of The North Carolina Medical Society, and permission to reprint all or any part of a published article must be negotiated with the author and the editor jointly. The reprinted material must carry a credit line signifying that it appeared in the *North Carolina Medical Journal*.

Medical articles, editorials, patient oriented articles, letters to the editor and all other text submitted for publication must be double-spaced throughout, including references and legends. The material should be typed on one side of the paper with 1¼ inch margins all around. Do not use an all-caps or a script typeface. Submit one original and one copy. Please be sure to include your phone number.

The author is responsible for the accuracy of all statements and references. Acronyms and other abbreviations should be kept to a minimum; *any acronym used should be fully translated in the text*. Refer to pharmaceutical products by their generic names; brand names may follow in parentheses. Units of measure should appear in the metric system. References, typed double-spaced, should be listed in the order of their citation in the text, not alphabetically. They should follow the style used in the *Journal*.

Illustrations should be black and white glossy prints or color or black and white slides, with legends typed in double-space on a separate sheet of paper. Since the *Journal* has a limited budget for color, it may be a factor in publishing color illustrations.

Attach to the two copies of the manuscript a cover letter giving the address and telephone number of the person who will correspond about it, and address the completed communication to the Editor, Box 3910, Duke University Medical Center, Durham, NC 27710.

All manuscripts are subject to editorial changes. If extensive revision is necessary, the author may be sent a draft of the edited article for approval before publication. The author will be sent galley proofs if the paper is published.

Authors interested in more effective writing may find *The Elements of Style* by Strunk and White and *How to Write and Publish a Scientific Paper* by Day helpful.

Extracted, with permission, from *Virginia Medical* with thanks.



Most patients need only one.

K-DUR™ 20 Microburst Release System™
(potassium chloride) 20mEq Sustained Release Tablets

A daily prophylactic dose in a single tablet.

Please see next page for brief summary of prescribing information.

KEY™ Key Pharmaceuticals, Inc.
Kenilworth, NJ 07033
World leader in drug delivery systems.

Copyright © 1987, Key Pharmaceuticals, Inc., Kenilworth, NJ 07033.
All rights reserved. KD-2055/14238603H 8/87

K-DUR™ Microburst Release System™ (potassium chloride) Sustained Release Tablets

INDICATIONS AND USAGE: BECAUSE OF REPORTS OF INTESTINAL AND GASTRIC ULCERATION AND BLEEDING WITH SLOW-RELEASE POTASSIUM CHLORIDE PREPARATIONS, THESE DRUGS SHOULD BE RESERVED FOR THOSE PATIENTS WHO CANNOT TOLERATE OR REFUSE TO TAKE LIQUID OR EFFERVESCENT POTASSIUM PREPARATIONS OR FOR PATIENTS IN WHOM THERE IS A PROBLEM OF COMPLIANCE WITH THESE PREPARATIONS.

1. For therapeutic use in patients with hypokalemia with or without metabolic alkalosis, in digitalis intoxication and in patients with hypokalemic familial periodic paralysis.

2. For the prevention of potassium depletion when the dietary intake is inadequate in the following conditions: Patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis with ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, and with certain diarrheal states.

3. The use of potassium salts in patients receiving diuretics for uncomplicated essential hypertension is often unnecessary when such patients have a normal dietary pattern. Serum potassium should be checked periodically, however, and if hypokalemia occurs, dietary supplementation with potassium-containing foods may be adequate to control milder cases. In more severe cases supplementation with potassium salts may be indicated.

CONTRAINDICATIONS: Potassium supplements are contraindicated in patients with hyperkalemia since a further increase in serum potassium concentration in such patients can produce cardiac arrest. Hyperkalemia may complicate any of the following conditions: Chronic renal failure, systemic acidosis such as diabetic acidosis, acute dehydration, extensive tissue breakdown as in severe burns, adrenal insufficiency, or the administration of a potassium-sparing diuretic (e.g., spironolactone, triamterene).

Wax-matrix potassium chloride preparations have produced esophageal ulceration in certain cardiac patients with esophageal compression due to enlarged left atrium.

All solid dosage forms of potassium chloride supplements are contraindicated in any patient in whom there is cause for arrest or delay in tablet passage through the gastrointestinal tract. In these instances, potassium supplementation should be with a liquid preparation.

WARNINGS: Hyperkalemia—In patients with impaired mechanisms for excreting potassium, the administration of potassium salts can produce hyperkalemia and cardiac arrest. This occurs most commonly in patients given potassium by the intravenous route but may also occur in patients given potassium orally. Potentially fatal hyperkalemia can develop rapidly and be asymptomatic. The use of potassium salts in patients with chronic renal disease, or any other condition which impairs potassium excretion, requires particularly careful monitoring of the serum potassium concentration and appropriate dosage adjustment.

Interaction with Potassium Sparing Diuretics—Hypokalemia should not be treated by the concomitant administration of potassium salts and a potassium-sparing diuretic (e.g., spironolactone or triamterene) since the simultaneous administration of these agents can produce severe hyperkalemia.

Gastrointestinal Lesions—Potassium chloride tablets have produced stenotic and/or ulcerative lesions of the small bowel and deaths. These lesions are caused by a high localized concentration of potassium ion in the region of a rapidly dissolving tablet, which injures the bowel wall and thereby produces obstruction, hemorrhage or perforation.

K-DUR tablets contain micro-crystalloids which disperse upon disintegration of the tablet. These micro-crystalloids are formulated to provide a controlled release of potassium chloride. The dispersibility of the micro-crystalloids and the controlled release of ions from them are intended to minimize the possibility of a high local concentration near the gastrointestinal mucosa and the ability of the KCl to cause stenosis or ulceration. Other means of accomplishing this (e.g., incorporation of potassium chloride into a wax matrix) have reduced the frequency of such lesions to less than one per 100,000 patient years (compared to 40–50 per 100,000 patient years with enteric-coated potassium chloride) but have not eliminated them. The frequency of GI lesions with K-DUR tablets is, at present, unknown. K-DUR tablets should be discontinued immediately and the possibility of bowel obstruction or perforation considered if severe vomiting, abdominal pain, distention, or gastrointestinal bleeding occurs.

Metabolic Acidosis—Hypokalemia in patients with metabolic acidosis should be treated with an alkalinizing potassium salt such as potassium bicarbonate, potassium citrate, potassium acetate, or potassium gluconate.

PRECAUTIONS: The diagnosis of potassium depletion is ordinarily made by demonstrating hypokalemia in a patient with a clinical history suggesting some cause for potassium depletion. In interpreting the serum potassium level, the physician should bear in mind that acute alkalosis per se can produce hypokalemia in the absence of a deficit in total body potassium while acute acidosis per se can increase the serum potassium concentration into the normal range even in the presence of a reduced total body potassium. The treatment of potassium depletion, particularly in the presence of cardiac disease, renal disease, or acidosis requires careful attention to acid-base balance and appropriate monitoring of serum electrolytes, the electrocardiogram, and the clinical status of the patient.

Laboratory Tests: Regular serum potassium determinations are recommended. In addition, during the treatment of potassium depletion, careful attention should be paid to acid-base balance, other serum electrolyte levels, the electrocardiogram, and the clinical status of the patient, particularly in the presence of cardiac disease, renal disease, or acidosis.

Drug Interactions: Potassium-sparing diuretics; see **WARNINGS**.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term carcinogenicity studies in animals have not been performed.

Pregnancy Category C: Animal reproduction studies have not been conducted with K-DUR. It is also not known whether K-DUR can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. K-DUR should be given to a pregnant woman only if clearly needed.

Nursing Mothers: The normal potassium ion content of human milk is about 13 mEq per liter. Since oral potassium becomes part of the body potassium pool, so long as body potassium is not excessive, the contribution of potassium chloride supplementation should have little or no effect on the level in human milk.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: One of the most severe adverse effects is hyperkalemia (see **CONTRAINDICATIONS**, **WARNINGS**, and **OVERDOSAGE**). There have also been reports of upper and lower gastrointestinal conditions including obstruction, bleeding, ulceration, and perforation (see **CONTRAINDICATIONS** and **WARNINGS**); other factors known to be associated with such conditions were present in many of these patients.

The most common adverse reactions to oral potassium salts are nausea, vomiting, abdominal discomfort, and diarrhea. These symptoms are due to irritation of the gastrointestinal tract and are best managed by taking the dose with meals or reducing the dose.

Skin rash has been reported rarely.

OVERDOSAGE: The administration of oral potassium salts to persons with normal excretory mechanisms for potassium rarely causes serious hyperkalemia. However, if excretory mechanisms are impaired or if potassium is administered too rapidly intravenously, potentially fatal hyperkalemia can result (see **CONTRAINDICATIONS** and **WARNINGS**). It is important to recognize that hyperkalemia is usually asymptomatic and may be manifested only by an increased serum potassium concentration and characteristic electrocardiographic changes (peaking of T-waves, loss of P-waves, depression of S-T segment, and prolongation of the QT-interval). Late manifestations include muscle-paralysis and cardiovascular collapse from cardiac arrest.

Treatment measures for hyperkalemia include the following:

1. Elimination of foods and medications containing potassium and of potassium-sparing diuretics.
2. Intravenous administration of 300 to 500 ml/hr of 10% dextrose solution containing 10–20 units of insulin per 1,000 ml.

3. Correction of acidosis, if present, with intravenous sodium bicarbonate.

4. Use of exchange resins, hemodialysis, or peritoneal dialysis.

In treating hyperkalemia, it should be recalled that in patients who have been stabilized on digitalis, too rapid a lowering of the serum potassium concentration can produce digitalis toxicity.

1002004

KEY Key Pharmaceuticals, Inc.
Kenilworth, NJ 07033 (USA)
World leader in drug delivery systems.

13944326
Rev. 4/87



TWELVE IMPECCABLE EXCUSES FOR NOT GIVING BLOOD.

1. I think I have lumbago.
2. I'm type Z negative.
3. I'm on the grapefruit diet.
4. I gave six months ago.
5. I just got back from Monaco.
6. The lines are thirteen blocks long.
7. My mother won't let me.
8. I didn't sign up.
9. I'm going out of town.
10. Asthma runs in my family.
11. I forgot to eat this morning.
12. I'm allergic to flowering magnolia.



Each one's a doozy, but we're hoping you won't use any of them. Give blood through the American Red Cross. Please, don't chicken out.

EXCUSES DON'T SAVE LIVES. BLOOD DOES.

American Red Cross

Computers in the Office: Who, What, and Why?

Colin P. Kerr, M.D.

With current technology and prices, it is now possible for any office, large or small, to implement a personal computer system.

Until recently, computer vendors were selling only very large systems with proprietary software, both too cumbersome and too costly for small practices. Now it is relatively easy for a physician to find both hardware and software to match his or her personal knowledge and expertise.

In view of this development, the critical issues now are: (1) what do *you* want the machine to do; (2) who will use the machine; (3) what are their typing skills; (4) how many people will need to use the main files *at the same time*; and (5) should you purchase a pre-packaged proprietary software system or should you try to customize a generic data base/accounting program to your particular situation?

My experience has led me to two assumptions: the doctor will want to use the machine at the keyboard, not just the receptionist or secretarial staff; and fair to poor typing skills will suffice, since the editing functions of the software are so forgiving, but some comfort at a keyboard is essential.

Hardware

I would recommend having a terminal in every exam room for use during patient interviews, but it is probably sufficient to have a terminal at each workstation serving three to six exam rooms. There is usually a need for at least two terminals in the main office area: one for scheduling and billing and one for general word processing. A third terminal, for clinical personnel who need to access patient data from the central workstation without interrupting the other office personnel, is a definite plus.

A minimal efficient configuration for such a system is a small network coordinated by an IBM PC-AT (or cheaper clone) with some 30-120 megabytes of hard disk storage (less if you don't want much clinical patient data stored),

and some four to eight terminals (basic PCs, now retailing at less than \$1,000 apiece). This whole system is available for less than \$10,000, and with careful purchasing, you can probably get two printers (a fast dot-matrix and a slower letter-quality printer), a surge protector/power back-up system, and a tape back-up system included. What you would not have yet is software.

Software

The major software issue is whether to buy pre-packaged, user-friendly word processing and accounting/billing modules or to have someone customize a standard program to fit your specific needs a little (or a lot) more closely. I cannot recommend strongly enough the desirability of being able to customize. Not until you have worked with your system for nine months or so will you really know what you want out of it. If you can't get it at this point, then you have wasted your money. It doesn't matter whether you do it yourself or have someone do it for you. Continuous modification of data structure and data formats is an essential part of growth with your computer, which the prepackaged programs discourage.

Accounting/billing programs for the medical profession abound and range in price from \$50 to \$20,000. They differ principally in their degree of user-friendliness, their forgiveness of user input error, the size of practice they were really designed for, whether you have to buy all your hardware from the same vendor to get the system to work, and whether you can modify it at all to make it do *exactly* what you want. (If it's yours and you've paid for it, why shouldn't it do exactly what you want!)

If all you want is accounting/billing functions *and* you are a large practice *or* you are very skilled at programming, your problems are very simple. Just buy the prettiest accounting package that runs on the machines you like best

and you can be up and running in one week. A typical price for an adequate software package is in the \$2,000 to \$3,000 range. There are literally hundreds to choose from and many of them are quite adequate. There is, however, very little available that performs satisfactorily (ease of use and error handling) for small practices and low prices. The higher-end accounting/billing programs (they often call themselves "complete office systems," but they are really accounting/billing programs) do offer some degree of clinical patient data-handling functions, but these are, in general, inelegant because they are not really what the programs were designed to do. They allow you virtually *no capability of customizing patient files* for your own needs.

If you want both accounting/billing and patient-data functions, here is the basic dilemma: do you get a simple but functional accounting program (fairly cheap) *and* a generic but reasonably sophisticated data base program to handle your patient data separately?

At the present time, there are no low-end systems that integrate both. Again, the question is what do you really want? If the bottom line is that you never want to have to worry about accounts receivable and billing problems, then just buy a well-tested pre-packaged accounting/billing program and forget about integrated patient data tracking.

If you are interested in patient data — as you should be, or you are missing the wonderful opportunity that these machines provide to upgrade the *quality of care* that you give — then you have a choice between buying into an integrated, high-end "complete office system" which will do a superb job at billing, but will maintain patient data in *the vendor's way*. Or you could just obtain an adequate accounting/billing program and dedicate one or two terminals to it and procure a complete and separate, but customizable, data base for your clinical information. Unfortunately, this requires a substantial amount of redundant data.

Finally, for the very adventurous, you could choose a really good generic data base program and customize it to do both your accounting/billing and data base functions *your way*. What you would sacrifice, in this last option, is the prettiness and power of some of the financial reports available from the slick pre-packaged programs (they would be possible, but would require *a lot* of programming).

How do you resolve this last dilemma, if you want to computerize your office? Let's get down to the hard facts. Are you a really big operation with money to spare so that you can afford to pay the *huge* surcharge that these specialty software vendors charge for their product? Is the convenience worth it to you? At the bottom line, do you *really need fancy billing reports*? Would a simple ledger, cash receipts, receivables, payables, simple billing invoices, and cumulative reports program suffice? It is *easy* to get any fairly sophisticated data base to perform these functions.

What, then, do you want in a data base, if you decide to go the more adventuresome route? By today's standards, it must be relational (more than just a computerized rolodex

file); it must be *programmable* (i.e., either you or a friend can design the command sequences to be used); indexing should be automatic, and maximum field lengths should be quite large for narrative data. Also nice are easy instant report writing utilities, a simple user-interface, near English command structure, and variable length fields. I have found these features in a generic data base named Zim (Zanthe Information Inc., Ottawa, Canada), which retails for less than \$1,000.

So far I have defined the basic problem of introducing computers into the office as a choice between programs that performed each function separately without allowing for the exchange of data between functions. I clearly recommended any system that allows for integration. This was because most physicians readily concede that their first need of computers is to run the business side of the practice; non-integrated software imposes too great a deterrent to even begin clinical data management. The quality of patient care will not be enhanced by computerizing a practice unless the computers are also used to manage the basic clinical data sets such as problem lists, medication lists, allergy lists, immunization lists, visit lists, lab files, and a tickler system. Now I will describe how to use a sophisticated generic data base to address the quality of care issues in practice.

Setting Up Your System

I am not going to discuss how to set up the basic accounting functions on a data base program. This is not different from what you would expect given basic accounting principles mixed with basic programming principles. The point is that this can and should be customized to the precise requirements of the small office; it is not that difficult to do. I recommend one simple personalized billing format and one general insurance billing format (plus an additional one for Medicaid/Medicare, if applicable). This paper focuses on what to do with a generic data base if you want to start managing some clinical data.

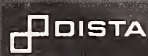
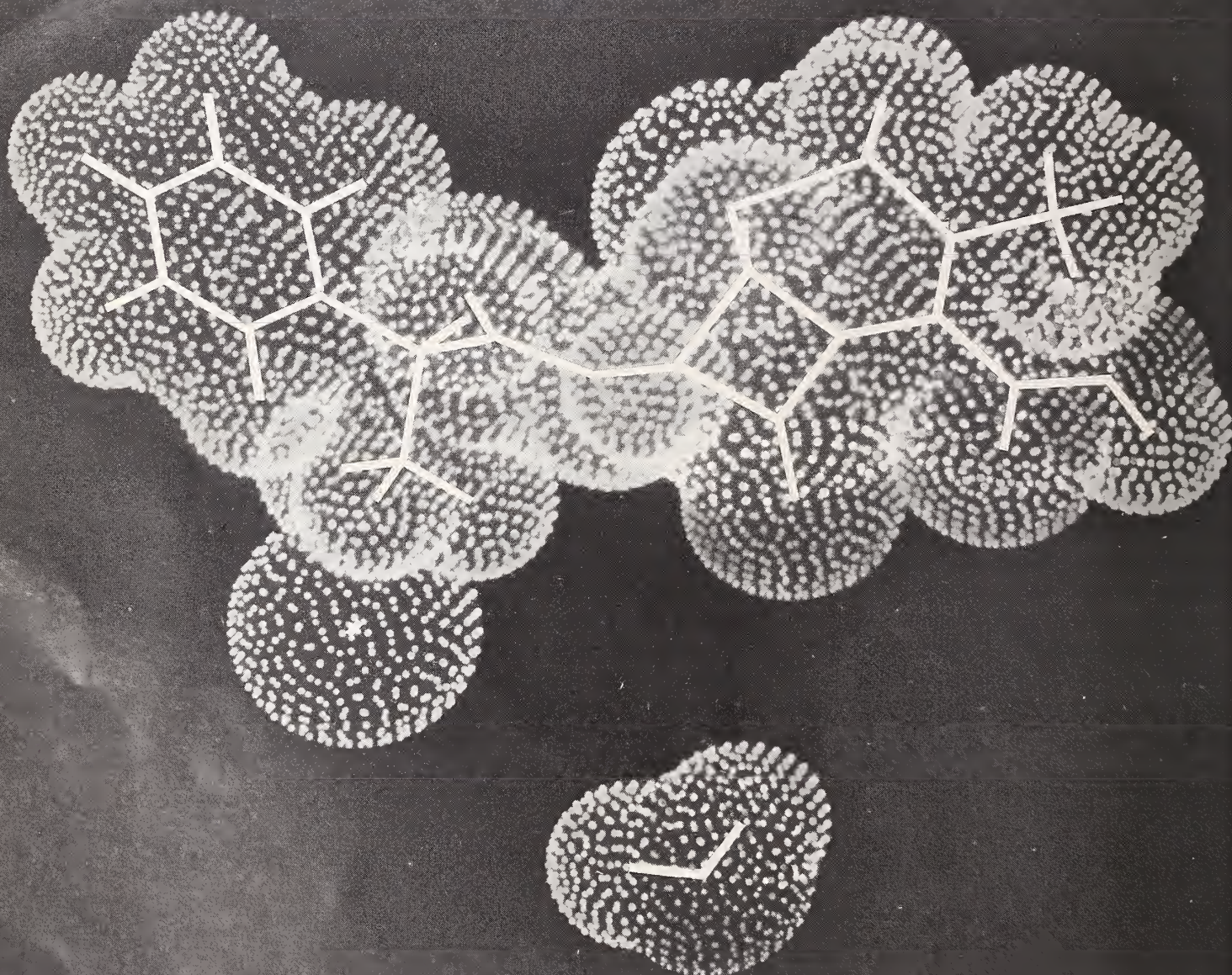
First, you have to do your mental homework. You have to make the *completely arbitrary* decisions about which data bits you wish to store permanently and which ones you are willing to let go. This is not easy. Obvious candidates for inclusions for permanent storage are a list of patient names with sex, race, date of birth, family number (because not all members of a family have the same last name) and telephone number. These are represented in the computer as discrete data "fields" of a specified length; these are the easiest to work with and do not require much computer memory (or disk space). Other obvious candidates are a list of all encounters (visit list), problem lists, medication lists, allergy lists, immunization lists, standardized clinical-intake inventory (customized to provider preference, of course), health maintenance protocol, procedure lists, consultation lists, hospitalization lists, and finally some sort of reminder list (tickler file).

ANNOUNCING

NEW

KEFTABTM

cephalexin hydrochloride monohydrate



Dista Products Company
Division of Eli Lilly and Company
Indianapolis, Indiana 46285
Mfd by Eli Lilly Industries, Inc.
Carolina, Puerto Rico 00630

© 1987, DISTA PRODUCTS COMPANY KX-9008-B-849336

Computer-generated molec
structure of cephalexin
hydrochloride monohydrate

Convenient 500-mg b.i.d. dosage and demonstrated effectiveness for treatment of:

- skin and skin structure infections*
- uncomplicated cystitis†
- pharyngitis‡

● New hydrochloride salt form of cephalexin—
requires no conversion in the stomach before
absorption

● Well-tolerated therapy

● May be taken without regard to meals

For other indicated infections, 250-mg tablets available
for q.i.d. dosage



Priced less than Keflex® (cephalexin)

Keftab is contraindicated in patients with known allergy to the
cephalosporins and should be given cautiously to penicillin-
sensitive patients.

Penicillin is the drug of choice in the treatment and prevention
of streptococcal infections, including the prophylaxis
of rheumatic fever.

*Due to susceptible strains of *Staphylococcus aureus* and/or β -hemolytic streptococci.
†Due to susceptible strains of *Escherichia coli*, *Proteus mirabilis*, and *Klebsiella* sp.
‡Due to susceptible strains of group A β -hemolytic streptococci.

KEFTAB™

(cephalexin hydrochloride monohydrate)

Summary: Consult the package literature for
prescribing information.

Indications and Usage:

Respiratory tract infections caused by susceptible
strains of *Streptococcus pneumoniae* and group A
 β -hemolytic streptococci.

Skin and skin structure infections caused by sus-
ceptible strains of *Staphylococcus aureus* and/or
 β -hemolytic streptococci.

Bone infections caused by susceptible strains of
S aureus and/or *Proteus mirabilis*.

Genitourinary tract infections, including acute pros-
tatitis, caused by susceptible strains of *Escherichia*
coli, *P mirabilis*, and *Klebsiella* sp.

Contraindication: Known allergy to cephalosporins.

Warnings: KEFTAB SHOULD BE ADMINISTERED
CAUTIOUSLY TO PENICILLIN-SENSITIVE PA-
TIENTS. PENICILLINS AND CEPHALOSPORINS
SHOW PARTIAL CROSS-ALLERGENICITY. POSSI-
BLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with
virtually all broad-spectrum antibiotics. It must be
considered in differential diagnosis of antibiotic-
associated diarrhea. Colon flora is altered by broad-
spectrum antibiotic treatment, possibly resulting in
antibiotic-associated colitis.

Precautions:

- Discontinue Keftab in the event of allergic reac-
tions to it.
- Prolonged use may result in overgrowth of nonsus-
ceptible organisms.
- Positive direct Coombs' tests have been reported
during treatment with cephalosporins.
- Keftab should be administered cautiously in the
presence of markedly impaired renal function. Al-
though dosage adjustments in moderate to severe
renal impairment are usually not required, careful
clinical observation and laboratory studies should
be made.
- Broad-spectrum antibiotics should be prescribed
with caution in individuals with a history of gas-
trointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined
in pregnancy and lactation. Cephalexin is excreted
in mother's milk. Exercise caution in prescribing
Keftab for these patients.
- Safety and effectiveness in children have not been
established.

Adverse Reactions:

- *Gastrointestinal*, including diarrhea and, rarely, nau-
sea and vomiting. Transient hepatitis and chole-
static jaundice have been reported rarely.
- *Hypersensitivity* in the form of rash, urticaria, angio-
edema, and, rarely, erythema multiforme, Stevens-
Johnson syndrome, or toxic epidermal necrolysis.
- *Anaphylaxis* has been reported.
- *Other reactions* have included genital/anal pruri-
tus, genital moniliasis, vaginitis/vaginal discharge,
dizziness, fatigue, headache, eosinophilia, neutro-
penia, and thrombocytopenia; reversible interstitial
nephritis has been reported rarely.
- Cephalosporins have been implicated in trigger-
ing seizures, particularly in patients with renal
impairment.
- *Abnormalities in laboratory test results* included
slight elevations in aspartate aminotransferase
(AST, SGOT) and alanine aminotransferase (ALT,
SGPT). False-positive reactions for glucose in the
urine may occur with Benedict's or Fehling's solu-
tion and Clinitest® tablets but not with Tes-Tape®
(Glucose Enzymatic Test Strip, USP, Lilly).

We have good news for 1988!

There is still room for a beach home under the present tax laws. Although some deductions may have changed, there are plenty of real reasons to consider property at the Coast.

Historically, prime beach property has been an attractive investment: providing appreciation, rental income, and tax deductions. What other investment allows you the leisure to watch a sunset, or your children splashing in the surf on a lazy afternoon?

Coast Realty and Construction can provide you with advice that we feel is sound and professional. We can match your financial situation with your goals to produce optimum returns with long term capital appreciation. With over thirty years of experience in quality custom construction, we can give you the information you need to make quality decisions about property at the beach.

Emerald Isle is a quality, family beach: the closest beach to the Triad area. Shouldn't you visit us and discover our "Down East" way of life?

913 Ocean Drive

This custom-built oceanfront home was made for pure comfort and shows quality throughout. Constructed by a builder for his family, this home has a terrific sense of detail — from the ceramic baths, marble hearth, large Master Suite with Jacuzzi, and wetbar to the 1350 sq. ft. of decking. Four bedrooms, three baths and upstairs lounge.

405 Ocean Drive

Make a splash at the beach in style! This contemporary, spacious + 1750 ft/ side oceanfront duplex will appeal as a year-'round home or rental property. This flexible floor plan sports four bedrooms and 3 baths per side. Private decks, exterior showers, and ocean views are only a few of the amenities. With a proven record in the rental market, this unit has provided a positive cash flow.

1607 Emerald Drive

This four-bedroom beach cottage is everything you're looking for at the beach! Open and airy with both ocean and sound views, this home will provide your family with all the amenities you want. A high, third row lot, enclosed garage, and convenient beach access make this an excellent choice.

For further information about these and other fine properties, please feel free to contact us.

Coast Construction specializes in quality custom homes at an affordable price. Homes that you feel as comfortable in during your stay at the beach as you do at your primary home. After all, why sacrifice luxury when you need it the most?

COAST REALTY AND CONSTRUCTION COMPANY

7703 EMERALD DRIVE
EMERALD ISLE, NORTH CAROLINA 28594
919/354-3700

The “Noisesome” Hospital Chart

Banks Anderson, Jr., M.D.

Communication theory tells us that the ease and accuracy of reading a signal (particularly an analog signal) depend upon the ratio between the signal and the background noise. Capturing the vital signal from a patient's “noisy” hospital chart these days is an exercise requiring no small degree of skill and persistence. Patient care suffers.

The litigation explosion is in part responsible. No longer is the hospital chart seen only as a guide to patient care. Hospital administrators see it as the shield and armor against the propensity of the plaintiff's attorney to construct scenarios with no basis in fact. Nurses' notes once collected in a separate section of the chart are now interspersed with physician care notes. The notation that the side rails of the bed were up obscures the notation that the patient had an episode of ventricular tachycardia. Informed consent forms, check lists, physical therapy notes, nursing care plans, exculpatory statements and long memorializations of thought processes to “document” the care decisions all elevate the noise threshold.

A recent memo has inspired this essay. It directs us to fill out yet another form to be placed in the front of each chart listing the vital patient problems and medication. Apparently these data are impossible to extract from a record ordinarily the size of a Sears & Roebuck catalog. The submersion of a patient's vital signals in this sea of noise is

not unique to my institution, as this memo was the result of another directive from that nonpareil of noise generators, the Joint Commission on the Accreditation of Hospitals.

Filing these Sears & Roebuck catalogs takes up so much space that inactive records are warehoused and become unavailable in a later emergency situation. Increasingly, physicians do not even read the record, elevating the litigation risk that this diarrhea of verbiage was created to reduce. Physicians create and maintain their own records and the hospital record for them becomes a dead file. On the wards the previous records are so unwieldy that they are not a part of the patient's active chart but are stacked gathering dust on some corner shelf to be expanded by several inches or into volume six at the patient's discharge.

Working physicians need to take back the “chart.” Let our hospital administrators maintain their own noisesome chart filled with nightly notations that the side rails were up and daily records of informed consents, disposition of valuables, and third-party authorizations. At discharge, relegate everything but a succinct discharge summary to their bureaucratic Eden where these mountains of paper can be filed, audited, massaged, and caressed by paper lovers, attorneys, and accrediting commissions while we patient lovers have our chart of vital signals once again standing far above the noise. We must increase the signal-to-noise ratio of our records. ■

"When I Grow Up..."



Playing "grown-up". One of the joys of childhood. Dressing in "grown-up" clothes, walking in "grown-up" shoes, and mocking "grown-up" words.

But everyday, children are stricken with the most dreaded of all "grown-up" diseases—cancer. And their games are ended.

To too many of these children, playing "grown-up" will never be anymore than that—playing. Many of these

children won't even play "grown-up" again.

At St. Jude Children's Research Hospital, we're fighting to put an end to this senseless loss, and we're working toward a day when no innocent "grown-up" will lose her life to cancer.

To find out how you can help in this desperate

struggle, write to St. Jude, 505 North Parkway, Memphis, TN 38105, or call 1-800-238-9100.



**ST. JUDE CHILDREN'S
RESEARCH HOSPITAL**
Danny Thomas, Founder

SOME OF THE MOST IMPORTANT WORK FOR CANCER IS BEING DONE OUTSIDE THE LAB.

It's being done in automobiles and living rooms. Over coffee and cake. By people like Madeline Mitza and Theresa Barbieri.



Now, like Theresa, Madeline is bringing help and hope to other women as a Reach to Recovery volunteer.

Madeline and Theresa are living

They met when Madeline was in treatment for breast cancer and Theresa was the volunteer who drove her to her therapy appointments.

proof that it's people who give people the will to live. The work in the lab must continue. And so must the work outside. We need your help.

**SHARE THE
COST OF LIVING**
Give to the American Cancer Society. 

Letters to the Editor

AIDS

To the Editor:

Without a doubt Acquired Immunodeficiency Syndrome (AIDS) is potentially one of the most devastating infectious diseases the world has ever known in terms of human suffering and death (150,000 worldwide now and 3,000,000 in the next five years), expense (\$37 billion by 1991 in the U.S.), and care requirements (facilities, people, time, etc.) I am a practicing surgeon and orthopaedist and in a high-risk M.D. group for AIDS contact and contamination.

The public concern is high and will increase. There is an element of self-righteousness still present in certain individuals, organizations and government bodies which *must stop*. Much proposed legislation does not do enough to protect the noninfected person, and particularly the noninfected and high-risk physician. Protection of individual rights of carriers and those tested is important, *but most important* is to accumulate organized and correct information. This information can and must be obtained immediately, and with ongoing efforts requires a 10-20 times greater amount of money from all levels than is now committed. The private system cannot cope alone. In this unique instance regional, state and federal funding of totally different and higher magnitudes is needed. We can't wait for every small and large group to carve out their own policy, donations and efforts.

It is necessary immediately to:

- 1 Proceed to free or cheap widespread testing at all entry points:

- (a) Immigrants and military (done)
- (b) Hospital admissions (at six-month intervals)
- (c) Hospital surgeries (at six-month intervals)
- (d) Marriages
- (e) Pregnancies
- (f) High-risk lifestyle groups
- (g) Affordable voluntary testing requests at any time

- 2 Continued and increased education as per NCMS guidelines.

- 3 Lobby, recruit, solicit to 15-20% of the estimated medical expense for AIDS and use this money to underwrite testing, to increase education, to support epidemiology, to increase basic research efforts and to improve testing procedures.

- 4 Emphasize what is not being done and that all will be touched in some way sooner or later by AIDS.

- 5 Surgeons, other procedural physicians, other high-risk physicians should be included early on in formulation of hospital and medical society AIDS policy and on local, state, regional and national levels.

Universal testing will come. We should move in that direction swiftly. Informed consent and confidentiality remain important. The positive spinoff from broader testing includes:

- 1 Better epidemiology.
- 2 Better understanding for false positive and false negative testing.
- 3 Better control by the infected person.
- 4 Decreased sense of discrimination.
- 5 Better and earlier prevention of complications and prolongation of life.
- 6 Better handle for all physicians in treating and operating on patients.

To be properly informed sparks the fire of solution and demands wider testing now rather than later. All arguments of "scaring away," discrimination, confidentiality, contingent liability, and individual negative psychological reaction are important, but secondary.

Angus M. McBryde, Jr., M.D.
Charlotte Orthopaedic Clinic, P.A.
1012 Kings Dr., Suite 101
Charlotte 28203

In appreciation of past articles

To the Managing Editor:

The article is fantastic — much more information, "fleshed-out," so to speak, than I thought it would be. (Sugerman J, Butters R. Medical words the doctor may not know. NCMJ 1985;46:415-7). Thank you so much for your help. I am an artist and using the terms in my work. I might mention too that my father is a G.P. practicing in Ohio, almost retired, and some of these are terms I heard him repeat over the years while he was treating the small rural community where I grew up.

Ann Holcomb
Nexus Contemporary Art Center
608 Ralph McGill Blvd.
Atlanta, GA 30312

To the Managing Editor:

This is just a note to say thank you ever so much for your speedy mailing of the copy of the North Carolina Medical Journal (Shepherd SM, Allison EJ, Sayers DG, et al. State-wide prehospital mobile intensive care treatment protocols for advanced life support units in North Carolina. 1985;46:579-602) that I needed for a lecture series. This is certainly above and beyond the call of duty, and I just want you to know that not only do I appreciate it but some of the people that I am giving the lecture to will appreciate it,

since a hand-out is always easier to follow than a lecturer.
Again, thank you ever so much.

James R. Busch, M.D.
Carolina Clinic, Inc.
1700 S. Tarboro Street
Wilson 27893

**Reply to Dr. Gamble's letter,
from Medical Mutual Insurance Co.:**

Doctor Gamble's letter to the Editor which appeared in your January, 1988, issue (49:60) expresses concerns over the premium charges facing a physician who wishes to reduce his practice either by the number of hours worked or by the nature of procedures performed.

Unfortunately, the situation that Doctor Gamble describes is a result of the nature of the tort problem in North Carolina as well as complications associated with insuring physicians for their professional liability. As things stand at the present time, there is no limitation or control on severities of claims and these are spiraling upward rapidly in our state. In addition, the statute of limitation is such that a physician is vulnerable to a claim alleging malpractice for a minimum of two years after treatment to as many as 19 years after the last treatment by the physician. This means that regardless of the discontinuation of practice a physician is still liable for incidents that occurred during their active practice and their insurance carrier remains liable for these claims under the terms of their contract and the reporting endorsement as offered.

Medical Mutual offers two options to individuals such as Doctor Gamble who are seeking to reduce their practice exposure. The first option is if the individual is entirely retiring from practice, is 60 years of age or older and has been insured with Medical Mutual for a period of five years or more, we will provide a no charge reporting endorsement covering all future claims for incidents that might have occurred while the physician was insured with Medical Mutual Insurance Company of North Carolina. If on the other hand the individual wishes to reduce his practice as is Doctor Gamble's case, we require that they pay the premium for their previous specialty for a period of two years at which time we reduce the premium to the current level of the physician's practice. The reason for this is quite simple: the majority of claims are presented in a two-year period following the date of the incident. Our premium projections are based upon claims as they are presented and, therefore, to have adequate premiums, we must charge for the exposure of claims as reported rather than the date the incident occurred.

Doctor Gamble questioned why we can offer a no charge reporting endorsement at retirement and yet must continue to charge an individual that reduces his practice. Part of the

answer lies in the fact that once an individual physician does retire there is a reluctance on the part of the public to initiate claims against that physician. If on the other hand the physician continues practicing regardless of a reduction in exposure, that reluctance does not exist and claims can be anticipated to continue at the same expected frequency.

Medical Mutual is a not for profit organization and has no interest in charging any insured physician premiums other than those necessary to pay our anticipated losses. If indeed we were to change our methods of rating individuals such as Doctor Gamble, we would in turn have to raise the premiums for our other insureds to provide us with adequate funds for our expected losses. We are most sympathetic with Doctor Gamble and others in his situation and, as an example, just recently reduced our retirement age from age 65 to 60 to accommodate many individuals who had requested earlier retirement. Until such time as there are meaningful tort reforms enacted in North Carolina, all physicians can expect to pay continually rising premiums and more physicians will be completely retiring at an earlier date despite the frustrations and lack of personal involvement this creates.

Douglass M. Phillips
Chief Executive Officer
Medical Mutual Insurance Company of North Carolina
Post Office Box 26088
Raleigh 27611-6088

Inhalers and cold weather

To the Editor:

Asthmatics who use metered dose sympathomimetic inhalers (metaproterenol, albuterol) should be cautioned about possible dysfunction of these units during cold weather. This occurs because of the Ideal Gas Equation, $\text{pressure} \times \text{volume} = n \times R \times \text{temperature}$, where n is the number of moles and R is a constant. When the unit is exposed to cold, the metered dose may not be delivered under adequate pressure for effective delivery of the medication. This is particularly true if the contents are partially depleted (n is smaller). Therefore during the winter season, asthmatics should be advised to carry a full inhaler in an inside pocket where it is warmed by body heat, take one dose before leaving a warm area (automobile, cabin) prior to an outing, and shake the unit before each use. This is especially true for those who have cold- or exercise-induced bronchospasm and participate in outdoor activities. An inhaler which dysfunctions due to cold can be warmed by rubbing the canister vigorously in the palms for a few minutes.

D. William Kitzman, M.D.
Fellow, Department of Medicine
Box 3141 Duke University Medical Center
Durham 27710

"High Quadriplegia— The Ultimate Challenge"

Plan to attend:

**A two-day symposium
at Colony Square
Atlanta**

April 7-8, 1988

Registration: \$225

Symposium
Co-Chairmen

David F. Apple, Jr., M.D.
Medical Director

Donald P. Leslie, M.D.
Medical Director
High Quadriplegia Program

A medical symposium addressing the acute and rehabilitative care of the C-1 through C-4 high quadriplegic. Hosted by Shepherd Spinal Center in Atlanta, now the nation's largest dedicated spinal cord injury hospital. Issues to be investigated include: medical, psychosocial and high tech approaches to care and rehabilitation. Special emphasis on ventilator weaning, the interdisciplinary care approach, phrenic nerve pacer implants and community reintegration.

Symposium Preview:

High Quadriplegics: They Can Go Home Again

With high quadriplegics surviving at unprecedented rates, quality of life issues and discharge planning are of paramount importance from the first

day of admission to the specialty setting. The philosophy of treatment at SSC will be covered, including the referring physician's role in long-term medical management.

Medical Overview: Care of the High Quadriplegic

The potential for complications such as deep vein thrombosis, stress ulceration, decubitus, pneumonia, urinary tract infections and sepsis poses a serious threat to high quadriplegic patients. Prevention strategies, the benefits of early mobilization of ventilator dependent patients and medical management of complications are covered.

Ventilator Weaning

All high quadriplegics at Shepherd Spinal Center are evaluated to determine their candidacy for phrenic nerve pacer implants and their potential for weaning from mechanical ventilation. The pulmonary evaluation studies performed at SSC and protocols for weaning are included.

Panel and Concurrent Session Topics:

- Pulmonary Issues
- Social Work: Discharge Planning, Peer Support, Sexuality
- The Therapeutic Value of Sensory Experience
- The Biofeedback Program at SSC
- Ventilator Home Care
- Focus On: Phrenic Pacer Implantation
- Departmental Presentations by O.T., P.T., Recreation Therapy, Social Work, Respiratory Care, Education, Nutritionists
- Emphasis on specialized equipment

For Physicians Only:

Grand Rounds at Shepherd Spinal Center

REGISTRATION IS LIMITED. Reserve your space today, by sending a check for \$225, payable to Shepherd Spinal Center, to: Lesley M. Hudson, Symposium Registrar, Shepherd Spinal Center, 2020 Peachtree Road, N.W., Atlanta, GA 30309. Confirmations of early registrations and a symposium information packet will be mailed in October.

High Quadriplegia— The Ultimate Challenge

Name _____

Specialty _____

Address _____

City _____

State _____

Zip _____

Check one: ☐ Check enclosed.
Reserve my space now.

☐ Please send a
complete information
packet.

Case Study: Larry McAfee

Diagnosis: C-1 Complete

Prognosis: Promising

Contact the Admissions Office for routine information. A physician is on 24-hour call to assist in emergency arrangements.

When 28 year-old Larry McAfee was brought to Shepherd Spinal Center as a result of a motor-cycle accident in late 1985, he was classified as a C-1 complete spinal cord injury. He was suffering from severe burns on his right ankle, massive atelectasis, pneumothorax and pneumonia. Paralyzed instantly at the first cervical vertebrae below the brain stem, he required mechanical ventilation for breathing.



The road to a meaningful quality of life has been a long one for Larry, requiring intensive medical care, rehabilitation, counseling—and Larry's own unsinkable spirit.

We couldn't promise Larry miracles, but we could promise him the care of the largest rehabilitation hospital in the nation specializing in paralyzing spinal cord disorders, Shepherd Spinal Center in Atlanta. With the help of various adaptive devices and skilled attendants, it is possible for Larry to live independently

in an apartment since his discharge from Shepherd. He now actively pursues his goal of a career as a computer programming consultant.

At Shepherd Spinal Center, our ultimate challenge is to assist patients like Larry in a comprehensive High Quadriplegia Program, (C 1-4). We involve referring physicians in all aspects of discharge planning for follow-up medical supervision with the hope that patients like Larry will go home again.

Your patients count on you. Accept the challenge and work with us...for them.

The Georgia Regional Spinal Cord Injury Center/Fully Accredited by CARF and JCAH/Designated "Model Spinal Cord Injury Program" by U.S. Dept. of Ed./Now offering a comprehensive Spina Bifida Program/Nation's Largest Dedicated Spinal Cord Injury and Disease Treatment Facility.

 **Shepherd
Spinal Center**

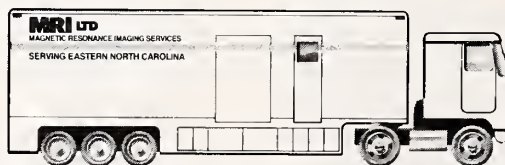
2020 Peachtree Road, NW
Atlanta, Georgia 30309
(404) 352-2020



Patients Are Now Looking Better Than Ever.

Magnetic Resonance Imaging is the most advanced diagnostic technology of the last 25 years. The quality of MRI images is helping physicians make easier, more accurate diagnoses.

Now, Craven County Hospital, in cooperation with Lenoir Memorial Hospital and Onslow Memorial Hospital, is bringing this technology to more physicians in Eastern North Carolina through MRI Ltd. The MRI unit is housed in a large van and will travel between New Bern,



County, Carteret General, Pitt Memorial, and Wayne Memorial Hospitals.

For more information or to refer patients, call Craven County Hospital at 919-633-8218 or toll free 1-800-682-0276.

Magnetic Resonance Imaging. It's helping patients look better than ever.

Kinston, and Jacksonville.

From these sites, it will serve physicians and patients of Craven County, Lenoir Memorial, Onslow Memorial, Beaufort

MRI LTD

A Service of Craven County Hospital
New Bern, NC

Bulletin Board

Continuing Medical Education

Please note: The Continuing Medical Education Programs at Bowman Gray, Duke (DUMC), East Carolina (ECU) and UNC Schools of Medicine, and Dorothea Dix are accredited by the American Medical Association. Therefore CME programs sponsored or cosponsored by these schools automatically qualify for AMA Category I credit toward the AMA's Physician Recognition Award, and for North Carolina Medical Society Category A credit. Where AAFP credit has been obtained, this also is indicated.

February 19-21

Family Physicians Weekend

Place: Raleigh

Credit: 12 hours AAFP

Info: Lois Voelker, Meeting Coordinator, NCAFP, P.O. Box 18469, Raleigh 27619, 919/781-6467

February 26

Pediatrics Day 1988

Place: Greenville

Credit: 6 hours Category I AMA

Info: Mary C. Valand, MSW, ACSW, Office of CME, ECU School of Medicine, P.O. Box 7224, Greenville 27835-7224. 919/551-5200

March 6-9

Administrative Skills I: Power, Leadership and Authority

Place: Rougemont

Credit: 20 hours Category I AMA

Info: Cindi Easterling, Office of CME, Box 3108 DUMC, Durham 27710. 919/684-6878

March 18-19

First National Conference on Reducing Physician Distress

Place: Chapel Hill

Fee: \$295

Info: Center for Professional Well-Being, 5102 Chapel Hill Blvd., Durham 27707. 919/489-9167.

March 19

Pulmonary Disease Update

Place: Greenville

Credit: 6 hours Category I AMA

Info: Mary C. Valand, MSW, ACSW, Office of CME, ECU School of Medicine, P.O. Box 7224, Greenville 27835-7224. 919/551-5200

March 25-26

Artherosclerotic Cerebrovascular Disease 1988: Current Concepts and Controversies

Place: Winston-Salem

Info: Sally Hudson Gulley, Div. of CME, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4450

April 5-8

Diagnostic Ultrasound (physicians and non-physicians)

Place: Winston-Salem

Credit: 7 hours/day Category I AMA

Info: Registrar, Ultrasound Center, Bowman Gray School of Medicine, 300 S. Hawthorne Rd., Winston-Salem 27103. 919/748-4505

April 7-8

Rehab Medicine Workshop: Prosthetics/Orthotics

Place: Greenville

Info: Mary C. Valand, MSW, ACSW, Office of CME, ECU School of Medicine, P.O. Box 7224, Greenville 27835-7224. 919/551-5200

April 8-9

Practical Pediatrics

Place: Winston-Salem

Credit: 9 hours Category I AMA

Info: Sally Hudson Gulley, Div. of CME, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4450

April 9, 13, 18, 21

Malpractice Awareness: 1988

Place: (on respective dates): Research Triangle Park, Greensboro, Greenville, Wilmington

Credit: 2 hours Category I AMA (each)

Info: Medical Mutual Insurance Co., P.O. Box 26088, Raleigh 27611. 919/828-9334

April 10-13

Administrative Skills II: Planning Change and Conflict Resolution
(See March 6-9 for information)

April 11-15

Diagnostic Ultrasound

(See April 5-8 for information)

April 18-22

Diagnostic Ultrasound

(See April 5-8 for information)

April 20-21

1988 Public Health Nutrition Update Conference

Place: Charlotte

Info: Registrar, Office of CME, UNC School of Public Health, CB #8165, Miller Hall, Chapel Hill 27599-8165. 919/966-4032

April 22-23

Advanced Cardiac Life Support Provider Course

Place: Asheville

Credit: 16 hours Category I AMA, ACEP, AAFP

Fee: \$200

Info: Daniel L. Dolan, M.D., MAHEC, 501 Biltmore Ave., Asheville 28801-4686. 704/257-4419

April 22-23

Frank R. Locke Symposium (OB-GYN)

Place: Winston-Salem

Credit: 9 hours Category I AMA

Info: Sally Hudson Gulley, Div. of CME, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4450

April 25-29

Diagnostic Ultrasound

(See April 5-8 for information)

April 25, 28, May 4

Malpractice Awareness: 1988

Place: (on respective dates): Charlotte, Asheville, Pinehurst

(See April 9 for information)

April 29-May 1

NC Ultrasound Society 7th Annual Symposium

Place: Raleigh

Credit: 16 hours Category I AMA

Info: 919/748-4505

You're The Experts In Medicine.

We're The Experts At Preventing Problems In Your Practice.

Medical Mutual is the physician-owned and physician-directed company committed to preventing problems in your practice *before* they occur. Through formal programs and day-to-day assistance, we help you identify areas of risk, reduce potential problems, and enhance your practice.

For example, our Medical Practice Survey brings specially trained staff to your office to audit the peripheral areas we've learned can create problems. The survey—which includes everything from documentation of patient drug

allergies to length of waiting time—offers practical suggestions for reducing your exposure.

Just as important, Medical Mutual provides ongoing assistance to respond promptly to your calls and questions. With 12 years of experience in professional liability coverage, we are the source of information for North Carolina. And if we don't have the answer, we'll find it for you.



Medical Mutual
Medical Insurance Agency, Inc.

Medical Mutual. We'll be there when you need us.

Medical Mutual Insurance Company of North Carolina and its subsidiary, Medical Insurance Agency, Inc., are located at 222 North Person Street, Raleigh, NC 27611 919/828-9334 800/662-7917

Give yourself a hand against breast cancer

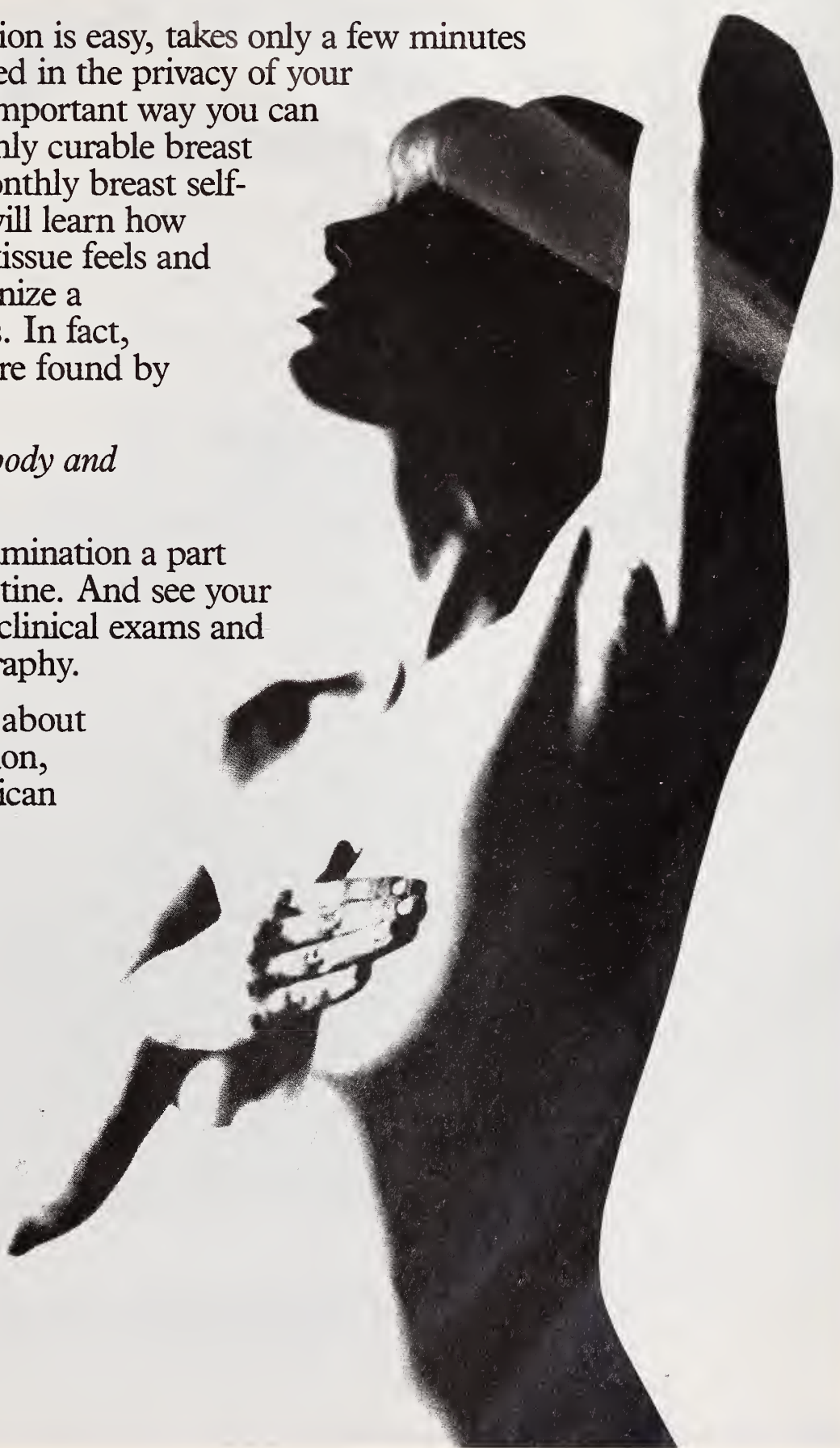
Breast self-examination is easy, takes only a few minutes and can be performed in the privacy of your own home. It's an important way you can detect early and highly curable breast cancer. Through monthly breast self-examinations, you will learn how your normal breast tissue feels and will be able to recognize a change if one occurs. In fact, most breast lumps are found by women themselves.

*Take control of your body and
your life.*

Make breast self-examination a part of your monthly routine. And see your doctor regularly for clinical exams and advice on mammography.

For a free pamphlet about breast self-examination, call your local American Cancer Society.

We're here to help.



AIM HIGH

YOU CAN KEEP THEM IN BALANCE— YOUR FAMILY LIFE AND YOUR MEDICAL PRACTICE.



We'd like to help you spend more time with your family yet receive professional satisfaction from your medical practice. As a member of the Air Force health care team, you'll be able to participate in our group practice concept which will free you of most administrative duties.

Air Force benefits are also very attractive. You and your family will enjoy 30 days of vacation with pay each year plus many more Air Force advantages. Call

Captain Chuck Helvey
919-850-9475
Station to Station collect



Call for Nominations John Huske Anderson Award

North Carolina Medical Society members are invited to submit nominations for the John Huske Anderson Award, "presented to those laymen whose contributions have had a positive impact on the medical profession and the public health in the manner exemplified by John Huske Anderson."

Recognition of award recipients shall include a permanent plaque to be displayed at the headquarters of the Medical Society in Raleigh.

Nominations should consist of a letter and any appropriate supporting documents, and should be sent by February 29 to:

The John Huske Anderson Award
Executive Committee
North Carolina Medical Society
222 N. Person St.
Raleigh 27611

MAGAZINE SUBSCRIPTIONS AT HUGE SAVINGS

NORTH CAROLINA MEDICAL SOCIETY MAGAZINE PROGRAM

a division of Subscription Services, Inc.

29 Glen Cove Avenue • Glen Cove, New York 11542 • 516-676-4300



Our members qualify for the lowest subscription rates on magazines for office reception room use. In addition to the lowest rates, we provide a free Renewal Service for all of your current subscriptions. This enables your office to save valuable time

by ordering just once a year. Simply send us your current labels (be sure to write the name of the magazine on each label), and we will inform you when it is time to renew.

PUBLICATION	(No. of issues per yr.)	REG. SUBSCR. PRICE	YOUR OFFICE PRICE	PUBLICATION	(No. of issues per yr.)	REG. SUBSCR. PRICE	YOUR OFFICE PRICE	PUBLICATION	(No. of issues per yr.)	REG. SUBSCR. PRICE	YOUR OFFICE PRICE
A+	12	24.97	12.97	Harpers Magazine	12	18.00	11.97	Petersens PHOTOGRAPHIC	12	15.94	7.97
American Health	10	14.95	12.95	Health [Special:9 issues]	16.50	8.97		*Popular Mechanics	12	13.97	7.00
American Heritage	8	24.00	18.00	High Fidelity	12	13.95	6.98	Popular Photography	12	11.97	6.99
Amer.Photog.[Special:8 iss]	11.95	5.98		HIPPOCRATES	6	18.00	12.00	*PRACTICAL HOMEOWNER	9	12.97	6.50
Audio	12	19.94	9.97	Home Mechanix	12	11.94	8.97	*PREVENTION	12	13.97	7.00
Automobile	12	18.00	9.00	Home Viewer	12	18.00	11.97	*Redbook	12	11.97	6.97
Backpacker	6	18.00	9.00	Horizon	10	21.95	16.00	Road and Track	12	19.94	14.99
Baseball Digest	12	14.95	9.97	*House Beautiful	12	15.97	8.00	Rolling Stone	26	23.95	15.95
Basketball Digest	8	9.95	7.95	*HOUSE & GARDEN, 2 yrs	24	24.00	18.00	*Runner's World	12	19.95	10.00
Better Health & Living	6	15.00	11.97	Humpty Dumpty:age 4-7	8	11.95	9.97	Sailing World	12	21.75	10.88
*Better Homes & Gardens	12	14.00	7.00	Inc.	12	24.00	18.00	Saturday Evening Post	9	12.97	12.97
*BICYCLING	10	15.97	8.00	Inside Sports	12	18.00	11.97	Savvy	12	18.00	9.00
Boating	12	21.94	14.97	Jack & Jill:age 6-8	8	11.95	9.97	SCIENCE DIGEST	6	12.95	12.95
Bowling Digest	6	12.00	9.97	Jet	52	36.00	26.00	Scientific American	12	24.00	24.00
*Brides	6	18.00	13.50	Ladies Home Journal	12	19.95	11.97	*SELF	12	15.00	12.00
Car Craft	12	15.94	9.97	LIFE	12	31.95	16.50	Sesame Street	10	11.97	11.97
Changing Times	12	18.00	18.00					SEVENTEEN	12	13.95	13.95
child (Fashion)	6	12.00	10.00					Shape	12	20.00	17.97
*CHILDREN:6 iss/18 months	11.97	6.00						Skiing	7	11.94	5.97
Childrens Dig:age 7-11	8	11.95	9.97					Sport	12	12.00	7.97
*Colonial Homes	6	14.97	9.97					Sporting News	55	59.95	29.97
*Connoisseur	12	19.95	10.00					*Sports Afield	12	13.97	6.99
Consumers Reports	12	18.00	18.00					SPORTS ILLUSTRATED	54	64.26	32.13
*Cosmopolitan	12	24.97	15.00					STAR	52	32.00	16.00
*Country Living	12	15.97	9.97					Stereo Review	12	11.97	5.99
Cruise Travel	6	12.00	9.97					Success Magazine	12	17.94	14.00
Cycle	12	15.94	7.97					Sylvia Porter Pers.Fin.	12	19.97	11.97
DISCOVER	12	27.00	13.50					Tennis	12	17.94	8.97
Ebony	12	16.00	10.97					3-2-1 Contact	10	12.97	12.97
The Economist	52	98.00	60.00					TIME	52	58.25	29.25
Electric Company	10	10.97	10.97					Tours and Resorts	6	12.00	9.97
*ELLE	12	24.00	16.00					*Town & Country	12	24.00	12.00
EM (Ebony Man)	12	16.00	10.97					Travel & Leisure	12	24.00	12.00
ESQUIRE	12	17.94	9.95					Conde Nast's TRAVELER	12	24.00	12.00
Essence	12	12.00	9.96					TV Guide	52	39.00	37.44
EUROPEAN TRAVEL & LIFE	10	24.00	12.00					Unique Homes	6	29.97	19.97
Family Circle	17	14.97	9.97								
Family Computing	12	19.97	9.99								
Field & Stream	12	15.94	7.97								
Fifty Plus	12	15.00	11.97								
Financial World	26	44.95	25.95								
Flying	12	18.98	15.97								
Food and Wine	12	20.00	10.00								
Football Digest	10	12.95	7.97								
Forbes	28	45.00	45.00								
Fortune	26	47.97	37.50								
Golf Digest	12	19.94	11.98								
*GLAMOUR	12	15.00	12.00								
Golf Illustrated	10	15.00	7.97								
GOOD FOODS	12	11.97	11.97								
*Good Housekeeping	12	15.97	9.97								
*GOURMET	12	18.00	13.50								
*GQ	12	20.00	15.00								
*Harpers Bazaar	12	16.97	8.97								

Reg Subs Price \$34.50
YOUR PRICE \$17.25
SAVE 50%

Reg Subs Price \$61.88
YOUR PRICE \$30.94
SAVE 50%

Reg Subs Price \$15.00
YOUR PRICE \$9.95
SAVE 33%

M (Civilized Man)	12	24.00	19.95
*Mademoiselle	12	15.00	12.00
McCalls	12	12.95	7.95
Metropolitan Home	12	18.00	9.97
Modern Photography	12	13.98	7.98
Mother Jones	9	24.00	16.00
MONEY	12	31.95	16.00
Motor Trend	12	19.94	9.97
*Motorboating & Sailing	12	15.97	7.97
MS Magazine	12	16.00	10.97
Nation's Business	12	22.50	12.97
New Eng. Journal of Med	52	69.00	
NEW REPUBLIC	52	56.00	28.00
New Woman	12	15.00	9.95
NEW YORK MAGAZINE	50	35.00	17.50
New York Woman	10	20.00	15.00
*Newsweek	52	41.08	21.85
THE NEW YORKER, 2 yrs	104	42.00	
New York Woman	10	20.00	15.00
ONNI	12	24.00	15.96
1001 Home Ideas [Spec:8 issues]	11.97		
*Organic Gardening	12	12.97	6.50
Outside	10	16.00	12.00
Ovation	12	21.00	11.95
PC Magazine	22	34.97	21.97
PARENTING	10	18.00	9.00
Parents	12	20.00	10.00
People	52	61.88	30.94

U.S. News & World Report	52	34.50	17.25
USA Today	260	130.00	97.50
US Magazine	26	23.95	14.97
*VANITY FAIR	12	12.00	9.00
Vegetarian Times	12	19.95	14.95
*Vogue	12	24.95	19.95
Video Review	12	12.00	6.97
W Magazine	26	30.00	23.00
Winning [Bicycle]	12	19.95	15.95
Women's Sports/Fitness	12	12.95	12.95
Working Mother	12	11.95	7.95
Working Woman	12	18.00	12.00
World Tennis [Spec:9 iss]	12.00	8.97	
World Traveling	4	11.00	9.95
Yachting	12	19.98	12.97
YM	12	14.00	7.00
* BUSINESS CARD NEEDED FOR OFFICE PRICE			

NCMS MAGAZINE PROGRAM
29 Glen Cove Avenue
Glen Cove, New York 11542

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

Telephone Number () _____

☐ VISA ☐ M/CNO. Exp. Date _____

You may pay by check or credit card. Please make checks payable to NCMS Magazine Program.

NAME OF PUBLICATION	YEARS	PRICE
<p>Terms: Subscriptions are one year unless otherwise noted. Prices subject to publishers' changes.</p> <p>Renewals: Please send the address label from your magazine at least 8 weeks in advance of expiration date.</p> <p>New Orders: Publishers take from 8 to 12 weeks to start your subscription.</p>	TOTAL	

HUNDREDS OF OTHER TITLES AVAILABLE - JUST ASK!

NCJMD-SP88

Classified Ads

KEEPING LONG HOURS? Too many patients and not enough time? Have you considered employing a physician assistant to help you extend your practice without extending yourself? The North Carolina Academy of Physician Assistants can supply you with helpful information about the training and capabilities of physician assistants. For more information contact Dean Minton, PA-C, NCAPA Public Affairs Chairman, 209 Shenendoah Dr., Winston-Salem 27103. 919/748-2247 (work); 919/768-4934 (home).

BLACKSBURG, VIRGINIA -Full-time emergency department physicians for 145 bed hospital in beautiful university town. Excellent recreational opportunities. Attractive salary and incentive bonus, malpractice insurance provided and benefit package available. Contact: Emergency Consultants, Inc., One Windemere Place, Room 33, Petoskey, MI 49770; 1-800/253-7092 or in Michigan 1-800/632-9650.

FAMILY PRACTITIONER to join four man Family Practice group in Southern Piedmont area, 20 miles south of Charlotte, NC. 160 bed community hospital. New office with full lab and x-ray facilities. Please contact William Deskins, M.D. or Paul Kitchin, M.D. at Monroe Family Medical Center, P.A., 1420 E. Franklin St., Monroe, NC 28110. 704/289-8427.

MEDSTAT — Discover why we are the most respected physician staffing service in the East for locum tenens and permanent placements. We can provide you with coverage or work as our staff physician. Call US 800/833-3465 (NC 800/672-5770); or write Medstat, Inc., P.O. Box 15538, Durham 27704.

FAMILY PRACTITIONER NEEDED for full-time solo practice in progressive community in Troutman, NC near beautiful Lake Norman. Guaranteed income plus benefits. Please send CV to Richard Blackburn, Executive Director, Lake Norman Regional Medical Center, P.O. Box 360, Mooresville, NC 28115. 704/663-1113.

UROLOGIST NEEDED for private practice in progressive community in Mooresville, NC, near beautiful Lake Norman. Guaranteed income plus benefits. Please send CV to Richard Blackburn, Executive Director, Lake Norman Regional Medical Center, P.O. Box 360, Mooresville, NC 28115. 704/663-1113.

PSYCHIATRIST NEEDED for private practice in progressive community in Mooresville, NC, near beau-

tiful Lake Norman. Guaranteed income plus benefits. Please send CV to Richard Blackburn, Executive Director, Lake Norman Regional Medical Center, P.O. Box 360, Mooresville, NC 28115. 704/663-1113.

OTORHINOLARYNGOLOGY: ENT PHYSICIAN NEEDED for private practice in progressive community in Mooresville, NC, near beautiful Lake Norman. Guaranteed income plus benefits. Please send CV to Richard Blackburn, Executive Director, Lake Norman Regional Medical Center, P.O. Box 360, Mooresville, NC 28115. 704/663-1113.

ORTHOPEDIC SURGEON NEEDED for partnership or associate practice in progressive community in Mooresville, NC, near beautiful Lake Norman. Guaranteed income plus benefits. Please send CV to Richard Blackburn, Executive Director, Lake Norman Regional Medical Center, P.O. Box 360, Mooresville, NC 28115. 704/663-1113.

NON-INVASIVE CARDIOLOGIST to join multispecialty group of eight internists to practice clinical and non-invasive cardiology in the Piedmont area of North Carolina. Excellent salary and benefits in a well established aggressive medical group. Reply to Code 35, NCMJ, Box 3910 DUMC, Durham 27710.

PRACTICE SALES, mergers, equity associateships, or appraisals from the nations oldest practice transition firm. Aftco Associates — Practice Transition Consultants, since 1968. 454 S. Anderson Road, Rock Hill SC 29730. 803/329-9655. Charlotte Metropolitan Area.

FAMILY PHYSICIAN BC/BE needed to replace retiring member of four physician F.P. group. OB not required. Available 1-88 or after. Pine Ridge Family Practice, PA. 147 Columbine Drive, Winston-Salem 27106.

VERY BUSY TWO-MAN OB-GYN office seeks physician. BE/BC preferred. Located in the foothills of beautiful North Carolina, county population of 70,000 and town 18,500. Participating hospital located across the street is undergoing additions now. New OB facility almost complete. Reply to P.O. Box 2640, Lenoir, NC 28645.

ACTIVE AND WELL ESTABLISHED work-compensation, personal injury practice in Los Angeles. We need one orthopedic surgeon and one neurologist, B/E. Please contact Gloria Gravino at 213/557-2743 from 10:00am to 5:00pm PST.

JACKSONVILLE, Onslow County, NC 28540 — Doctors Offices/Medical Suites. Most upfitting complete 1500 to 5100 + square feet. Exceptional location, Memorial Drive, adjacent to entrance to Onslow Memorial Hospital. Contact Robert E. Lock, 8:30 to 5:00 weekdays, 919/347-3200; after 6:00 pm and on weekends, 919/346-8093. Post Office address: P.O. Box 592, Jacksonville, NC 28540.

GENERAL INTERNIST to join an eight-physician internal medicine group in Charlotte, NC. Travis Medical Clinic, 217 Travis Ave., Charlotte 28204. Call 704/372-3350.

PRIVATE PRACTICE opportunity in small community 50 miles south of Atlanta. For more information contact Phillip Jordan, Administrator, Jasper Memorial Hospital and Nursing Home, Monticello, GA 31064. Phone 404/468-6411.

ATTENTION DISPENSING PHYSICIANS: Computer system designed specifically for dispensing physician. Creates written prescription copy as required by NC Board of Pharmacy as label is typed. Monitors drug allergies, automatically prices prescription. Bills third party, Medicare, medicaid, etc. IBM equipment. No monthly maintenance fee for hardware or software. Price includes set up and training. Consulting service available to make your current pharmacy more efficient and profitable. Phone 704/328-1169 days, 704/459-9565 nights. K. Sigmon.

PHYSICIAN'S OFFICE SUPPLIES and furniture in-

cluding EKG machine and table, Minolta copier, electric typewriter, Royal calculator, two examination tables and lounge chairs. Call 704/253-5685 or 704/645-6942.

OUTER BANKS - Northeastern North Carolina: BC/BE residency trained family physician, young family physician expanding into nearby area needs partner. No obstetrics, 40 hrs/wk or less, full time. No hospital duties, relax at the beach. Call or send CV: Bob Kastner, M.D., Box 229 Nags Head 27959. Telephone: 919/441-7111.

LUXURIOUS 7,496 sq.ft. home at top of Hound Ears Club. Glass enclosed pool. Views from every room! \$740,000. Panoramic view Ski Mt. 3,051 sq. ft. home. Jacuzzi. Red oak, teakwood, pine, mahogany custom interior. \$250,000. Beautifully different gabled cathedral ceiling condominium. Elevator. Jacuzzi. View of mountains. Walk to shops. Appraised \$206,500. Broker-owner. Blowing Rock 4 BR 3 1/2 Bath furnished home. \$135,000. Estate home, guest house, stable, 24 acres, \$1.2 million. 200 acres \$440,000. Tellekamp Real Estate, Blowing Rock, NC 28605. 704/295-7602.

DISCOUNT HOLTER SCANNING: starting at \$40. Spacelab Holters available at \$1275. Turn-over time is 24-48 hours. Hook-up kits available at \$4.95. Stress test electrodes available at 29¢. Scanning paper available at \$18.95. One free test is offered at no obligation on trial basis. Cardio Care, Inc. For more information call us today at 1-800/248-0153.

NCMJ Classified Ads . . .

Send your ad to:

Managing Editor
Box 3910
Duke University Medical Center
Durham 27710

Please specify the number of issues in which you'd like it to appear. Include your name, address, and phone number.

Closing date is the 25th of the second prior month. For cost and billing information, call 919/684-5728.

FP, GP, PED

Needed now to work with a unique, internationally respected rural health system network in Kentucky which includes a hospital, satellite clinics, a home health agency and a school of advanced nursing. A regional medical center is within 20 miles. The practice environment is stimulating — physicians and Advanced Registered Nurse Practitioners work in joint practice teams; interaction with students is encouraged; the rural population presents a wide range and intensity of medical problems.

The FP or GP will be expected to share call with specialists and consequently must have particular strength in one of the following areas: Pediatrics, Obstetrics, Emergency Medicine or Internal Medicine.

The setting is in heavily-wooded mountains with a moderate 4-season climate. Seven state parks are within 80 miles.

Superior compensation/benefits package includes a guaranteed salary with incentives and malpractice. Call Deborah Pennington COLLECT at 1-502-897-2556. This is an Equal Opportunity Employer.



Index to Advertisers

Baron Advisory Services, Inc.	65	Medical Mutual Insurance Company of N.C.	114
B & B X-Ray, Inc.	79	Medical Protective Company	87
Burroughs Wellcome Co.	83	MRI, Ltd.	112
Blue Cross & Blue Shield of N.C.	66	Roche Laboratories	88, Cover 3-4
Coast Realty and Construction Co.	104	Saint Albans Psychiatric Hospital	68
Crompton Company	Cover 2	Shepherd Spinal Center	110-111
Eli Lilly & Company	102-103	Smith Kline and French Laboratories	80a, c
Focus: Healthcare	119	The Upjohn Company	80b
Hinrichs Financial Group	80	U.S. Air Force	116
Key Pharmaceuticals	97-98	U.S. Navy	74
Management Systems, Inc.	86	Winchester Surgical Supply Co.	120
Med-Care	84		

Winchester®

"CAROLINAS' HOUSE OF SERVICE"

Winchester Surgical Supply Company

200 South Torrence St. Charlotte, N.C. 28204

Phone No. 704/372-2240

Winchester Home Healthcare

Medical supplies and equipment for your patients at home

Charlotte, N.C. Greensboro, N.C. Hickory, N.C.

704/332-1217 919/275-0319 704/324-0336

704/547-0708

**Serving the MEDICAL PROFESSION of NORTH CAROLINA
and SOUTH CAROLINA since 1919.**

We equip many physicians beginning practice each year and invite your inquiries.

Our salesmen are located in all parts of North Carolina.

*We have DISPLAYED at every N.C. State Medical Society Meeting since 1921
and advertised CONTINUOUSLY in the N.C. Journal since January 1940 issue.*

CURRENT
NLS
1
0
07

Journal

Carolina

Medical Society

March 1988

Volume 49

Number 3

North Carolina Medical
Journal
UCSF LIBRARY
Received on: 03-22-88

North Medical Journal

For Doctors and their Patients

What Does It Take to Quit Smoking?

Steve Herman, Ph.D.

Lung Cancer: Relationship to Passive and Active Smoking

Don V. Jackson, Jr., M.D.

This quaint bit of
tobacco history
contrasts with the
new message:
DON'T SMOKE!
See "For Patients"
inside.



THERE IS
SOMETHING
IN OUR NAME
THAT BRINGS YOU
A FEELING OF
SECURITY.

CRUMPTON COMPANY.

Why do so many NC physicians participate in the Crumpton Plan of Disability Income Protection?

THE ANSWER is the 47 years of successful relationship and personal service at claim time!

Yes, the feeling of security as well as economic advantage in knowing the program is a plan of carefully designed benefits.

The plan is not filled with a lot of "purple duck feathers," but provides income when you are unable to produce — not promises, but performance.

Why not call us today to obtain the latest details for your group practice? We are delighted to offer our broadened portfolio of professional insurance.



Commercial Insurance Company

Crumpton Company
Box 8500 Academy Center, Durham 27707
800/672-1674 919/493-2441

NORTH CAROLINA MEDICAL JOURNAL

For Doctors and their Patients

March 1988, Volume 49, Number 3

Published Monthly as the Official Organ of The North Carolina Medical Society

(ISSN-0029-2559)

STAFF

Eugene A. Stead, Jr., M.D.
Rt. 1, Box 194, Bullock
EDITOR
919/693-4531

Francis A. Neelon, M.D.
Durham
ASSOCIATE EDITOR

F. Maxton Mauney, Jr., M.D.
Asheville
ASSOCIATE EDITOR

George E. Moore
Raleigh
BUSINESS MANAGER

Laurel Ferejohn
Durham
MANAGING EDITOR
919/684-5728

Jane Whalen
Durham
EDITORIAL ASSISTANT

EDITORIAL BOARD

Charles W. Styron, M.D.
Raleigh
CHAIRMAN

Edwin W. Monroe, M.D.
Greenville

Robert W. Prichard, M.D.
Winston-Salem

Louis deS. Shaffner, M.D.
Winston-Salem

Jay Arena, M.D.
Durham

Jack Hughes, M.D.
Durham

William B. Blythe, M.D.
Chapel Hill

Margaret C. Swanton, M.D.
Clinton

The appearance of an advertisement in this publication does not constitute any endorsement of the subject or claims of the advertisements.

The Society is not to be considered as endorsing the views and opinions advanced by authors of papers delivered at the Annual Meeting or published in the official publication of the Society. — *Constitution and Bylaws of the North Carolina Medical Society*, Chapter IV, Section 3, page 4.

NORTH CAROLINA MEDICAL JOURNAL, P.O. Box 3910, Duke University Medical Center, Durham, NC 27710 (919/684-5728), is owned and published by The North Carolina Medical Society under the direction of its Editorial Board. Copyright © The North Carolina Medical Society 1988. Address manuscripts and communications regarding editorial matters to the Durham address. Questions relating to subscription rates, advertising, etc., should be addressed to the Managing Editor at the Durham address. All advertisements are accepted subject to the approval of a screening committee of the State Medical Journal Advertising Bureau, 711 South Blvd., Oak Park, Illinois 60302 and/or by a Committee of the Editorial Board of the North Carolina Medical Journal in respect to strictly local advertising. Instructions to authors appear in each issue (see table of contents). Annual Subscription, \$12.00. Single copies, \$2.00. Publication office: The Ovid Bell Press, Inc., 1201-05 Bluff St., Fulton, MO 65251. *Second-class postage paid at Raleigh, North Carolina 27611 and additional mailing offices.* Postmaster: Send address changes to North Carolina Medical Society, 222 N. Person St., Raleigh NC 27611.



Unique Boutique
"Pamper Your Femininity"

*After Breast
Surgery
Consultants*

We would like to acquaint you with the shop that specializes in servicing all of the needs of the mastectomee. We carry a variety of breast forms and bras that enable us to provide a custom fit specifically for each individual. We also have accessory items helpful during stages of reconstruction or after lumpectomy surgery. In a cozy intimate shop with a relaxed environment, our customers will receive service and understanding from women who have shared their experience.

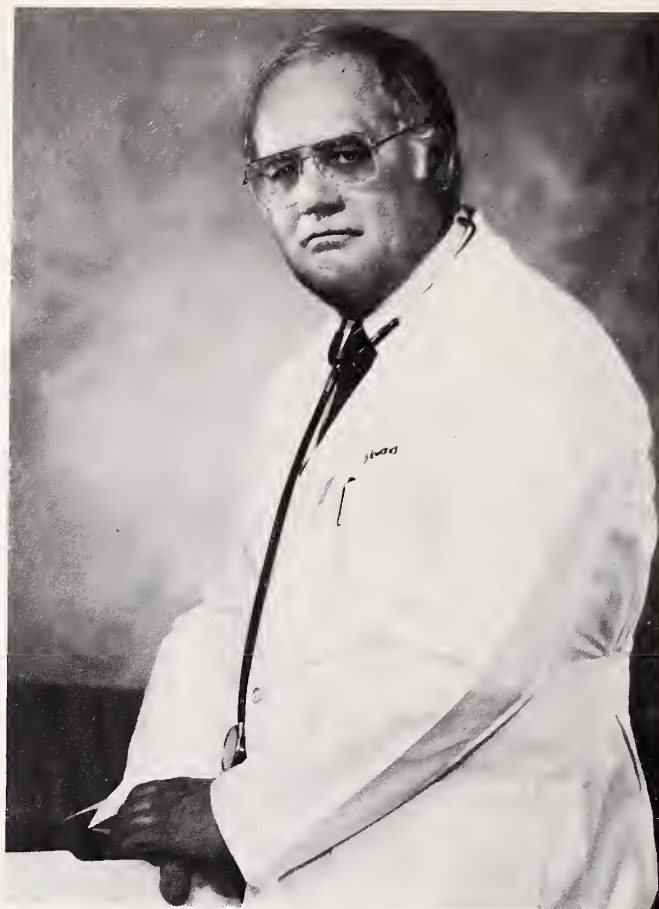
FOR BETTER SERVICE AND FIT VISIT

UNIQUE BOUTIQUE

1819 E. SEVENTH STREET
CHARLOTTE, NC 28204
(704) 377-4356

HOURS: MON-THURS 10 AM-4 PM
FRIDAY 10 AM-2 PM
SAT. BY APPOINTMENT

THE SECRET IS OUT



“I believe if I were starting out in medicine today the Southern Medical Association would be one of the first organizations that I would want to join. For the price you pay, I believe that you have access to more information and more services than other organizations available.”

**Thomas C. Rowland, Jr., M.D.
OB / GYN
Columbia, SC**

Since 1906, the Southern Medical Association has been the best kept secret in the South. No longer! The word is out and everybody's talking.

They're talking about the educational benefits of belonging to the largest regional multi-specialty association in the U.S. and the diversity of the Annual Scientific Assembly.

They're talking about a non-political association whose only mission is to provide the best educational and financial benefits available anywhere.

They're also talking about unrivaled member benefits including the SMA Insurance Program, the Physicians' Purchasing Program, the SMA Retirement Program, SMA Travel Services, Dial Access, the *Southern Medical Journal* and many, many more.

But most of all, they're talking about how SMA can offer so much at such a low cost.

Call the SMA for more information and a membership application. Find out why more and more physicians are joining the SMA every day.

Join the SMA today . . . You'll be talking about us too!

Post Office Box 190088
Birmingham, Alabama 35219



1-800-423-4992
(205) 945-1840

North Carolina Medical Journal

FOR DOCTORS AND THEIR PATIENTS

Contents / March 1988, Volume 49, Number 3

SCIENTIFIC ARTICLES

- 125 Malignant External Otitis: An Unusual Route to Mastoiditis *Perry F. Cook and Francis A. Neelon*
129 Evaluation and Management of Selected Non-Neoplastic Disorders of the Esophagus
Richard A. Weddle

TOXIC ENCOUNTERS

- 133 A Trollope Is Not Necessarily a Ho-Ho *Ronald B. Mack*

FOR PATIENTS

- 145 What Does It Take To Quit Smoking? *Steve Herman*
151 Lung Cancer: Relationship to Passive and Active Smoking *Don V. Jackson, Jr.*
155 The Eggless Egg: Coping with Food Allergies at Easter *Claude A. Frazier*

PHYSICIANS' FORUM

- 157 Hospital Ethics Committees *Edited by Eugene W. Linfors*

CAROLINA HISTORY

- 163 George J. Baylin, M.D.: A Tribute Facilitated by William R. Hudson

BOARD OF MEDICAL EXAMINERS

- 168 Anorectic Agents in the Control of Obesity *Eban Alexander, Jr.*

BULLETIN BOARD

- 142 Official Call House of Delegates
169 Letters to the Editor
173 New Members
174 Instructions to Authors
175 Continuing Medical Education
177 In Memoriam
178 Classified Advertisements
180 Index to Advertisers

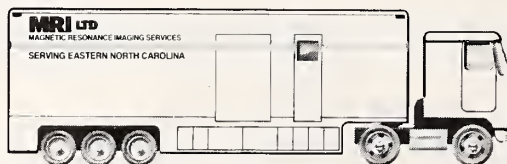
On the cover: Advertising poster, W. Duke, Sons, & Company, Durham, NC, Circa 1885. In Tobacco Collection, Manuscript Department, Duke University Library, Durham.



Patients Are Now Looking Better Than Ever.

Magnetic Resonance Imaging is the most advanced diagnostic technology of the last 25 years. The quality of MRI images is helping physicians make easier, more accurate diagnoses.

Now, Craven County Hospital, in cooperation with Lenoir Memorial Hospital and Onslow Memorial Hospital, is bringing this technology to more physicians in Eastern North Carolina through MRI Ltd. The MRI unit is housed in a large van and will travel between New Bern,



Kinston, and Jacksonville.

From these sites, it will serve physicians and patients of Craven County, Lenoir Memorial, Onslow Memorial, Beaufort

County, Carteret General, Pitt Memorial, and Wayne Memorial Hospitals.

For more information or to refer patients, call Craven County Hospital at 919-633-8218 or toll free 1-800-682-0276.

Magnetic Resonance Imaging. It's helping patients look better than ever.

MRI LTD

A Service of Craven County Hospital
New Bern, NC

Malignant External Otitis

An Unusual Route to Mastoiditis

Perry F. Cook and Francis A. Neelon, M.D.

Otitis externa is a common and usually benign disease. In diabetics and other immunocompromised individuals, the infection may become invasive, at which point it is termed malignant external otitis. Malignant external otitis can be complicated by osteomyelitis, cranial nerve palsies, meningitis, sinus thrombosis, and death. Long courses of intravenous antibiotics are required for control. Despite its serious consequences malignant external otitis can appear deceptively "benign" at first evaluation, as demonstrated by a recent patient who illustrates many of the classic findings of this disorder.

Case

Our patient was a 45-year-old man with a 36-year history of Type I diabetes mellitus complicated by retinopathy, nephropathy, and peripheral vascular disease. Two weeks before admission, he developed pain and drainage from his right ear. He was treated by a physician for otitis externa, without improvement. Nine days later, he consulted an otolaryngologist. Pus was found in the external auditory canal and grew out *Pseudomonas aeruginosa* on culture. He was treated with gentamicin ear drops. Pain and purulent drainage persisted and he came to Duke for further evaluation.

On admission, he was afebrile and did not appear acutely ill. His right external auditory canal was narrowed and inflamed. No mastoid or pre-auricular tenderness was elicited; there was no cervical adenopathy. Cranial nerves were intact. His admission white blood cell count was 5400 with a normal differential count. *Pseudomonas aeruginosa* grew out from his admission ear cultures. An otolaryngologist found the external auditory canal blocked by a large polyp of granulation tissue originating from the inferior bony-cartilaginous junction. The clinical diagnosis was external otitis. A wick was placed and he was continued on the topical gentamicin drops. The patient's external auditory canal improved clinically over the first five days of his admission. Mastoid bone radiographs were initially inter-

preted as normal, but there was some concern over clouding and sclerosis of the right mastoid.

On the sixth hospital day, slight swelling was noted at the angle of the mandible. The following day the amount of granulation tissue in the external canal was noted to have increased, and silver nitrate cauterization was tried. His diabetes was difficult to control. On the twelfth hospital day, a computed tomographic (CT) scan of the mastoid bone revealed opacification of 80% of the right mastoid air cells (figure 1A, next page). A soft tissue mass was noted in the middle ear, but there was no destruction of the bony wall. On the basis of in vitro bacterial sensitivities, he was begun on intravenous ceftazidime. This antibiotic was chosen over an aminoglycoside in order to preserve his already impaired renal function. Topical gentamicin was continued.

The swelling and granulation tissue resolved slowly over the ensuing days. By the sixth day of ceftazidime, the swelling at the angle of the mandible had disappeared. Repeat CT after nine days of ceftazidime showed a slight increase in the mastoid opacification and in the middle ear findings. His diabetic control had improved by day 12 of intravenous antibiotics and his tympanic membrane could be seen and was noted to be intact. On day 22 of intravenous antibiotics, external otitis was completely healed, but CT showed continued opacification of the mastoid air cells. A fluid meniscus remained visible behind the intact right tympanic membrane. Topical antibiotics were discontinued.

On day 43 of intravenous antibiotics, myringotomy revealed no effusion and the middle ear was flushed for cultures. The flushings proved sterile. Two days later, repeat CT showed partial clearing of the mastoid air cells and decreased soft tissue swelling (figure 1B, next page). Antibiotics were discontinued. The patient had received a total of 45 days of ceftazidime. CT performed one week later showed no worsening of the mastoiditis and the patient was discharged. Follow-up CT six weeks after discharge was normal (figure 1C, next page).

Anatomy

The external auditory canal is approximately three centi-

From Duke University Medical Center, Department of Medicine, Durham 27710.

meters long (figure 2). The outer half is supported by cartilage and is covered by thick skin. Anteriorly, the cartilage is pierced by the clefts of Santorini. The inner portion of the external canal is supported by the bony canal which is lined with thin skin. The mastoid air cells lie adjacent to the external canal and are aerated from the nasopharynx via the middle ear (figure 3).

Clinical Findings

Malignant external otitis was first described in the English literature by Meltzer and Keleman¹ in 1959. They related the case of an elderly diabetic patient whose otitis externa was complicated by prominent granulation tissue in the external auditory canal, mastoiditis, multiple cranial nerve palsies, osteomyelitis of the temporal bone, thrombosis of the internal jugular vein, and ultimately death from rupture of the internal carotid artery. *Bacillus pyocyaneus* (now known as *Pseudomonas aeruginosa*) was cultured from the patient.

In 1968, Chandler² reviewed 13 cases of invasive otitis externa. He found all cases to be caused by *Pseudomonas aeruginosa*, and he coined the term malignant external otitis. It is most commonly seen in elderly diabetics (75%-94% of patients) but has also been described in other immunocompromised patients and, rarely, in patients with no known underlying abnormality. Most patients are in their late 60s, but ages range from seven months to 91 years. The diabetes is usually longstanding, as in our patient, but less than half of the patients are insulin-dependent.

The common presenting symptoms are otalgia and purulent drainage. Systemic symptoms such as fever or weight loss are unusual. The canal is markedly swollen and tender with obvious pus. The tympanic membrane, if visible, is usually intact. Prominent granulation tissue is present, most often arising from the bony-cartilaginous junction of the floor of the external auditory canal (figure 2). Laboratory

evaluation is remarkable only for the growth of *Pseudomonas aeruginosa* from ear cultures in all patients. Blood leucocytosis is seen in only 8% to 10% of patients. Our patient was typical in all of these findings.

Cranial nerve (CN) palsies develop in up to half of patients. The facial nerve is most commonly affected, followed by the nerves traversing the jugular and hypoglossal canals (CN IX-XII), but palsies of all nerves except the olfactory nerve have been described. Other complications include osteitis or osteomyelitis of the base of the skull, retro-pharyngeal abscess, temporo-mandibular joint pyarthrosis, parotitis, mastoiditis, internal jugular or sigmoid sinus thrombosis, carotid artery rupture, and death.³⁻⁷

Pathogenesis

The development of malignant external otitis requires the combination of an immunocompromised patient and the *Pseudomonas aeruginosa* organism. Nevertheless, the virulence of *Pseudomonas* alone does not adequately explain the tissue invasion seen, since the organism can be cultured from 50% of healthy individuals who have "garden variety" otitis externa.⁸ Poor immune function and microvascular disease of the long-standing diabetic, compounded by the ability of *Pseudomonas* to cause a necrotizing vasculitis, may allow the otitis to become invasive.

The external auditory canal lacks subcutaneous fat on its inner surfaces, allowing infection to spread through the cartilaginous wall via the clefts of Santorini (figure 2). The infection may continue anteriorly to involve the periauricular tissues or the facial nerve. Inferiorly, the infection can spread through the thin skin directly into the underlying cartilage and bone. The typical prominent granulation tissue reflects the deepening infection. The infection of the bony canal may spread directly into the mastoid air system and, since the tympanic cavity is continuous with the mastoid air cells, proceed into the middle ear (figure 2). We postulate

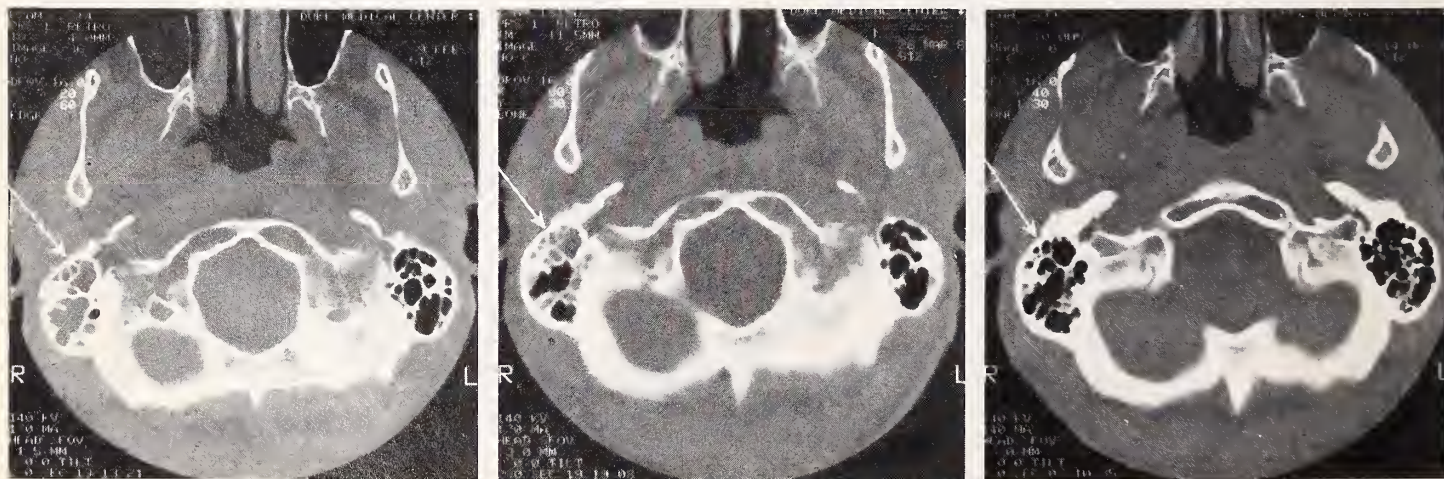


Figure 1. Computed tomographic scans showing (at arrows): (A) opacification of right mastoid sinus air cells at diagnosis (left); (B) partial clearing at end of intravenous antibiotic therapy (middle); (C) full resolution six weeks after stopping antibiotics (right).

that this was the mode of spread in our patient.

Once osteitis or osteomyelitis develops, infection may spread along the base of the skull. Cranial neuropathies ensue as the stylomastoid (CN VII), jugular (CN IX-XI) or hypoglossal (CN XII) foramina become involved. Temporary palsies are thought to result from neurotoxins elaborated by some pseudomonas strains; permanent palsies result from nerve necrosis. Progressing osteitis may lead to involvement of the carotid artery or to thrombosis of the jugular vein at its foramen with propagation upwards to the cavernous sinus.

Diagnosis of malignant external otitis is made clinically by finding evidence of invasive disease in a diabetic or immunocompromised individual with a pseudomonas otitis externa. Persistent granulation tissue on the floor of the external auditory canal, present in the vast majority of patients, is usually the first sign of invasion.

Imaging Studies

Radiographic studies useful in the evaluation of malignant external otitis include plain films, tomograms, radionuclide studies, computerized tomography (CT), and magnetic resonance imaging (MRI). Plain films are positive in 75%-85% of patients. Unfortunately the plain film findings may be non-specific and they correlate poorly with the clinical findings. CT may reveal soft tissue changes, as in our patient, but significant demineralization must be present before bony abnormalities will be evident. CT abnormalities resolve slowly and therefore this method may not be ideal for assessing treatment response. MRI may be more sensitive and provide better anatomic information than CT; however, like CT, the MR scan may remain abnormal following successful treatment.

Radionuclide scanning with technetium-99 labelled phosphate reveals abnormal activity before radiographic evidence of bone destruction. In McShane's study⁴ all patients

with malignant external otitis had positive bone scans, but only 40% showed evidence of bone destruction on CT. However, a recent study questioned the specificity of the bone scan since 33% of healthy patients with simple otitis externa had markedly positive bone scans.⁹ Bone scans, like CT and MRI, may also remain positive for years after successful treatment.

Gallium-67 citrate is picked up by an iron-binding protein found in abscesses and infections and is positive in over 90% of cases of malignant external otitis. More than 85% of positive scans resolve with successful treatment, and in only a few reported cases has otitis recurred after the scan became negative.

Although no one radiologic study is ideal, it appears that serial gallium citrate scans are helpful for evaluating the response to therapy, and MRI or CT are useful for anatomic definition.¹⁰ We still need further studies on the specificity of bone scans before we can rely upon them for the diagnosis of invasive osteomyelitis in this disease.

Treatment and Prognosis

Treatment of Malignant external otitis was originally surgical. In 1977, Chandler⁵ recommended a medical approach with local debridement and topical antibiotics combined with two systemic, anti-pseudomonal antibiotics. Aggressive surgical intervention was reserved for recalcitrant disease. These recommendations are currently in use. Antibiotic coverage is long-term (more than four weeks or until the gallium citrate scan returns to normal) and usually consists of an aminoglycoside antibiotic such as gentamicin in combination with a B-lactam antibiotic such as carbenicillin.

Ceftazidime, a third generation cephalosporin, has been used in Pseudomonas osteomyelitis since it has no renal toxicity.¹¹ Greater than 90% cure rates of Pseudomonas osteomyelitis have been reported with the use of ceftazidime

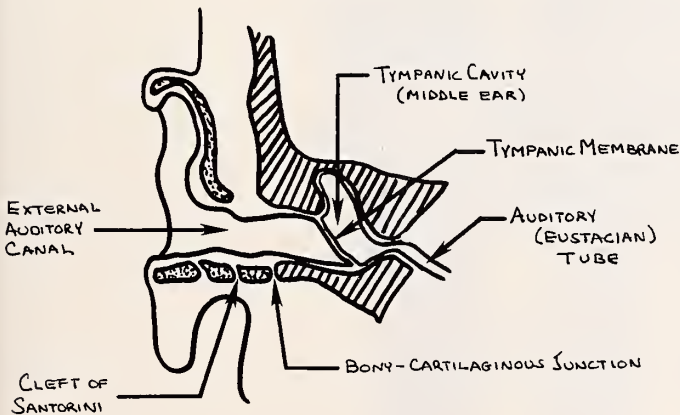


Figure 2. Cross-section diagram of the external and middle ear. Cartilage is shown stippled; sections of the temporal bone are cross-hatched. The middle ear ossicles are omitted for clarity.

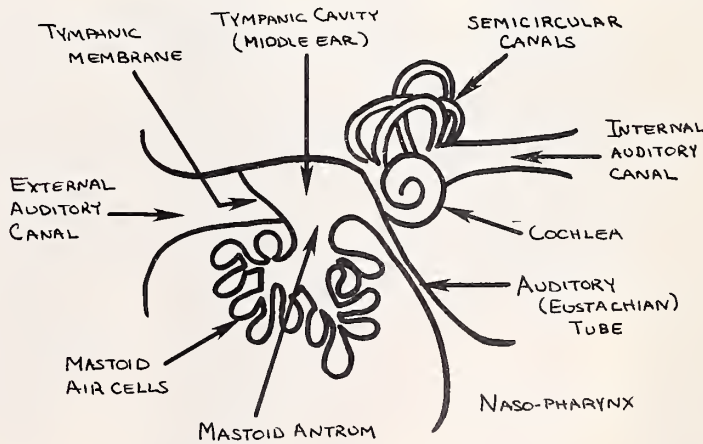


Figure 3. Schematic representation of the anatomical relationship of the mastoid air sinus to the external and middle ear. Note that the mastoid air cells are aerated via the middle ear.

alone. Treatment failures have occurred when resistance to ceftazidime has developed during therapy. Therefore, the combination of an aminoglycoside and a B-lactam antibiotic is still preferred unless there is a contraindication to aminoglycoside use.

The prognosis for patients with malignant external otitis correlates well with the extent of cranial nerve involvement. In Doroghazi's³ review of his cases from 1969-1979, he reported 100% survival in cases when no cranial nerves were involved (as in our patient); 80% when just cranial nerve VII was affected; and 50% when multiple cranial nerves were palsied. The cranial nerve palsies themselves may resolve with adequate and timely treatment, but it is always better to treat early and vigorously before nerve palsy or other calamities ensue. ■

Acknowledgments

The authors wish to thank Dr. Russell Blinder and Dr. Andrew Yates for their review of the radiographic section of this paper.

References

- 1 Meltzer PE, Keleman G. Pyocyanus osteomyelitis of the temporal bone, mandible and zygoma. *Laryngoscope* 1959;69:1300-16.
- 2 Chandler JR. Malignant external otitis. *Laryngoscope* 1968;78:1257-94.
- 3 Doroghazi RM, Nadol JB, Hyslop NE, et al. Invasive external otitis. *Am J Med* 1981;71:603-14.
- 4 McShane D, Chapnik JS, Noyek AM, Vellend H. Malignant external otitis. *J of Otol* 1986;15:108-11.
- 5 Chandler JR. Malignant external otitis: further considerations. *Ann Otol* 1977;86:417-28.
- 6 Paparella M, Shumrick D. *Otolaryngology*. Philadelphia: WB Saunders Co., 1980.
- 7 Holder CD, Gurucharri M, Bartels LJ, Colman MF. Malignant external otitis with optic neuritis. *Laryngoscope* 1986;96:1021-3.
- 8 Hawke M, Wong J, Krajden S. Clinical and microbiological features of otitis externa. *J of Otol* 1984;13:289-95.
- 9 Levin WJ, Shary JS, Nichols LT, Lucente FE. Bone scanning in severe external otitis. *Laryngoscope* 1986;96:1193-5.
- 10 Gherini SG, Brackman DE, Bradley WG. MRI and CT in malignant external otitis. *Laryngoscope* 1986;96:542-8.
- 11 Gentry LO. Treatment of skin, skin structure, bone, and joint infections with ceftazidime. *Am J Med* 1985;79(2A):67-74.

**Want to fund your retirement plans
at up to 25% pay and your staff at
only 11% pay? That's leverage!**

Call BARON for answers.

CALL OR WRITE FOR INFORMATION:

Joseph M. Gordon, CLU, ChFC, CFP
"Admitted to the Registry of
Financial Planning Practitioners"
BARON ADVISORY SERVICES, INC.
4110 Wake Forest Road, #211
Raleigh, NC 27609
790-9904/(800) 222-8783

To show you how many
hypertensives stayed on
INDERAL[®] LA
(PROPRANOLOL HCl)
after a major nationwide trial...



An aerial photograph of a large, modern stadium at night. The stadium is filled with spectators, and the football field is brightly lit. The stadium is surrounded by a city, with a winding road visible on the left. The sky is dark, and the city lights are visible in the background.

...we had
to find
just the
right room.

60,073 patients (90%) who started on INDERAL[®] LA stayed on INDERAL LA.^{1*}

Surprising? Not really.

Because most patients on INDERAL LA (propranolol HCl) don't even know it's working.

A recent double-blind, placebo-controlled, crossover study in 138 hypertensive patients² revealed that INDERAL LA has a side effects profile unsurpassed by atenolol or metoprolol — which shows how well-tolerated once-daily INDERAL LA can be.

Sole therapy or concomitant therapy?

Fifty-nine percent of the time, INDERAL LA stood on its own.

The patients in the nationwide compliance trial were no different from yours. Generally when the antihypertensive regimen is complicated, compliance may become a problem. So, the effectiveness of INDERAL LA as once-daily monotherapy is a big plus. Of the remaining hypertensives in the program, 36% were treated merely with the addition of a diuretic to INDERAL LA.

For the noncompliant patients in your practice, INDERAL LA may well be the answer.

Almost 20,000 of the patients in the nationwide compliance trial were identified as having been noncompliant with their previous antihypertensive therapy. Their physicians reported that 88% showed improved compliance when placed on once-daily INDERAL LA.

Control, comfort, and compliance

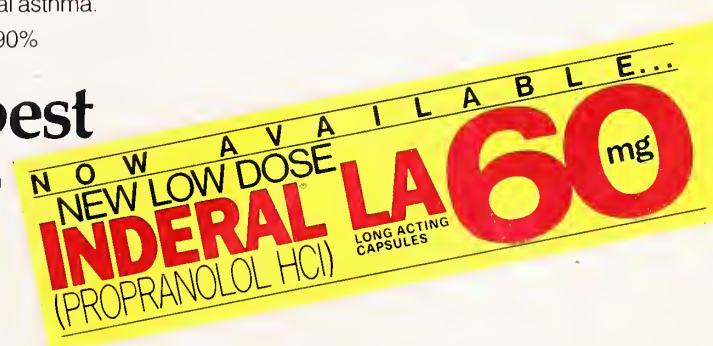
ONCE-DAILY
INDERAL[®] LA
(PROPRANOLOL HCl) LONG ACTING CAPSULES

Like conventional INDERAL Tablets, INDERAL LA should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree, and bronchial asthma.

*After a 30-day trial with INDERAL LA, physicians reported that 90% of the patients would remain on INDERAL LA.

The one you know best keeps looking better

Please see next page for brief summary of prescribing information.



The one you know best keeps looking better

BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR)

INDERAL® LA brand of propranolol hydrochloride (Long Acting Capsules)

DESCRIPTION. Inderal LA is formulated to provide a sustained release of propranolol hydrochloride. Inderal LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. Inderal is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by Inderal, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

Inderal LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with Inderal LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of Inderal Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

Inderal LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to Inderal LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, Inderal LA has been therapeutically equivalent to the same mg dose of conventional Inderal as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. Inderal LA can provide effective beta blockade for a 24-hour period.

INDICATIONS AND USAGE. Hypertension: Inderal LA is indicated in the management of hypertension, it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. Inderal LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: Inderal LA is indicated for the long-term management of patients with angina pectoris.

Migraine: Inderal LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: Inderal LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. Inderal LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. Inderal is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first-degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with Inderal.

WARNINGS. CARDIAC FAILURE. Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or Inderal should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of Inderal therapy. Therefore, when discontinuance of Inderal is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If Inderal therapy is interrupted and exacerbation of angina occurs, it is usually advisable to reinstitute Inderal therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. Inderal should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY. The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

Inderal (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA. Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T₄ and reverse T₃, and decreasing T₃.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case, this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL: Propranolol should be used with caution in patients with impaired hepatic or renal function. Inderal (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should

be told that Inderal may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if Inderal is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenytoin, phenobarbital, and rifampin accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels of both drugs.

Antipyrine and lidocaine have reduced clearance when used concomitantly with propranolol.

Thyroxine may result in a lower than expected T₃ concentration when used concomitantly with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY: Pregnancy Category C. Inderal has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. Inderal should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: Inderal is excreted in human milk. Caution should be exercised when Inderal (propranolol HCl) is administered to a nursing woman.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: Bradycardia, congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System: Light-headedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to cataplexy, visual disturbances; hallucinations; vivid dreams; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy, and vivid dreams appear dose related.

Gastrointestinal: Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: Bronchospasm.

Hematologic: Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: Alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. Inderal LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from Inderal Tablets to Inderal LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. Inderal LA should not be considered a simple mg-for-mg substitute for Inderal. Inderal LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—Dosage must be individualized. The usual initial dosage is 80 mg Inderal LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood-pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—Dosage must be individualized. Starting with 80 mg Inderal LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—Dosage must be individualized. The initial oral dose is 80 mg Inderal LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximal dose, Inderal LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg Inderal LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

REFERENCES:

1. Inderal LA National Compliance Evaluation Program. Data on file, Ayerst Laboratories.
2. Ravid M, Lang R, Jutrin I: The relative antihypertensive potency of propranolol, oxprenolol, atenolol, and metoprolol given once daily. *Arch Intern Med* 1985; 145:1321-1323.

IR7119/887

Ayerst

AYERST LABORATORIES
New York, NY 10017

© 1987 Ayerst Laboratories

Evaluation and Management of Selected Non-Neoplastic Disorders of the Esophagus

Richard A. Weddle, M.D.

Symptoms of Esophageal Disease (table 1)

There are three types of chest pain specifically associated with esophageal disease: heartburn (pyrosis); odynophagia (painful swallowing); and spontaneous chest pain. Regurgitation is reflux or emesis of food or fluid. Dysphagia is the sensation of difficulty in swallowing either solids or liquids and may be described as swallowed objects sticking at a particular level in the neck or chest. Upper GI bleeding has an esophageal source in at least 25% of cases. Esophageal bleeding may present as hematemesis or occult GI bleeding. These sources may include esophagitis, ulcers, Mallory-Weiss tear, or varices. Other nonspecific symptoms that may arise from the esophagus include nausea, dysguesia (sour, bitter, acid or unpleasant taste), and upper abdominal pain.

Tests of Esophageal Function (table 2)

X-ray. The chest x-ray may show an air fluid level in a large fixed hiatal hernia. The barium swallow is the most widely used test for esophageal symptoms and is sensitive for structural abnormalities of the esophagus such as strictures and rings. It is a good initial test for dysphagia as a solitary symptom or for chest pain of a suspected esophageal source. An isolated hiatal hernia on barium swallow is not diagnostic for gastroesophageal reflux. The barium swallow may detect esophageal motor disorders by detecting esophageal dilation, retained foods or liquids and abnormal peristalsis. The barium swallow is of debatable value in the assessment of gastroesophageal reflux because of its lack of sensitivity for esophageal erosions. Thoracic CT scan and magnetic resonance imaging are mainly of value in pre-operative staging or to determine operability in esophageal cancer, and do not have much of a role for non-neoplastic disorders of the esophagus.

Radionuclide scintigraphy. Nuclear scanning is useful in the detection and quantification of gastroesophageal reflux

and in measuring esophageal transit time and clearance. It may be of value as a screening test for esophageal motor disorders, as nuclear scans are sensitive for the detection of subtle esophageal motility disorders. It may be helpful in evaluating the results of treatment of achalasia.

Upper GI endoscopy. This is more sensitive than the barium swallow for detection of esophageal mucosal inflammation. Endoscopy also allows mucosal biopsy or brushing for diagnosis. Upper GI endoscopy is frequently recommended to explain or confirm barium swallow abnormalities or to evaluate persistent symptoms despite a normal barium swallow. Upper GI endoscopy is especially useful when reflux symptoms are present, as it is more sensitive than a barium swallow for esophageal erosions.

The Bernstein Test or acid infusion test is useful for the detection of gastroesophageal reflux. The patient's symptoms are assessed during intra-esophageal infusion of hydrochloric acid or normal saline. The acid infusion test detects esophageal sensitivity to acid in the distal esophagus. It is accurate for GE reflux when the symptoms are reproduced with acid infusion but not with saline infusion.

Table 1
Symptoms of Esophageal Disease

Chest Pain
Regurgitation
Dysphagia
Upper Gastrointestinal Bleeding

Table 2
Tests of Esophageal Function

Chest X-ray
Barium Swallow
Radionuclide Scintigraphy
Upper GI Endoscopy
Bernstein Test
Standard Acid Reflux Test
Esophageal Manometry

From Shelby Medical Associates, 808 Schenck Street, Shelby 28150.

The *Standard Acid Reflux Test (SART)* is the gold standard for the detection of esophageal reflux. The esophageal pH is measured 5 cm. above the lower esophageal sphincter in four different positions with four different maneuvers to increase intra-abdominal pressure. A pH of less than four during any of the 16 different conditions means that acid reflux has occurred. The number of reflux episodes detected is an indication of the degree of reflux.

Esophageal manometry is direct measurement of pressure within the esophagus. A low-compliance open-tipped constant water infusion system is the preferred method. Lower esophageal sphincter pressure and peristaltic activity of the esophagus are measured. A lower esophageal sphincter pressure of less than 10 mm. hg. supports the diagnosis of suspected gastroesophageal reflux. Normal or abnormal peristalsis of the esophagus can be determined, thus esophageal manometry is the best test for the diagnosis of esophageal motor disorders. Esophageal manometry is a useful diagnostic test to evaluate dysphagia when the barium swallow and upper GI endoscopy are negative. Measurement of the lower esophageal sphincter pressure after reflux surgery or following treatment for achalasia can be useful to evaluate the success of either procedure.

Provocative testing of the esophagus usually involves measuring esophageal motility during infusion of drugs that affect the esophagus. Drugs used have included methacholine, bethanecol, ergonovine, and edrophonium. The preferred provocative drug is edrophonium. A newer provocative test of the esophagus is graded intra-esophageal balloon distention with assessment of patient symptoms. Provocative tests may increase the ability to incriminate the esophagus as a source for noncardiac chest pain.

Twenty-four-hour ambulatory pH and pressure monitors will increase the sensitivity for detecting gastroesophageal reflux or esophageal motor disorders. These tests are similar to the Holter monitor tests for measuring ambulatory EKG. Spontaneous abnormalities may be related to the patient's symptoms during prolonged monitoring.

Selected Non-Neoplastic Esophageal Disorders (table 3)

Hiatal hernias are structural abnormalities of the distal esophagus. Type I hernias are also called sliding hernias and may be diagnosed by barium swallow or endoscopy. Moderate to large type I hiatal hernias are associated with gastroesophageal reflux. Type I hernias have a low complication rate which includes upper GI bleeding and iron deficiency anemia. Type II hiatal hernias are also known as para-esophageal hernias. They may be diagnosed by barium swallow or endoscopy, but barium swallow may be more sensitive. The natural history of type II hernias is progressive enlargement. They have a much higher complication rate compared to type I hernias, and complications may include obstruction, bleeding, intra-thoracic gastric dilation, volvulus, and infarction. In general, the recommended therapy is surgical resection.

Table 3

Selected Non-Neoplastic Esophageal Disorders

Hiatal Hernia Gastroesophageal Reflux Esophageal Motor Disorders
--

The symptoms of *gastroesophageal reflux* may include positional or postural heartburn and regurgitation. Dysphagia may occur with reflux esophagitis despite absence of a stricture. Patients with reflux frequently have post prandial symptoms including nausea and epigastric abdominal pain. Other possible symptoms are odynophagia and chest pain. Gastroesophageal reflux may be evaluated by barium swallow, nuclear scan, endoscopy, Bernstein test, SART, or esophageal manometry. Complications include esophagitis, stricture formation, upper GI bleeding, aspiration pneumonia, and Barrett's esophagus. Treatment of gastroesophageal reflux includes lifestyle changes, antacids, H2 blockers, prokinetic drugs, and surgery.

The primary *esophageal motility disorders* of interest include achalasia, diffuse esophageal spasm, and nutcracker esophagus. *Achalasia* is characterized by lack of peristalsis in the esophageal body, a hypertensive lower esophageal sphincter, and impaired lower esophageal sphincter relaxation upon swallowing. The symptoms of achalasia include progressive dysphagia for solids and liquids and positional or nocturnal regurgitation. The diagnosis of achalasia may be suspected on barium swallow or upper GI endoscopy. The esophageal scan may show decreased transit time but manometry is diagnostic. Achalasia may also present with pulmonary symptoms due to aspiration. Weight loss is common, and untreated achalasia patients are at increased risk for esophageal cancer. Medical treatment of achalasia includes use of long-acting nitrates, calcium channel blockers, tranquilizers, anti-depressants, anti-cholinergics, glucagon and beta II agonist. Esophageal dilatation with pneumatic dilatation is effective in 80% to 90% of cases. Surgical myotomy may be required for relief of symptoms of achalasia.

Diffuse esophageal spasm is characterized by a normal or high esophageal sphincter pressure and high amplitude nonperistaltic esophageal contractions which occur with greater than 10% of swallows. Abnormal motor responses such as retrograde contraction, simultaneous waves or repetitive waves may occur. Triple peaked waves are characteristics for a diffuse esophageal spasm. In addition to high amplitude contractions, the contractions may have prolonged duration. Peristalsis may be periodically normal. The symptoms of diffuse esophageal spasm include dysphagia and nonprogressive chest pain. The condition does not generally lead to weight loss, and it is associated with gastroesophageal reflux. The dysphagia that occurs may occur with solids or liquids but especially cold liquids. The chest pain associated with the diffuse esophageal spasm may be

indistinguishable from angina pectoris, including relief from Nitroglycerin. Barium swallow may show tertiary contractions and the esophageal scan may show decreased transit, but manometry is diagnostic. Medical treatment of diffuse esophageal spasm includes the use of anticholinergic drugs, nitrates and calcium channel blockers. Other treatments that have been tried include esophageal dilation and surgical myotomy. Endoscopic myotomy is experimental. Provocative testing of the esophagus may increase the diagnostic sensitivity for diffuse esophageal spasm.

Nutcracker esophagus is also known as high amplitude peristaltic esophageal contraction disorder. The contractions may also have an increased duration. Nutcracker esophagus is the most common esophageal motor disorder that is diagnosed during the manometric evaluation of patients with noncardiac chest pain. Symptoms include chest pain with or without dysphagia, and are similar to the symptoms of diffuse esophageal spasm. In nutcracker esophagus, peristalsis is normal and lower esophageal sphincter pressure and function are normal. The mean contraction amplitude is increased. Various medical treatments have been tried, the most promising of which is calcium channel blockers. Esophageal bougienage is of debatable value in the treatment of nutcracker esophagus. Refractory cases have benefited from surgical myotomy. Patients with nutcracker esophagus tend toward improvement of their symptoms over time. They should be reassured that the source of their pain is not cardiac, and attempts should be made to eliminate stress factors.

The *Hypertensive lower esophageal sphincter syndrome* is an esophageal motor disorder characterized by normal peristalsis and an elevated lower esophageal sphincter pressure. This disorder is noted in a small subset of patients with noncardiac chest pain. There are several *nonspecific esophageal motor disorders* that have been discovered with the increasing use of esophageal manometry. Their clinical significance is uncertain. These include the following occasional or isolated abnormalities: Decreased peristaltic amplitude, triple peaked waves, simultaneous contractions in less than 10% of swallows, and contractions with prolonged duration.

Noncardiac Chest Pain (table 4)

When a patient presents with chest pain, a cardiac source should be ruled out first. At least 10% to 30% of people who undergo cardiac catheterization for suspected angina have normal coronary arteries. Noncardiac chest pain has a benign prognosis and reassurance is indicated. Further evaluation to determine other sources of pain may arise from pulmonary, rheumatologic or esophageal sources. Up to 60% of these patients have a potential esophageal source for their chest pain, which is generally gastroesophageal reflux or an esophageal motor disorder. An esophageal source for chest pain should be suspected when the pain is non-exertional, associated with heartburn, dysphagia, or regur-

Table 4
Noncardiac Chest Pain

Rule Out Cardiac Source First
Incrimination of the Esophagus
Formal Evaluation of Esophageal Function (Esophageal Studies Lab)
Treatment of Esophageal Chest Pain

gitation, occurs post prandially or in the recumbent position, or is relieved by the upright position or the use of antacids. Mechanical lesions of the upper GI tract should initially be ruled out followed by testing for esophageal reflux. If these are negative, then evaluation for esophageal motility disorders is indicated.

Gastroesophageal reflux may present as noncardiac chest pain in up to 10% of patients with reflux. Esophageal motor disorders appear to be a cause of noncardiac chest pain. Some investigators believe that esophageal chest pain not attributable to gastroesophageal reflux is a variant of the irritable bowel syndrome. They believe that these patients have a lowered pain threshold to normal esophageal physiology. Psychiatric illness occurs with more frequency than normal in patients with noncardiac chest pain and esophageal motor disorders.

The Esophageal Studies Lab

Specialized esophageal manometry may be of value in the diagnosis of noncardiac chest pain. These studies can be done in a community hospital in the setting of an esophageal studies lab. The esophageal studies lab should be a dedicated procedure room in which equipment is available to perform the Bernstein acid infusion test, standard acid reflux testing and esophageal manometry. These studies require the use of a specially trained nurse for GI procedures. All three studies can be done at the same setting with one nasoesophageal intubation. With an esophageal study lab, suspected esophageal disease can be assessed in an efficient manner. The success of reflux surgery can also be measured. Esophageal motility disorders may be diagnosed. The evaluation of noncardiac chest pain is facilitated by the use of an esophageal studies lab, because of the increased sensitivity for the detection of gastroesophageal reflux or esophageal motor disorders. The response to treatment of esophageal motor disorders can also be evaluated. Provocative esophageal testing and prolonged 24-hour pH and pressure monitoring is investigational and reserved for major medical centers.

Gastroesophageal reflux can be diagnosed when it presents atypically. If any is documented, then therapy for acid reflux should be initiated. If no reflux is documented or there is failure to respond to reflux treatment and there is a high suspicion for an esophageal motor disorder, then treatment for motor disorders should be tried. Cost-benefit analysis has shown that esophageal manometry is of value

in the evaluation of patients with noncardiac chest pain, dysphagia, or suspected achalasia. Once an esophageal source for chest pain has been defined, the patient can be reassured regarding his diagnosis and the noncardiac nature of the chest pain. A proposed step therapy for esophageal motor disorders includes, in this order, reassurance, calcium channel blockers, consideration of anxiolytics, bougienage, then surgery. ■

Acknowledgment

The author thanks the Medical Staff of Cleveland Memorial Hospital, Shelby, N.C. for listening and asking questions regarding this topic, Doris Callahan and Lori Rabb for excellent word processing without which this paper would not be possible.

References


- 1 Duranceau AC, et al. Esophageal motility in asymptomatic volunteers. *Surg Clin of North America* 1983;63:777-86.
- 2 Castell DO. Clinical applications of esophageal manometry. *Digestive Dis and Sci* 1982;27:769-71.
- 3 Benjamin SB, et al. Prospective manometric evaluation with pharmacologic provocation of patient with suspected esophageal motility dysfunction. *Gastroenterology* 1983;84:893-901.
- 4 Gelfand MD, Botoman VA. Esophageal motility disorders: a clinical overview. *Amer J of Gastroenterology* 1987;82:181-7.
- 5 Katz PO, Castell DO. Esophageal motility disorders. *Amer J of the Med Sci* 1985;290:61-9.
- 6 Traube M, et al. Effects of Nifedipine in achalasia and in patients with high-amplitude peristaltic esophageal contractions. *JAMA* 1984;252:1733-6.
- 7 Richter JE, Cartell DE. Diffuse esophageal spasm: a reappraisal. *Annals of Intern Med* 1984;100:242-5.
- 8 Ockne IS, et al. Unexplained chest pain in patients with normal coronary arteriograms. *N Engl J Med* 1980;303:1249-52.
- 9 Castell DO. Esophageal chest pain. *The Amer J of Gastroenterology* 1984;79:969-71.
- 10 Clouse RE, et al. Esophageal motility disorders and chest pain. *Arch Intern Med* 1985;145:903-5.
- 11 Ward BW, et al. Long-term follow-up of symptomatic status of patients with noncardiac chest pain. *Amer J of Gastroenterology* 1987;82:215-8.
- 12 Meshkinpour H, et al. Esophageal manometry. *Digestive Dis and Sci* 1982;27:772-5.


AIM HIGH

**YOU CAN KEEP THEM
IN BALANCE—
YOUR FAMILY LIFE
AND YOUR
MEDICAL PRACTICE.**

We'd like to help you spend more time with your family yet receive professional satisfaction from your medical practice. As a member of the Air Force health care team, you'll be able to participate in our group practice concept which will free you of most administrative duties. Air Force benefits are also very attractive. You and your family will enjoy 30 days of vacation with pay each year plus many more Air Force advantages. Call

Captain Chuck Helvey
919-850-9475
Station to Station collect





A Trollope Is Not Necessarily a Ho-Ho

Ronald B. Mack, M.D.

In my old neighborhood, growing up on the mean streets of the big city, it did not bode well for you if you were different, i.e., either weird looking or having an unusual name. I shudder when I think of how it would have been for the great English novelist of the last century, Anthony Trollope, to suffer the slings and arrows of the cave dwellers of my old gang. The name Trollope evoked salacious images of the kind of women about whom Mother always warned us. These feminine creatures were also pictured on posters in the Navy barracks and "heads" with the intriguing words: "would you use another man's toothbrush?" I treated a lot of sailors who used other men's toothbrushes or whatever. The guys who grew up with me probably would not have known the other, more sophisticated meaning of the word trollop in any event, although you never know.

Anthony Trollope wrote his novels in the 1800s, and gave to those who enjoy the written word stories that were marked by the creation of wonderful characters; good people, bad people, strange people and those who adhered to Victorian conservative ideals. It has been said that no English novelist of his time, except Dickens and possibly Thackeray, could equal the fictional people he created in terms of interest. He is perhaps best known for his depiction of the mundane everyday existence that most people endure; except he had the gift for showing human life in its ordinary manner and making it interesting. He was one of the great literary realists and that is why his books are still popular today. Trollope was a keen observer of people, a trait that all physicians need to emulate.

One hundred years after this literary giant began to publish his most popular books, the *Barset Chronicles* (1855), Nakamura¹ discovered a drug called azomycin (2-nitroimidazole). One year later Horie (oops, another one of those names) determined that the drug was trichomonocidal. From that seminal work many nitroimidazoles were synthesized and tested. One of these compounds, 1-(B-hydroxyethyl)-2-methyl-5-nitroimidazole, ADA metronidazole (Flagyl), was to have very broad spectrum activity against protozoa and bacteria. This drug is directly trichomonocidal and is

very active against *E. histolytica*. It demonstrates antibacterial activity against all anaerobic cocci and both anaerobic gram-negative bacilli (including *Bacteroides* species) and anaerobic spore-forming gram-positive bacilli. In other words, metronidazole is effective against trichomonas, amebiasis and giardiasis as well as many infections caused by obligate anaerobic bacteria. This chemical is also being used in patients with *Gardenella* vaginitis, Crohn's Disease and antibiotic-associated pseudomembranous colitis.¹ The first three diseases mentioned are common enough in this country that preschool children or suicidal adolescents and adults could have easy access to this drug, and when the time is right someone is going to ingest too many and you are going to get a phone call.

You do not have to be a pharmacologist to appreciate the kinetics of the drug; it should help you both in your prescribing of this medication and management if overdose should ensue. A remarkable amount of metronidazole is absorbed from the gastrointestinal tract, 80% to 90%, and is distributed into most body tissues and fluids, including pleural fluid, peritoneal fluid, bone, saliva, cerebrospinal fluid, breast milk, cerebral and hepatic abscesses and vaginal and seminal fluids. (Well, isn't that *special* — considering how often the drug is used against trichomonas, it is comforting to know that it enters these latter two body fluids with ease.) Peak plasma concentrations are reached in three hours and the elimination half-life ($T_{1/2}$) is six to 12 hours. Less than 20% of this chemical is bound to protein and the apparent volume of distribution is 0.6-0.8 L/kg. Metronidazole is metabolized by the liver and excreted by the kidneys. The presence of metabolites can cause the urine to become dark or reddish-brown in color.² There now, don't you feel better knowing all that stuff. Was it good for you too?

From the point of view of the clinician, it is very gratifying to know that serious consequences from acute overdose are not at all common. The typical oral forms of the drug are in 250 and 500 mg. tablets. In reported cases of suicide attempts in young adults, acute ingestion of as much as 12 grams did not result in significant signs and symptoms of toxicity. Although the minimal acute or lethal dose is not known, toxicity is not likely in an ingestion of less than

From Department of Pediatrics, Bowman Gray School of Medicine, Wake Forest University, Winston-Salem 27103.

two grams taken at one time.³ Of course no one is recommending that you take that much acutely, even though trichomonas can be an awful pain in the nether regions.

Do not misunderstand me, overdosing on metronidazole is not exactly a walk in the park. The patient who takes too much of this drug, for whatever reason, can expect nausea, vomiting, headache, a metallic taste in the mouth, and less frequently, drowsiness or insomnia (sorry, you don't get your choice), depression and darkening of the urine. Vertigo, a sensation of dry mouth, and, on rare occasions, convulsions have been reported. One very bad idea, apparently, would be to co-ingest ethanol and metronidazole. The result can be a disulfiram (Antabuse-like) reaction with subsequent headache, flushing, nausea, vomiting, abdominal pain and diaphoresis. Apparently metronidazole can inhibit the enzyme alcohol dehydrogenase and that is what some authorities believe is the reason for this sickening response. Just when I had you convinced along come some data that claim that well-controlled data do not confirm this disulfiram-like effect, and in some studies the same effect can occur with placebo.³ What can you believe anymore? Next they will be telling us alfalfa tablets do not prevent baldness and otitis media. I don't know about you but I am not going to swallow metronidazole and Sambuca at the same time.

It would probably be useful at this juncture to mention that there are drug interactions with metronidazole that are better documented. For example, if a patient is taking an anticoagulant when metronidazole is prescribed, you have to follow prothrombin levels carefully. This drug can potentiate oral anticoagulant medication. If a patient is on chronic phenobarbital therapy, the standard dose of metronidazole may not be effective. Phenobarbital increases the metabolic rate of this drug, and more may be needed to treat what ever it is you are using metronidazole for in the first place. On the other hand, if a patient on phenobarbital overdoses on metronidazole, the metabolism of the latter drug is accelerated. Patients taking cimetidine and metronidazole can have problems because cimetidine can inhibit the latter drug's metabolism causing an increase in the adverse effects of metronidazole. One of the most common questions asked of me concerning the use of this drug is its usage in breast feeding mothers who also have contracted trichomoniasis. It is reported that metronidazole produces concentrations in the milk approximating those of plasma.¹ The current literature recommends that although no toxic effect on breast feeding infants has been observed, the use of metronidazole in the breast feeding mother should be avoided, if possible. For the breast feeding mother with trichomoniasis who insists on breast feeding, no matter what, one suggestion that has been offered is to pump the breasts, discard the milk, and resume breast feeding 12 to 24 hours later. Gosh, I almost forgot, you have to feed the baby something other than breast milk. How about using a standard infant formula or calling Hertz Rent-a-Feed who will dispatch a wet-nurse. Be sure to ask for a dry wet-nurse;

the wet wet-nurses can ruin the rugs.

Fortunately for the patient and the prescribing doctor, metronidazole is usually given for an acute problem and long-term therapy is not an issue. For those patients, however, who are committed to this drug for prolonged periods, there are additional adverse consequences; they are interesting, medically, unless you are the patient. Long-term therapy can produce seizures, ataxia, and sensory neuropathy, usually in patients receiving large doses of the drug. It has been suggested that metronidazole not be used in patients with active disease of the central nervous system or those with a history of blood dyscrasias. Want to avoid trouble? Ask the patient if he or she is taking any other medication, obtain a good past history, do a complete physical and remember the old adage, disease exists under the clothing. My Mom is a funny lady; when she goes to the doctor and the doctor says remove your clothes, she always says, "Oh no, doctor . . . you first!"

If you're faced with a patient who overdosed on metronidazole either accidentally or on purpose, remember that there is no antidote. Although plasma levels are available, they are not thought to be clinically useful as they do not correlate with the degree of intoxication. If the ingestion has been quite recent and the patient is obtunded or seizing, ipecac syrup is indicated; if this is not feasible then you may resort to gastric lavage. Activated charcoal and cathartics can be administered following gastric decontamination, although there are no good data that speak to its efficacy. Other adversities are to be treated symptomatically.

For most patients, metronidazole is only prescribed for one to ten days, but as we have seen the drug can be useful in certain diseases where more chronic therapy is indicated. One of the more unusual consequences of this medication is its association with gynecomastia. (Please, I have enough trouble as it is, don't give me drugs that will make my body produce more protuberances that I have to provide for.) It is speculated that because both ketoconazole and metronidazole have imidazole rings, and because ketoconazole displaces 50% of dihydrotestosterone from sex-hormone globulins and can cause gynecomastia, metronidazole-associated cases of gynecomastia are on the same basis. It would seem that two or more weeks of therapy are necessary to produce this effect.⁴

Anthony Trollope is a good example of the idea that you cannot always predict the outcome of a child by looking only at his early school experiences and general demeanor. This revered man of letters, in his "grammar school" days, is described as a dunce, physically dirty, and slovenly in dress. At age 15 years he was further characterized as large, uncouth, ill-clad and unhappy.⁵ Sound familiar? Do not lose heart, Trollope finally matured and wrote 47 novels. Some of his works were made into a miniseries that appeared on Masterpiece Theater several seasons ago ("The Barchester Chronicles"). Could there be any higher honor?

I don't care what anyone else says, I like Anthony Trol-

lope. One of the best things he ever said was: "A novel should give a picture of common life enlivened by humor and sweetened by pathos."⁶ In my old neighborhood, in order for him to survive, we would have nicknamed him "Tony the Quill." ■

References

1 Goodman and Gilman. The pharmacological basis of therapeu-

tics. 7th ed. Macmillan Publishing Company, 1985, Chap. 45, p. 1052.

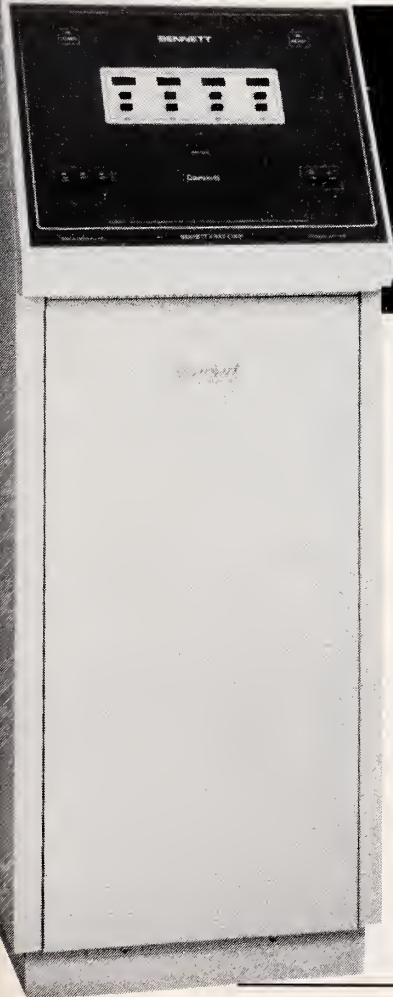
2 Ellenhorn MJ, Barceloux DG. Medical toxicology. New York: Elsevier, 1988.

3 Micromedex, Inc. Poisindex. Vol. 53. Metronidazole.

4 Fagan TC, et al. Metronidazole-induced gynecomastia. JAMA 1985;254:3217.

5 Lawrence K, Seifter B, Ratner L. (eds). McGraw-Hill guide to English literature volume 2, 1985, p. 221.

6 Kendrick W. The novel-machine. Baltimore: Johns Hopkins University Press, 1980, p.25.



THE FUTURE IS NOW WITH THE ELIMINATOR

"Eliminator" is a fairly harsh word to describe an x-ray generator. However, the Compu-mAs system from Bennett X-Ray Corp. and B & B X-Ray does so many things for you, there's no other word to explain it. The generator automatically calculates the next available mAs from the 34 time stations and the 7 mA stations, therefore eliminating many of the steps that were once necessary in taking x-rays.

The Compu-mAs:

- Eliminates setting major and minor kVp tap switches
- Eliminates setting high and low range for kV selectors
- Eliminates calculating mA x time to find mAs
- Eliminates checking and adjusting line compensation
- Eliminates the need to set both mA and time

By eliminating all of these steps, the Eliminator moves into the future without sacrificing dependability and accuracy. Dependability has been a benefit of owning a Bennett Radiographic System for over 30 years. And now, by automatically selecting the next available mAs combination of mA and time, Compu-mAs provides accuracy to almost infinite resolution. The Compu-mAs Eliminator—just another way B & B X-Ray is working for your end result, optimum quality radiographs.

B & B X R A Y

working for the end result—optimum quality radiographs
P.O. Box 802 Matthews, NC 28105 In NC Call 1-800-222-9262
In SC Call Collect 704-847-8521

Our Alumni Make Great Recoveries.

They needed our program to solve their problems, so you probably won't hear them brag about their Alma Mater. But they're proud of us and we're proud of them, because they continue to live straight and sober *after* they leave our program.

Some people call it success. We call it recovery. And it happens because of teamwork. Our staff, our client's physician, employer, and family, all working together with each patient for the same goal: freedom from drugs and alcohol one day at a time.

Guaranteed. That's right, if a patient follows our program and doesn't remain drug and alcohol free, we'll provide additional treatment at *no charge*.

Don't lose your patients to alcohol and drugs. Get them back with our help and discover what recovery can mean for your patient's life.

We offer 24 hour free confidential evaluations and case consultations 7 days a week.



**Charter
Northridge
Hospital**

400 Newton Road
Raleigh, NC 27615
1-800-447-1800

Patient costs covered by Medicaid, Medicare and most insurance companies.



A Facility of Charter Medical Corporation
Quality Hospitals.



BRIEF SUMMARY

CONTRAINDICATIONS

There are no known contraindications to the use of sucralfate.

PRECAUTIONS

Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that the simultaneous administration of CARAFATE with tetracycline, phenytoin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. The clinical significance of these animal studies is yet to be defined.

Carcinogenesis, Mutagenesis, Impairment of Fertility: No evidence of drug-related tumorigenicity was found in chronic oral toxicity studies of 24 months' duration conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies have not been conducted.

Pregnancy: Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients, adverse effects were reported in 121 (4.7%). Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

DOSAGE AND ADMINISTRATION

The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

HOW SUPPLIED

CARAFATE (sucralfate) 1-gm pink tablets are supplied in bottles of 100 and in Unit Dose Identification Paks of 100. The tablets are embossed with MARION/1712.

Issued 3/84

References:

1. Grossman MI: *Scand J Gastroenterol* 58 (suppl 15):7-16, 1980.
2. Marks IN, in Hellemans J, Vantrappen G (eds): *Gastrointestinal Tract Disorders in the Elderly*. Edinburgh, Churchill Livingstone, 70-81, 1984.
3. Krentz K, Jablonowski H, in Hellemans J, Vantrappen G (eds): *Gastrointestinal Tract Disorders in the Elderly*. Edinburgh, Churchill Livingstone, 62-69, 1984.

Another patient benefit product from



1595H7

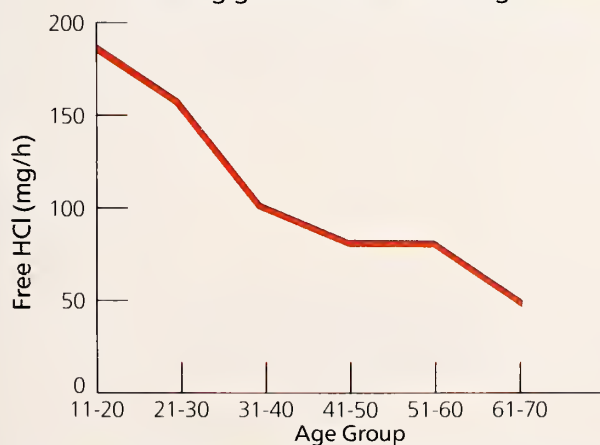
Specialized ulcer therapy

When advancing age signals reduced acid secretion



If your duodenal ulcer patient is over 55, decreased mucosal resistance is more likely to cause an ulcer than hypersecretion of acid-pepsin.¹ A tendency toward lower acid secretion with advancing age has been shown.^{2,3}

Declining gastric secretion and age³



CARAFATE® (sucralfate/Marion) makes sense as initial ulcer therapy for the elderly. Carafate provides ulcer

healing rates comparable to H₂ antagonists without the risk of systemic side effects or drug interactions—an important benefit for older patients.

The unique, nonsystemic action of Carafate enhances the body's own ulcer healing ability, strengthening the mucosal structure as it protects damaged tissue from further injury.

When advancing age signals reduced acid secretion, choose the specialized ulcer therapy of safe, nonsystemic Carafate.

Nothing works like


CARAFATE®
sucralfate/Marion

Please see adjoining page for references and brief summary of prescribing information.

1595H7



First hundreds...

Then thousands...

Soon more than a million.

Soon more than a million insulin users will be taking Humulin.


And no wonder. Humulin is identical to the insulin produced by the human pancreas—except that it is made by rDNA technology.

Humulin is not derived from animal pancreases. So it contains none of the animal-source pancreatic impurities that may contribute to insulin allergies or immunogenicity.

The clinical significance of insulin antibodies in the complications of diabetes is uncertain at this time. However, high antibody titers have been shown to decrease the small amounts of endogenous insulin secretion some insulin users still have. The lower immunogenicity of Humulin has been shown to result in lower insulin antibody titers; thus, Humulin may help to prolong endogenous insulin production in some patients.

Any change of insulin should be made cautiously and only under medical supervision. Changes in refinement, purity, strength, brand (manufacturer), type (regular, NPH, Lente®, etc), species/source (beef, pork, beef-pork, or human), and/or method of manufacture (recombinant DNA versus animal-source insulin) may result in the need for a change in dosage.

DIET...EXERCISE...

Humulin® 
human insulin
(recombinant DNA origin)

For your insulin-using patients



Lilly Leadership
IN DIABETES CARE



Eli Lilly and Company
Indianapolis, Indiana
46285

© 1987, ELI LILLY AND COMPANY

HI-2907-B

849313

Now America's oldest professional liability insurer has come to North Carolina.

The newest professional liability insurer in North Carolina is the oldest in the nation. The Medical Protective Company pioneered the concept of professional protection before the turn of the century and has been serving doctors exclusively ever since. Through good times and bad.

With the current liability crisis escalating, you need to take a close look at your coverage and the company that stands behind it. Then take a close look at us. You'll see we carry the highest

rating from A.M. Best, the firm that tracks the financial stability of insurance companies nationwide. Beyond that, you'll find complete protection at premium rates that are likely lower than you're currently paying. Plus the personal attention and claims prevention assistance you deserve.

Contact Stu Mitchelson today at 704/541-8020. He's the oldest company's representative in its newest state. And he's here to serve you.

IN

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

Stuart Mitchelson, P.O. Box 13489
Charlotte, North Carolina 28211, (704) 541-8020

*Financial services that will get
you in shape for the future.
That's Blue Chip.*

We have a variety of insurance and investment options to make sure your future is financially strong. For example:

- Tax shelters, to keep more of your money working for you;
- Annuities, to make money available at retirement or whenever you need it;
- Insurance, to protect your family, your business and your income.

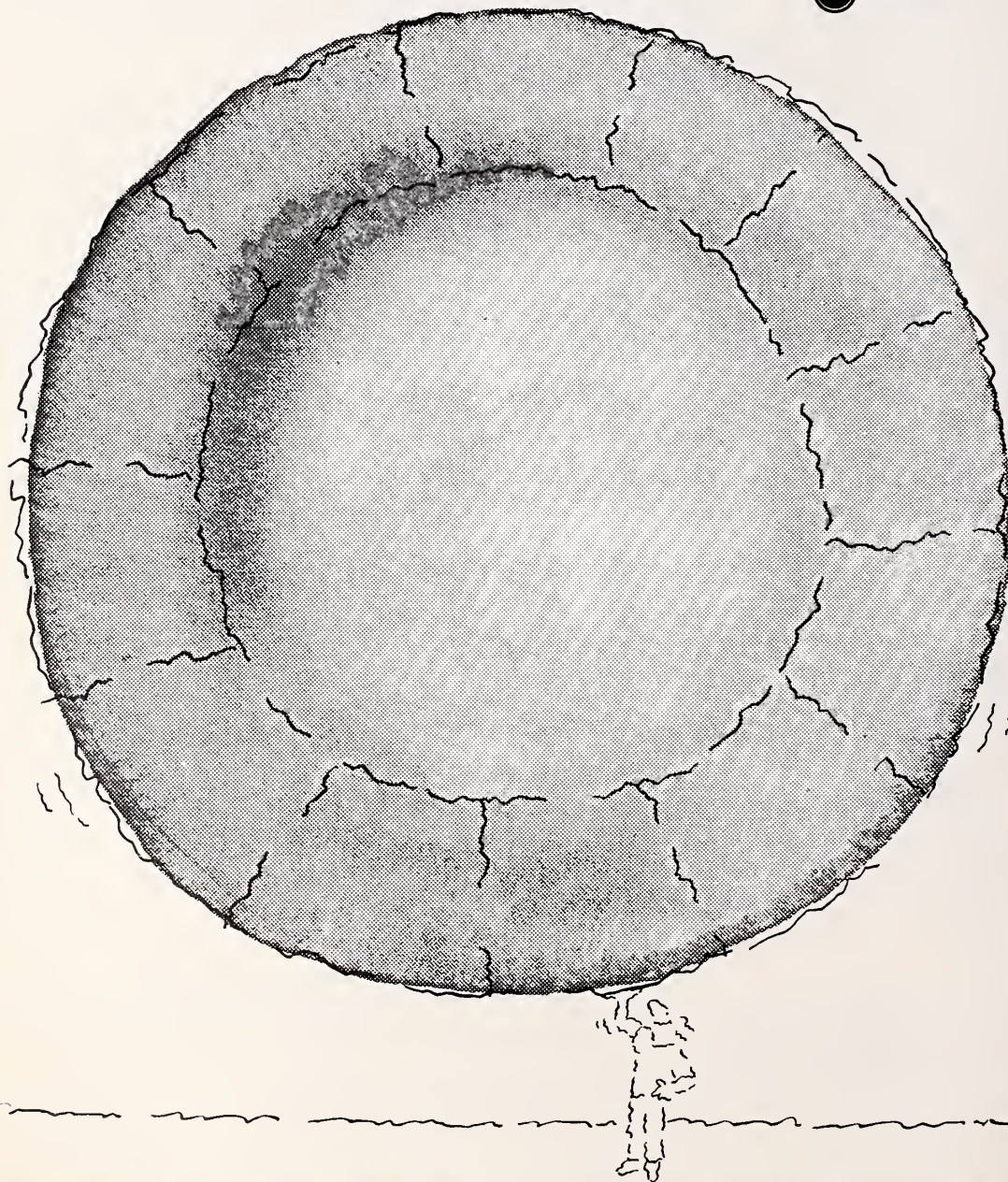
Our specialists will help you identify your needs and develop a program that's right for you.

Start shaping your future today.
Call or write us for details.

The Hinrichs Financial Group

1600 Charlotte Plaza Charlotte, NC 28244
(704) 371-8600

An affiliate of the  **CM Alliance**



Connecticut Mutual Life Insurance Co. (Hartford CT) • Connecticut Mutual Financial Services, Inc. • CM Life Insurance Company • Diversified Insurance Services of America, Inc. and its affiliates.



Sudafed[®]

(Pseudoephedrine HCl)
Nasal Decongestant

Stops Symptoms Fast, But Won't Stop Her.



Today's active woman can't let cold symptoms slow her down. Recommend SUDAFED when she comes to you seeking relief from sinus congestion — the most uncomfortable cold symptom.

- Fast, effective relief from nasal and sinus congestion
- No antihistamines that can cause drowsiness
- The nasal decongestant most recommended by physicians*
- SUDAFED 12 Hour available for convenient, twice-a-day dosage

Recommend SUDAFED, the dependable decongestant that will stop her symptoms but won't stop her.



SUDAFED Tablets
SUDAFED 12 Hour Safety-Sealed Capsules



PHYSICIANS, SCHEDULE SOME TIME FOR YOUR COUNTRY.

Many physicians would like to devote some time to their country in a local Army Reserve unit. We know that making a weekend commitment can be difficult for most physicians. So it is practical for the Army Reserve units to be flexible about time. It's worth discussing.

Incidentally, in addition to satisfying your own desire to serve your country, there are exceptional opportunities to do something totally different from a day-to-day routine. Opportunities to study new areas of medicine, meet new people in your specialty, and be a part of one of the world's most advanced medical teams.

Discuss the opportunities with our Army Medical Personnel Counselor.

FOR SURGEONS LOOKING FOR A CHALLENGE.

Your challenge could be the Army Reserve unit near you. It's a unit that requires the services of surgeons.

You may wish to explore the challenge of teaching in a major medical center. You may wish to explore the special challenges of your specialty in triage. Certainly you'll be confronted by challenges very different from your daily routine.

You'll also have an opportunity to participate in a number of programs in which you'll be able to exchange views and information with other surgeons from all over the country.

The Army Reserve understands the time demands on a busy physician, so you can count on us to be totally flexible in making time for you to share your specialty with your country. We'll arrange your training program to work with your practice.

To find out about the benefits of serving with a nearby Army Reserve unit, we recommend you call our Army Medical Personnel Counselor.

PHYSICIANS, THERE ARE TWO KINDS OF FLEXIBILITY IN THE ARMY RESERVE WE THINK YOU'LL LIKE.

One, time. We know how tough it is for a busy physician to make weekend time commitments. So we offer flexible training programs that allow a physician to share some time with his or her country. We arrange a schedule to suit your requirements.

Two, the opportunity to explore other phases of medicine, to add a different kind of knowledge—the challenge of military health care. It's a flexibility which could prove to be both stimulating and rewarding, with the opportunity to participate in a variety of programs that can put you in contact with medical leaders from all over the country.

See how flexible we can be, call our Army Medical Personnel Counselor.

**ARMY RESERVE.
BE ALL YOU CAN BE.**



HERE'S ONE DOCTOR WHO WON'T PAY HIS MALPRACTICE PREMIUMS THIS YEAR.

The Army covers his premiums. Since he's an Army Physician, there are a lot of worries associated with private practice that he won't have to contend with. Like excessive paperwork, and the overhead costs incurred in running a private practice.

What he will get is a highly challenging, highly rewarding experience. The Army offers varied assignments, chances to specialize, or further your education, and to work with a team of dedicated health care professionals. Plus a generous benefits package.

If you're interested in practicing high quality health care with a minimum of administrative burdens, examine Army medicine. Talk to your local Army Medical Department Counselor for more information.

**ARMY MEDICINE.
BE ALL YOU CAN BE.**

MAJOR OPPORTUNITIES FOR HEALTH PROFESSIONALS.

Army Medicine
Federal Office Bldg.
P.O. Box 10167
Richmond, VA 23240
Call collect: (804) 771-2354

Army Reserve Medicine
2634 Chapel Hill Blvd.
Suite 205
Durham, NC 27707
Call collect: (919) 493-1364



In North Carolina, when you decide to prescribe Librium,

To protect your prescription...



You sign on the right.

Librium[®] 5-mg, 10-mg, 25-mg capsules
brand of
chlordiazepoxide HCl/Roche [®]

ROCHE[®]

Copyright © 1987 by Roche Products Inc., Manati, Puerto Rico 00701. All rights reserved.

OFFICIAL CALL HOUSE OF DELEGATES

HOUSE OF DELEGATES Meetings Scheduled

Notice to: Delegates, Alternate Delegates, Officials of the North Carolina Medical Society, and Presidents and Secretaries of component medical societies.

Sessions of the HOUSE OF DELEGATES will convene in the Cardinal Ballroom, Pinehurst Hotel, Pinehurst, North Carolina, at the following times:

Thursday, May 5, 1988 — 9:30 a.m. — Opening Session

Saturday, May 7, 1988 — 2:00 p.m. — Second Session

A member of the CREDENTIALS COMMITTEE will be present at the Meeting Registration Desk in the West Lobby, Wednesday, May 4, 1988, 3:00 p.m. to 5:00 p.m., and Thursday, May 5, 1988, 8:30 a.m. to 10:00 a.m. to certify Delegates. Delegates are urged to bring their Credential Cards for presentation at the Registration Desk. Delegate Badges must be worn to be seated in the HOUSE OF DELEGATES.

REFERENCE COMMITTEE HEARINGS

Reference Committee hearings are scheduled to begin Thursday, May 5, 1988, at 2:00 p.m.

HENRY J. CARR, JR., M.D., President
ERNEST B. SPANGLER, M.D., President-Elect
T. REGINALD HARRIS, M.D., Speaker
JOHN A. FAGG, M.D., Vice-Speaker
JOHN T. DEES, M.D., Secretary
GEORGE E. MOORE, Executive Vice-President



"The Power of the Pen"

When you decide to use Bactrim, use the power of the pen as well. It guarantees your patient will get Bactrim—with the power of penetration where you want it, the power of concentration where you want it, and the power to persist. Three powers well worth trusting.

And remember, after deciding on Bactrim, protect your decision. Take an extra half-second, in accordance with your state regulations, to prevent substitution.

SPECIFY.

Do not Substitute

Bactrim™ DS

(160 mg trimethoprim and 800 mg sulfamethoxazole/Roche)

Bactrim™ Pediatric

(40 mg trimethoprim and 200 mg sulfamethoxazole per 5 ml)



Please see summary of product information on following page.

Copyright © 1987 by Hoffmann-La Roche Inc. All rights reserved.

Before prescribing, please consult complete product information, a summary of which follows:
CONTRAINDICATIONS: Hypersensitivity to trimethoprim or sulfonamides; documented megaloblastic anemia due to folate deficiency; pregnancy at term and during the nursing period; infants less than two months of age.

WARNINGS: FATALITIES ASSOCIATED WITH THE ADMINISTRATION OF SULFONAMIDES, ALTHOUGH RARE, HAVE OCCURRED DUE TO SEVERE REACTIONS, INCLUDING STEVENS-JOHNSON SYNDROME, TOXIC EPIDERMAL NECROLYSIS, FULMINANT HEPATIC NECROSIS, AGRANULOCYTOSIS, APLASTIC ANEMIA AND OTHER BLOOD DYSCRASIAS.

BACTRIM SHOULD BE DISCONTINUED AT THE FIRST APPEARANCE OF SKIN RASH OR ANY SIGN OF ADVERSE REACTION. Clinical signs, such as rash, sore throat, fever, pallor, purpura or jaundice, may be early indications of serious reactions. In rare instances a skin rash may be followed by more severe reactions, such as Stevens-Johnson syndrome, toxic epidermal necrolysis, hepatic necrosis or serious blood disorder. Perform complete blood counts frequently.

BACTRIM SHOULD NOT BE USED IN THE TREATMENT OF STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A β -hemolytic streptococcal tonsillopharyngitis have a greater incidence of bacteriologic failure when treated with Bactrim than with penicillin.

PRECAUTIONS: General: Give with caution to patients with impaired renal or hepatic function, possible folate deficiency (e.g., elderly, chronic alcoholics, patients on anticonvulsants, with malabsorption syndrome, or in malnutrition states) and severe allergies or bronchial asthma. In glucose-6-phosphate dehydrogenase deficient individuals, hemolysis may occur, frequently dose-related.

Use in the Elderly: May be increased risk of severe adverse reactions in elderly, particularly with complicating conditions, e.g., impaired kidney and/or liver function, concomitant use of other drugs. Severe skin reactions, generalized bone marrow suppression (see WARNINGS and ADVERSE REACTIONS) or a specific decrease in platelets (with or without purpura) are most frequently reported severe adverse reactions in elderly. In those concurrently receiving certain diuretics, primarily thiazides, increased incidence of thrombocytopenia with purpura reported. Make appropriate dosage adjustments for patients with impaired kidney function (see DOSAGE AND ADMINISTRATION).

Use in the Treatment of Pneumocystis Carinii Pneumonitis in Patients with Acquired Immunodeficiency Syndrome (AIDS): Because of unique immune dysfunction, AIDS patients may not tolerate or respond to Bactrim in same manner as non-AIDS patients. Incidence of side effects, particularly rash, fever, leukopenia, with Bactrim in AIDS patients treated for *Pneumocystis carinii* pneumonitis reported to be greatly increased compared with incidence normally associated with Bactrim in non-AIDS patients.

Information for Patients: Instruct patients to maintain adequate fluid intake to prevent crystalluria and stone formation.

Laboratory Tests: Perform complete blood counts frequently; if a significant reduction in the count of any formed blood element is noted, discontinue Bactrim. Perform urinalyses with careful microscopic examination and renal function tests during therapy, particularly for patients with impaired renal function.

Drug Interactions: In elderly patients concurrently receiving certain diuretics, primarily thiazides, an increased incidence of thrombocytopenia with purpura has been reported. Bactrim may prolong the prothrombin time in patients who are receiving the anticoagulant warfarin. Keep this in mind when Bactrim is given to patients already on anticoagulant therapy and reassess coagulation time. Bactrim may inhibit the hepatic metabolism of phenytoin. Given at a common clinical dosage, it increased the phenytoin half-life by 39% and decreased the phenytoin metabolic clearance rate by 27%. When giving these drugs concurrently, be alert for possible excessive phenytoin effect. Sulfonamides can displace methotrexate from plasma protein binding sites, thus increasing free methotrexate concentrations.

Drug/Laboratory Test Interactions: Bactrim, specifically the trimethoprim component, can interfere with a serum methotrexate assay as determined by the competitive binding protein technique (CBPA) when a bacterial dihydrofolate reductase is used as the binding protein. No interference occurs if methotrexate is measured by a radioimmunoassay (RIA). The presence of trimethoprim and sulfamethoxazole may also interfere with the Jaffe alkaline picrate reaction assay for creatinine, resulting in overestimations of about 10% in the range of normal values.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Carcinogenesis: Long-term studies in animals to evaluate carcinogenic potential not conducted with Bactrim. **Mutagenesis:** Bacterial mutagenic studies not performed with sulfamethoxazole and trimethoprim in combination. Trimethoprim demonstrated to be nonmutagenic in the Ames assay. No chromosomal damage observed in human leukocytes *in vitro* with sulfamethoxazole and trimethoprim alone or in combination; concentrations used exceeded blood levels of these compounds following therapy with Bactrim. Observations of leukocytes obtained from patients treated with Bactrim revealed no chromosomal abnormalities. **Impairment of Fertility:** No adverse effects on fertility or general reproductive performance observed in rats given oral dosages as high as 70 mg/kg/day trimethoprim plus 350 mg/kg/day sulfamethoxazole.

Pregnancy: Teratogenic Effects: Pregnancy Category C. Trimethoprim and sulfamethoxazole may interfere with folate acid metabolism; use during pregnancy only if potential benefit justifies potential risk to fetus. Nonteratogenic Effects: See CONTRAINDICATIONS section.

Nursing Mothers: See CONTRAINDICATIONS section.

Pediatric Use: Not recommended for infants under two months (see INDICATIONS and CONTRAINDICATIONS sections).

ADVERSE REACTIONS: Most common are gastrointestinal disturbances (nausea, vomiting, anorexia) and allergic skin reactions (such as rash and urticaria). **FATALITIES ASSOCIATED WITH THE ADMINISTRATION OF SULFONAMIDES, ALTHOUGH RARE, HAVE OCCURRED DUE TO SEVERE REACTIONS, INCLUDING STEVENS-JOHNSON SYNDROME, TOXIC EPIDERMAL NECROLYSIS, FULMINANT HEPATIC NECROSIS, AGRANULOCYTOSIS, APLASTIC ANEMIA AND OTHER BLOOD DYSCRASIAS (SEE WARNINGS SECTION).**

Hematology: Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, neutropenia, hemolytic anemia, megaloblastic anemia, hypoprothrombinemia, methemoglobinemia, eosinophilia. **Allergic Reactions:** Stevens-Johnson syndrome, toxic epidermal necrolysis, anaphylaxis, allergic myocarditis, erythema multiforme, exfoliative dermatitis, angioedema, drug fever, chills, Henoch-Schoenlein purpura, serum sickness-like syndrome, generalized allergic reactions, generalized skin eruptions, photosensitivity, conjunctival and scleral injection, pruritus, urticaria and rash. **Periarteritis nodosa** and systemic lupus erythematosus have been reported. **Gastrointestinal:** Hepatitis (including cholestatic jaundice and hepatic necrosis), elevation of serum transaminase and bilirubin, pseudomembranous enterocolitis, pancreatitis, stomatitis, glossitis, nausea, emesis, abdominal pain, diarrhea, anorexia. **Genitourinary:** Renal failure, interstitial nephritis, BUN and serum creatinine elevation, toxic nephrosis with oliguria and anuria, crystalluria. **Neurologic:** Aseptic meningitis, convulsions, peripheral neuritis, ataxia, vertigo, tinnitus, headache. **Psychiatric:** Hallucinations, depression, apathy, nervousness. **Endocrine:** Sulfonamides bear certain chemical similarities to some goitrogens, diuretics (acetazolamide and the thiazides) and oral hypoglycemic agents; cross-sensitivity may exist. Oliguria and hypoglycemia have occurred rarely in patients receiving sulfonamides. **Musculoskeletal:** Arthralgia, myalgia. **Miscellaneous:** Weakness, fatigue, insomnia.

DOSAGE AND ADMINISTRATION: Not recommended for use in infants less than two months of age. **URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN:** Usual adult dosage for urinary tract infections is one OS tablet, two tablets or four teaspoonfuls (20 ml) b.i.d. for 10 to 14 days. Use identical daily dosage for 5 days for shigellosis. **Recommended dosage for children** with urinary tract infections or acute otitis media is 8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses every 12 hours for 10 days. Use identical daily dosage for 5 days for shigellosis. **Renal Impaired:** Creatinine clearance above 30 ml/min, give usual dosage; 15-30 ml/min, give one-half the usual regimen; below 15 ml/min, use not recommended.

ACUTE EXACERBATIONS OF CHRONIC BRONCHITIS IN ADULTS: Usual adult dosage is one DS tablet, two tablets or four teasp. (20 ml) b.i.d. for 14 days.

PNEUMOCYSTIS CARINII PNEUMONITIS: Recommended dosage is 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

HOW SUPPLIED: DS (double strength) Tablets (160 mg trimethoprim and 800 mg sulfamethoxazole)—bottles of 100, 250 and 500; Tel-E-Oose® packages of 100; Prescription Paks of 20, 40, 60, 80, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750, 800, 850, 900, 950, 1000; Suspension (40 mg trimethoprim and 200 mg sulfamethoxazole per teasp.)—bottles of 100 ml and 16 oz (1 pint). **Suspension** (40 mg trimethoprim and 200 mg sulfamethoxazole per teasp.)—bottles of 16 oz (1 pint).

STORE TABLETS AT 15°-30°C (59°-86°F) IN A DRY PLACE PROTECTED FROM LIGHT. STORE SUSPENSIONS AT 15°-30°C (59°-86°F) PROTECTED FROM LIGHT.

YOCON® YOHIMBINE HCl

Description: Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubiaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalamic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympatholytic and mydriatic. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.^{1,2} Also dizziness, headache, skin flushing reported when used orally.^{1,3}

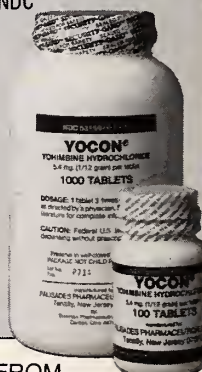
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.^{1,3,4} 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to 1/2 tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.³

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:

1. A. Morales et al., New England Journal of Medicine: 1221, November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

Rev. 1/85



AVAILABLE EXCLUSIVELY FROM
**PALISADES
 PHARMACEUTICALS, INC.**
 219 County Road
 Tenafly, New Jersey 07670
 (201) 569-8502
 Outside NJ 1-800-237-9083



Roche Laboratories
 Division of Hoffmann-La Roche Inc.
 Nutley, New Jersey 07110

NORTH CAROLINA MEDICAL JOURNAL

For Patients

VOLUME 49 / NUMBER 3 / MARCH 1988

What Does It Take To Quit Smoking?

STEVE HERMAN, Ph.D.

It's getting tougher these days to remain a smoker. Each year brings convincing new demonstrations of major health consequences of tobacco use, with frightening reminders displayed prominently on every cigarette pack. Non-smokers are becoming bold in their demands to breathe clean smoke-free air — a claim backed up by new medical studies which show that breathing smoke from the air is hazardous in the same ways as inhaling smoke from a cigarette. New smoking restrictions are appearing in public places, on the job, and in public transportation; frequently these require long periods of uncomfortable abstinence for the addicted smoker. The economic costs of smoking — already a significant concern to many smokers — threaten to rise as Congress considers doubling the excise tax on tobacco, and insurance companies begin to assign higher premiums to subscribers who smoke. The final straw for many smokers is the shift taking place in how our society views the smoker; in many circles, smoking has taken on a distinctly negative social stigma. The smoker is increasingly seen not as sexy, sophisticated, and confident but rather as a person with an undesirable, unpleasant habit who lacks the self-control to overcome it. As one smoker recently explained, "As a kid I started smoking so my friends would think I'm 'cool'; now I want to *quit* for the same reason."

Assistant Professor of Medical Psychology, Director, Quit Smoking Consultation Service, Duke University Medical Center

As the personal burden of smoking mounts, it is no wonder that more and more smokers are deciding that life may indeed be better without cigarettes. In fact, recent data from the National Center for Health Statistics indicates that quitting smoking has become a clear national trend. In 1965 there were three smokers for every person who had quit. By 1985, smokers and quitters had become about equal in number. In the years ahead it is likely that smokers will become increasingly outnumbered by quitters, unless the tobacco industry can do a better job of convincing smokers that cigarettes are worth all the trouble they bring.

All this talk about trends, however, is of little comfort to the millions of Americans who continue to smoke but wish they didn't (it is estimated that about 75% of current smokers fall into this category). Many of these smokers feel "hopelessly hooked" and look with envy and amazement upon friends, relations, and co-workers who have given up similar habits with apparent ease. "What," they ask, "will it take to get *me* off cigarettes?"

This is not a simple question, and there are probably as many different answers as there are smokers. Nevertheless, there are certain essential ingredients which seem to be present in most successful quit efforts. These include the following:

- The desire to quit.
- Confidence that success is likely.
- A good quitting plan.
- Support from others.
- Perseverance.

The Desire To Quit

Smoking is a powerfully addictive habit, and people simply do not quit smoking by accident; when a smoker quits it's because he or she really *wants* to quit. As a general rule, the more a smoker is "hooked," the greater must be the desire to quit if the effort is to be a success. So the first requirement for quitting is adequate *motivation*.

Smokers vary greatly in how they feel about giving up the habit. At the extreme are those dyed-in-the-wool smokers who extol the pleasures of tobacco, shrug off the health risks as exaggerations, and vehemently defend their "right to smoke" ("My grandfather smoked every day of his adult life, and he lived to be 85"). More common are the smokers who agree in theory that smoking is hazardous, but do not feel the risks apply to them personally ("Yeah, I know smoking is not good, but I work out a lot and the doctor says I'm in great shape"). Still others are genuinely concerned that they are harming themselves by smoking, but give more weight to presumed benefits of smoking ("I know that this constant cough is from smoking, but without cigarettes I could never cope with my job; I'd rather be coughing than unemployed").

What these groups share is a tendency to deny the unwelcome reality that smoking is above all a thoroughly self-destructive habit. This denial often neutralizes any motivation to quit; as long as the denial is maintained, smokers may go on from year to year, thinking about quitting but doing nothing about it. Eventually, however, many smokers will come face-to-face with the harmful effects of smoking in terms that can no longer be denied or ignored. For some this may involve a personal experience with smoking-related health problems, such as heart disease or difficulty breathing. For others it may involve standing by as a loved one succumbs to lung cancer. Still others may be shaken when they see their children following the parent's model and taking up smoking.

Under such conditions the usual consequence is a dramatic increase in motivation to quit. Many ex-smokers can identify some such critical event which provided the final motivation necessary to give up cigarettes. Such motivation is often fleeting, however, which makes *timing* of the essence. Every effort should be made to take advantage of naturally-occurring episodes of increased desire to quit. This is one of the guiding principles behind the Quit Smoking Consultation Service we offer at Duke University Medical Center. Our service provides timely smoking cessation counseling to patients while they are hospitalized for treatment of medical problems — a time when the desire for good health tends to be greatest. As expected, a high percentage of these smokers do attempt to quit, and many (48% overall) are still abstinent one to two months after discharge. The quit rate is even higher among patients with serious smoking-related health prob-

lems: 85% of heart attack patients seen by our service go home as ex-smokers, and 72% are still off cigarettes a year later.

Unfortunately, there is no intervention known to medical science which can approach heart attack as a motivator of smoking cessation. What can we do to increase the desire to quit in smokers who do not happen to be in the midst of a smoking-related crisis? Scare tactics in such instances do not seem to help, and may even backfire, resulting in increased denial. The best approach, rather, is one which emphasizes the many benefits to be gained by quitting. Confirmed smokers need to be convinced that their quality of life will be significantly improved once the smoking habit is broken. One way this can be accomplished is through education regarding the health benefits of quitting (see table on page 147). In addition, each smoker can be helped to recognize other personally significant changes that can result from giving up smoking. Such changes may include financial savings, enhanced sense of taste and smell, greater social acceptability, fresher breath, a better example for children, and so on. Finally, motivation to quit may be boosted if the smoker can be helped to feel: (1) more confident that quitting is an achievable goal; (2) more aware of methods to reduce the discomforts of quitting; and (3) more secure that their effort to quit will be supported and appreciated by friends and loved ones. The significance of these factors is addressed in the sections which follow.

Confidence

In recent years behavioral scientists have recognized a truth long known to athletes, coaches, and business leaders: Expecting success is a major cause of success, while expecting failure tends to breed failure. The current term for this quality of personal confidence is "self-efficacy," and a number of studies have shown it to be just as important in quitting smoking as it is in athletics, business, or other challenges in life. The more confident you are that you will be able to quit, the more likely it is that you will make an attempt, and the more likely that you will succeed.

Just as smokers vary in their desire to quit, so do they vary in their confidence that they *can* quit. Some smokers — correctly or incorrectly — assume that it will be "a piece of cake," while others believe they could not quit for a day if their life depended on it (which it just might). Most smokers, of course, have expectations somewhere between these two extremes. What accounts for this difference in "self-efficacy," and what can be done to shore-up confidence when it is lacking?

To some extent, self-confidence is a personal characteristic established early in life and tending to be consistent across time. We all know some people who seem to bring confidence and optimism to all their endeavors,

Some Good News and Some Bad News About Smoking and . . .



	First, the bad news . . .	Now the good news . . .
Heart Disease	Smoking is a major cause of heart disease. Death from heart attack is much more common among smokers than non-smokers. The more you smoke, the greater the risk.	The most important thing you can do to prevent heart disease is quit smoking. The longer you've quit the less likely you are to develop heart disease or suffer a heart attack.
Circulatory Problems	Smoking contributes greatly to hardening of the arteries. Smokers are also more likely to have a stroke.	Quitting smoking greatly reduces your risk of illness and death due to hardening of the arteries. Circulation problems in the arms and legs can be more effectively treated if you quit smoking.
Cancer	Smoking is the major cause of lung cancer and cancer of the throat, mouth and esophagus. Heavy smokers are 15-25 times more likely than non-smokers to die from lung cancer.	Quitting smoking lowers your risks for getting cancer. The longer you have been off cigarettes the more your cancer risks drop.
Lung Disease	Smoking is the major cause of obstructive lung disease, chronic bronchitis and emphysema. These diseases get worse the more you smoke and the longer you smoke.	Quitting will bring quick improvement in your lung function, with reduced inflammation, coughing and phlegm. Emphysema is slowed down by stopping smoking, and the risk of death declines.
Ulcers	Smokers are more likely to develop stomach ulcers. Smoking slows the healing of ulcers and leads to more flare-ups. Death from a bleeding ulcer occurs twice as often among smokers as non-smokers.	Quitting smoking will speed up the healing of ulcers and help prevent future flare-ups.
Diabetes	Smokers with diabetes carry a much higher risk of cardiovascular disease, especially poor circulation in the limbs. Diabetics who smoke have a higher risk of eye problems and kidney failure.	Stopping smoking reduces the complications of diabetes, and is especially important if you already have problems with circulation. Quitting may enable your insulin dosage to be lowered.
High Blood Pressure	Smoking does not cause high blood pressure, but the combination of smoking and high blood pressure can cause serious heart disease.	If you suffer from high blood pressure, quitting smoking will substantially lower your risk of serious heart problems.
Pregnancy & Childbirth	Smoking reduces birthweight, which can mean serious problems for a new baby. Smokers suffer more complications of labor and delivery, such as miscarriage, still birth and premature labor.	Pregnancy is a great time for you to quit smoking. This will lower the chance of complications in your pregnancy and delivery and help your baby develop to a normal size before birth.
Reproductive Problems	Smoking may reduce fertility in both men and women. Smokers using birth control pills have a greater risk of heart attacks and stroke. Smoking may worsen impotence in some males.	Quitting may improve your ability to enjoy sex and have children. The safety of birth control pills is increased if you stop smoking.
Surgery	Smokers show lower cardiovascular functioning and more frequent breathing problems during and after surgery. This increases the risk of serious complications from surgery.	The heart and lungs function better during surgery if you stop smoking. The longer you have been off cigarettes before surgery, the greater the benefits.

and others who are consistently self-doubting and pessimistic. While each of us maintains a characteristic "level" of self-confidence, we also tend to approach different tasks with different degrees of confidence. In general, we feel more confident when a task is familiar and easy to accomplish, and when the consequences of failure are not severe. On the other hand, there is a tendency for confidence to erode when a task is unfamiliar, when it seems overwhelmingly difficult, or when failure is seen as very threatening.

Unfortunately, for "truly hooked" smokers the task of quitting usually carries these same confidence-eroding characteristics. Many have never tried to quit and don't know what to expect. The idea of spending the rest of one's life without cigarettes seems an impossible goal. Furthermore, the thought of trying to quit and failing is very frightening. Nobody wants to find out they are unable to control their own behavior, especially when it involves a self-destructive habit. When smokers are burdened with such worries, the frequent result is that they back off from the challenge of quitting.

This way of understanding the factors that undermine a smoker's confidence about quitting also suggests some ways that confidence might be increased. Probably the most effective way is to reduce the enormity of the task by breaking it down into a series of smaller steps, each of which is more achievable and thereby less intimidating. This may be done in any number of ways. Smokers who are not ready to quit completely may be encouraged to discontinue smoking in one situation only — for example, the customary cigarette after meals. Or, they may be asked to quit totally, but for only a brief limited time period. Another approach would be to change to a lower tar/nicotine brand of cigarette without increasing the number of cigarettes smoked. Each of these approaches could be adjusted to permit a high likelihood of initial success. The successful first step would then be followed by a series of further steps leading toward the ultimate goal of complete abstinence. The principle here is to raise the smoker's level of confidence by setting tasks the person feels capable of accomplishing. This approach is part of most quit-smoking programs, including those of-

fered by the American Lung Association and the American Cancer Society (see list on page 150).

Another valuable way to enhance confidence is to "de-catastrophize" failure. Some smokers view quitting as an ultimate test of personal character or self-worth, and as such the "stakes" are simply too high to give it a try. Smokers who are fearful of trying and failing need to be reminded that many people seem to go through a series of unsuccessful attempts before they are finally able to quit for good. In a sense, quitting smoking is like learning to ride a bicycle: we may fall off a few times, but in the process of falling we learn how to stay on. Quitting can be approached with greater confidence if it is viewed not as a test of character but as a *learning process*.

Many smokers, of course, have already had their full share of failures at quitting and may feel even farther from their goal than ever. When this happens it is most often a matter of failing to learn from past experiences. To restore the confidence of these smokers it is first necessary to analyze and understand the causes of past failures so that history does not have to repeat itself. Once a smoker's personal weaknesses are understood, new tools and coping strategies can be provided to overcome these same obstacles next time around. In this way, the demoralization from past failures is replaced by new understanding, new confidence, and a new plan.

A Quitting Plan

There are easy ways and there are hard ways to do almost anything, and quitting smoking seems to be no exception. Smokers these days are bombarded from all sides with advice on products, programs, and techniques designed to make quitting "easy." Examples include acupuncture, hypnosis, filtering devices, pills, nicotine chewing gum, aversive smoking, brand switching, relaxation training, special diets, cigarette substitutes, group therapy, "adopt-a-smoker" programs, and vitamin treatments. Many of these procedures are well-based in medical and psychological theory and have proven effective as aids in smoking cessation. No single approach stands significantly above the others, however, and no one method is appropriate for all smokers. Rather, our experience has been that each smoker has unique needs which should be taken into account when formulating a personal quitting plan.

One important factor in this regard is the utility or function of smoking for the individual. While smoking may seem like a meaningless habit, it usually does fulfill one or more personal needs. For example, some smokers rely on cigarettes to relax them or calm their nerves. Others describe smoking as a means of avoiding boredom, or as giving them something to do with their hands. Still others rely on cigarettes to enhance alertness and

maintain attention to a task. The important thing about these personal needs is that they are likely to continue as needs after smoking is stopped, and unless effective substitutes are found the outlook for permanent abstinence is not favorable. Thus, the smoker who uses cigarettes as a tranquilizer will need a plan that includes learning alternative ways to relax and manage stress; the bored smoker will need to find new diversions; and the smoker who uses cigarettes as a stimulant must develop other methods to maximize performance.

Another important factor in tailoring a personal quitting plan concerns the smoker's degree of nicotine addiction. For reasons that are not fully understood, some smokers more than others experience nicotine withdrawal symptoms when they stop smoking. These symptoms may include craving for tobacco, irritability, nervousness, insomnia, difficulty concentrating, and a variety of physical discomforts. Usually such symptoms are mild and brief, but for some they are so uncomfortable that smoking is quickly resumed to obtain relief.

Where intense withdrawal symptoms are anticipated, the quitting plan should include measures to reduce these effects. Nicotine-containing chewing gum (Nicorette®) and other medications have proven especially helpful in such situations, enabling even the most severely nicotine-addicted smokers to withdraw with minimal discomfort. The medications with proven effectiveness to reduce withdrawal symptoms are available by prescription only; the interested smoker should consult his or her physician.

Most quit-smoking programs — whether of the "self-help" variety or group classes — advise a period of preparation prior to actual quitting. This is a time to learn more about one's personal smoking habit and to anticipate the immediate and longer-term problems likely to be encountered when quitting. It is also a time to learn coping skills for dealing with these problems. A number of excellent quit-smoking manuals are available which describe these skills and provide other information helpful in preparing a quit attempt. Especially recommended are *Quit Smart: A Guide to Freedom from Cigarettes* by Dr. Robert Shipley (\$3.95 + \$1.50 shipping from J.B. Press, Box 4843, Duke Station, Durham, NC 27706); *Clearing the Air: A Guide to Quitting Smoking* (free from National Cancer Institute: call 1-800/442-6237); and *Freedom from Smoking in 20 Days* (\$5.00 from American Lung Association: call regional office listed on page 150).

We are often asked whether it is better to quit on one's own or to join a class or group. The fact that most ex-smokers have quit on their own indicates that joining a group is by no means essential for success. However, many smokers unable to quit by themselves find group classes very helpful by virtue of the information and structure provided as well as the social support available from other group members. Another important advantage of groups is the opportunity to discuss problems encountered "along the way," after smoking is stopped. No

matter how well prepared one is, the unanticipated often occurs, and at such times the advice available from group members or leaders may resolve a problem before it leads to a relapse. To join or not to join, then, is a matter of personal preference, but the smoker who has experienced difficulty quitting alone should look into the availability of local quit-smoking programs. A number of reputable programs available state-wide are listed on page 150.

Social Support

For most smokers, the biggest problem is not quitting, but "staying quit." Many of the smokers we counsel at Duke Medical Center have little trouble staying off cigarettes while in the hospital but find it much more difficult once they return to their usual social environment at home. Often the people they live, work, and socialize with are themselves smokers, and the new ex-smoker may experience subtle or not-so-subtle pressure to resume the old habit. Many relapses occur in the presence of others who are smoking, and more often than not the first cigarette is obtained from a friend or acquaintance. On the positive side, recent studies have found that when a person's quit-smoking effort is supported and encouraged by family and friends, there is a greater likelihood that abstinence will be maintained.

Social factors, then, appear to be quite important in determining whether or not an ex-smoker will remain an ex-smoker. For this reason, quit-smoking programs strongly encourage smokers to enlist the help and support of friends and family members and to "buddy-up" with another smoker for mutual support purposes. In our counseling sessions with Duke patients we include family members whenever possible, and together discuss ways in which they can support the quit effort. We also provide an excellent pamphlet available from the American Lung Association entitled *Help a Friend Stop Smoking*. This readable pamphlet offers practical advice on how to be helpful, and is appropriate for smokers to give to friends and loved ones.

Perseverance

Smokers sometimes ask what the chances are that they can quit for good. My usual answer is "100% — as long as you don't stop trying." Unfortunately, many do stop trying, even when they have managed well without cigarettes for weeks or even months. Some are discouraged that they still experience cravings for cigarettes, and take this as a sign that they are permanently addicted. Others become so upset with themselves if they slip and take a "first cigarette" that the slip quickly turns into a full-blown relapse.

People who have succeeded in quitting permanently often tell us that the critical point for them was when they *decided absolutely* that *no matter what happened* they were giving up smoking. The key here is making a commitment to oneself which is total. As one ex-smoker described it: "As long as I left the door (to resuming smoking) open even a crack, I'd find myself back smoking as soon as things got tough. When I finally realized this was happening over and over, I slammed the door shut and it's been a totally different story from that point on."

When one has made this kind of complete commitment to quitting, urges to smoke are tolerated as "just something to get used to"; and lapses or slips are regarded as momentary setbacks rather than as triggers for complete relapse. We advise smokers to do everything possible to avoid smoking even one cigarette after they have quit; but we also advise that if a slip does occur they must not give up the effort. Instead, they are urged to think about the reasons for the slip, take actions to remedy the causes, and then resume the quit effort where they left off. As I mentioned earlier, quitting smoking is like learning to ride a bicycle: with perseverance virtually anyone can do it.

It's tough these days to be a smoker, but even tougher to become an ex-smoker. Fortunately, a great deal has been learned about what it takes to accomplish this goal, and there are now many things smokers can do to ease their way toward freedom from cigarettes. I hope this review will encourage more smokers to find out for themselves that they can live well indeed without cigarettes.

Turn the page for
a list of quit-smoking
programs in
North Carolina

Quit-Smoking Programs Available in North Carolina

FreshStart (American Cancer Society) A 2-week, 4-session group program (12-15 per group). Cost: Free. Self-help materials also available. Call your local Cancer Society chapter for information on programs in your area.*

Freedom From Smoking (American Lung Association): A 6-week, 7-session group clinic (20-25 per group). Self-help manuals and tapes also available. Cost: \$25-40 for group clinic; \$5 for self-help kit. Call the Lung Association regional office nearest you for information on programs in your area.†

Breathe Free Plan (Seventh Day Adventist Church): 8-session small group program over a 2-week period. Cost: \$10-25. Call the Carolina Conference of Seventh Day Adventists (704-535-6720) for information on local programs.

Duke QuitSmart Clinic (Duke University Medical Center): 5-session evening group clinic held during one week each month at Duke Medical Center in Durham. Cost: \$150 (discount available for Duke employees). Call 684-2887 for information on the

next clinic. **QuitSmart** self-help manual and self-hypnosis audio tape are available for \$14.95 from: J.B. Press, Box 4843, Duke Station, Durham 27706.

Smoke Stoppers: 8-session group program over a 1-month period. Cost: \$140-195. Some discounts available. Programs offered at community hospitals in Burlington (229-2696); Fayetteville (323-6643); Goldsboro (731-6145); Durham (493-4226); Raleigh (872-4800); and Wilmington (395-8100).

*Local Cancer Society Offices:

Albemarle, 982-4401
Asheville, 253-2893
Burlington, 227-7257
Carrboro, 942-1953
Charlotte, 376-1659
Concord, 782-5882
Durham, 490-1875
Edenton, 482-8764
Elizabeth City, 338-5353
Fayetteville, 484-0456
Forest City, 245-7239
Goldsboro, 735-8427
Greensboro, 273-8398
Greenville, 752-2574
Hickory, 328-3581

High Point, 882-1214
Jacksonville, 455-0554
Kinston, 522-5416
Lenoir, 754-4520
Lexington, 249-8812
Lumberton, 738-4943
Monroe, 283-5386
Mt. Airy, 789-2580
New Bern, 637-6594
N. Wilksboro, 667-7426
Raleigh, 834-1636
Roanoke Rapids, 537-4870
Rockingham, 895-2185
Rocky Mount, 448-8917
Salisbury, 636-3151
Shelby, 482-1566
Smithfield, 934-8411

Southern Pines, 982-2513
Washington, 946-1253
Wilmington, 395-4223
Wilson, 243-4959
Winston-Salem, 761-1528

†Regional Lung Association Offices:

Asheville, 252-2071
Charlotte, 537-5776
Conover (Hickory) 464-2413
Greensboro, 272-4234
Greenville, 752-5093
Raleigh, 834-8235
Rocky Mount, 446-8011
Southern Pines, 692-3981
Wilmington, 395-5864
Winston-Salem, 723-3395

Lung Cancer

Relationship to Active and Passive Smoking

DON V. JACKSON, JR., M.D.

Lung cancer is the leading cause of cancer death in the United States. The American Cancer Society estimates that in 1987 there will have been 483,000 cancer deaths in this country, 28% (136,000) of which will be due to cancer of the lung. In North Carolina there will have been approximately 3,500 deaths from lung cancer in 1987, which will account for 30% of the expected cancer deaths for that year in our state. Lung cancer continues to be the leading cause of cancer death in men. In 1986, it became the number one cause of cancer death in women, surpassing breast cancer for the first time.

Major Risk Factors

Tobacco smoking of the active type (person inhales own smoke) has been linked with 80% to 85% of cases of lung cancer. Numerous cancer-causing chemicals (called carcinogens) have been found in both the tar and gas parts of tobacco smoke. The risk of development of lung cancer has been tightly associated with the degree of exposure to tobacco smoke. Important features include the following: age at initiation of smoking, total number of cigarettes used, duration of smoking, depth of inhalation, and levels of tar in the cigarette.

In order to examine the possible relationship between smoking and development of lung cancer, the American Cancer Society studied 200,000 people over a seven-year period. The statistics were overwhelming. Considering a population of 100,000 people for statistical analysis, there were only three deaths due to lung cancer among nonsmokers. However, there were 51 deaths due to lung cancer among those using one to two packs per day. In this study, smoking cigars and pipes was also associated with a markedly increased death rate com-

pared to nonsmokers. With respect to the levels of tar, there did not appear to be any "safe cigarette," since use of any type was associated with a marked increase in lung cancer deaths compared to the nonsmoking group.

Most patients who develop lung cancer do so after 20 to 30 years or more of tobacco smoking, and most cases occur among people 60 years or older. However, about 2% of victims are under 40 years of age. Generally, heavy smoking histories have been noted in this young group of patients.

The number of new cases of lung cancer has increased dramatically since the 1930s in both men and women. This has paralleled the increase in tobacco usage by both sexes since the World War I years. Recently, there has been an alarming increase in the death rate due to lung cancer among women. This appears to be related, at least in part, to the lag period of 25 to 30 years for widespread use of cigarettes among women behind that of men. With respect to race, a greater percentage of black men develop lung cancer compared to white men, according to a recent report of the Secretary's Task Force on Black and Minority Health. The 1985 national health interview survey showed that 41% of black men smoke cigarettes, compared with 32% of white men. That survey also showed that somewhat more black women smoke than white (32% versus 28%).

Environmental Risks

Carcinogens other than tobacco smoke have been associated less commonly with lung cancer, such as asbestos in insulation, radon in uranium mining, and exposure in the workplace to nickel, chromates, arsenic, chloroethers, vinyl chloride, and coal tar products. The combination of some of these with tobacco smoke may be particularly hazardous. For instance, a well-studied interaction is that of asbestos with cigarette smoking. Generally, regular smokers have about a 10 times greater chance of developing lung cancer than nonsmokers. Nonsmoking asbestos insulation workers have a five times

From the Oncology Research Center, Bowman Gray School of Medicine of Wake Forest University, Winston-Salem 27103. Supported in part by NIH grant CA-12197.

greater chance of developing it compared to nonsmokers who have other occupations. However, an insulation worker who smokes has a 50 times increased likelihood of developing lung cancer than a nonsmoker who is not an asbestos insulation worker. This type of interaction has also been observed among uranium miners.

Does air pollution cause lung cancer? Probably very little, if at all. It has been shown that more urban dwellers develop lung cancer than those living in the country. Thus, air pollution would seem to be a cause of lung cancer. However, when tobacco use was taken into account, there was no difference in the lung cancer rates between city and country dwellers. Another piece of information against air pollution as a cause of lung cancer is the very low rate of lung cancer among Seventh Day Adventists who live in the city. This religious group strongly adheres to a no-smoking policy.

Passive Smoking

Passive smoking (inhaling others' tobacco smoke) may constitute the single greatest environmental risk for development of lung cancer. One report estimated that between 500 and 5,000 Americans die each year as a result of inhaling others' tobacco smoke. The National Academy of Sciences recently stated that approximately 20% (or 2,400 cases) of lung cancer deaths occurring yearly in nonsmokers may be attributable to passive smoking.

In 1986 the Surgeon General, C. Everett Koop, issued a report on the health consequences of passive smoking. The three major conclusions were: (1) involuntary smoking is a cause of disease, including lung cancer in healthy nonsmokers; (2) compared with children of nonsmoking parents, children whose parents smoke have an increased frequency of respiratory symptoms and infections and they also have slightly smaller rates of increase in lung function as the lung matures; and (3) simple separation of smokers and nonsmokers within the same air space may reduce, but does not eliminate, environmental tobacco smoke for the non-smokers.

Recently the American Cancer Society has stated the following facts about passive smoking: (1) the nonsmoking wives of husbands who smoke have a 35% increased risk of lung cancer compared to women whose husbands don't smoke; (2) in several studies, nonsmokers married to heavy smokers were found to have a 2 to 3.5 times greater risk of lung cancer than those married to nonsmokers; (3) the smoke in tightly confined spaces such as airplanes is dangerous to nonsmoking passengers and personnel alike (a National Academy of Sciences committee recommended that smoking on airlines be banned); and (4) an American Cancer Society study found that among nonsmokers, those who were exposed to 20 or more cigarettes a day at home had twice the risk of

developing lung cancer.

There is a growing concern about the workplace. Tobacco smoke spreads quickly and the total exposure time may be lengthy when cumulative work days are considered. Air filtration systems are costly, and may be only partially effective when used.

Prevention

Neither the variety of treatments nor attempts to catch lung cancer early have been very effective. Therefore, prevention must be stressed. Considering all cases, less than 15% will survive five years. Some may be cured by surgery. Even radiation therapy and/or chemotherapy may cure a very small percentage of patients. However, most patients die within one year from the time of diagnosis despite treatment with surgery (with or without radiotherapy and chemotherapy). The reason for this lies in the fact that the disease has spread to other parts of the body by the time the diagnosis is made, even when all tests such as x-rays and scans are negative. The cancer cells multiply and eventually cause problems. It would seem that regular check-ups and x-rays would make a difference. Unfortunately, this is not the case, even in the setting of well-designed studies supported by the National Cancer Institute.

Public education about smoking and health, smoking cessation programs, and environmental control of tobacco smoke have the potential to make a major impact on lung cancer in our country. Ex-smokers are 37 million strong in America, but 54 million still smoke. Some are unaware of the potential health hazards. More than 40% of Americans do not know that smoking causes most lung cancer, and 20% do not know it can cause cancer at all, according to a recent Federal Trade Commission staff report. Smokers should be told firmly by health care personnel about the health risks associated with smoking. Quitting smoking reduces the risk of developing lung cancer to that of a nonsmoker after 10 to 15 years. Numerous cessation programs are available. (See "What Does It Take to Quit Smoking?" in this issue of *For Patients*).

Because most adults who smoke regularly began the habit as teenagers, public education efforts should be focused for the most part on the young. There has been some decrease in smoking by highschool seniors according to surveys taken in 1976 and repeated in 1984. During this period, there was a drop from 28% to 16% in the number of boys smoking, and the number of girls who smoked decreased from 28% to 21%. However, the addictive nature of this habit results in a great number of subsequent adult smokers.

Numerous public and private sector institutions have adopted policies to protect individuals from environmental tobacco smoke exposure by restricting the circumstances

in which smoking is permitted. In the 1980s, many state and local laws were implemented restricting smoking in public places, and public opinion polls have documented strong and growing support for either restricting or banning tobacco use in a wide range of public places.

Tobacco smoking is the largest single preventable cause of cancer death in the United States today. The strides made in the war on cancer would appear so much greater in our country were it not for the devastating effects of lung cancer. ■

Their Future Is Ours

Today's children will make a brighter tomorrow. But each year, 10,000 of "today's" children are stricken with the most dreaded disease of them all - cancer. Many will never see a tomorrow.

With your help, St. Jude can save even more of these little lives. And maybe someday, one of those children will grow up to be the person who puts an end to childhood cancer forever.

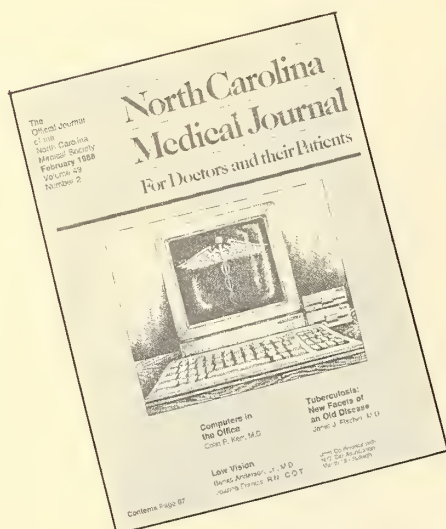
For more information on how you can help, write to St. Jude, 505 N. Parkway, Memphis, TN 38105 or call 1-800-238-9100.



**ST. JUDE CHILDREN'S
RESEARCH HOSPITAL**
Danny Thomas, Founder

North Carolina Medical Journal

Subscribe for yourself or a friend



Please enclose a check or money order for:

- ☐ \$12.60 (NC Residents; this includes 5% sales tax)
☐ \$12.00 (out-of-state subscribers)
☐ New ☐ Renewal

Send to NCMJ, Box 3910 DUMC
Durham 27710. (919/684-5728)

Please print:

My Name _____

Address _____

City/State/Zip _____

Please send a gift subscription to:

Name _____

Address _____

City/State/Zip _____

The Eggless Egg

Coping with Food Allergies at Easter

CLAUDE A. FRAZIER, M.D.

There are some individuals for whom
the traditional Easter Egg
represents disaster, not a treat.

Whether it be "hen-fruit," or the more enticing chocolate egg, or just brightly colored, flavored jelly beans, in one form or another, the egg can transform Easter into a day of discomfort rather than a celebration for the allergic individual. For that matter, those cute little yellow chicks and baby rabbits, and other symbols of Easter, including the marvelous "hot cross buns" of Lent, can be sources of trouble for the hypersensitive person.

Yes — I said jelly beans — and especially the black licorice bean, may well have to be avoided *completely* by those who are known to be allergic to peanuts or peas, since the licorice plant is a fellow member of the legume family, and therefore in the "no-no" category for those who suffer with this particular allergic reaction.

Now that I've taken a bit of the joy out of your Easter, allow me to put some of the happiness back. There are ways to make "eggless" and "chocolateless" Easter eggs¹ that will tickle the palate and gladden the heart. Here is one that is egg-free, chocolate-free, milk-free, wheat-free and gluten-free.

Easter Eggs II

2 tablespoons milkfree margarine
1 cup powdered sugar
 $\frac{1}{2}$ teaspoon vanilla extract
1 teaspoon water

Cream margarine. Add sugar, vanilla and water, mixing well. Place mixture on board or wax paper and continue kneading for several minutes until mixture is smooth, not sticky. Cut off a small portion and add a few drops of yellow food coloring for "yolk" appearance. Knead until color is evenly blended. Then roll into small balls for use as "yolks." Cut the remaining mixture into equal portions, patting each one flat so that it can be molded around a "yolk" and into an elongated egg-shape. Chill for a short time, and if necessary, remold gently. Then chill for several hours or overnight for a more firm "egg." This will make two large eggs. Recipe can be doubled for two more eggs, tripled for six, and so on.

I hope this makes those of you who are allergic a little happier this Easter. ■

Reference

- 1 Frazier C. Coping with food allergy. Times Books/Random House, 1986.

You're The Experts In Medicine.

We're The Experts At Preventing Problems In Your Practice.

Medical Mutual is the physician-owned and physician-directed company committed to preventing problems in your practice *before* they occur. Through formal programs and day-to-day assistance, we help you identify areas of risk, reduce potential problems, and enhance your practice.

For example, our Medical Practice Survey brings specially trained staff to your office to audit the peripheral areas we've learned can create problems. The survey—which includes everything from documentation of patient drug

allergies to length of waiting time—offers practical suggestions for reducing your exposure.

Just as important, Medical Mutual provides ongoing assistance to respond promptly to your calls and questions. With 12 years of experience in professional liability coverage, we are the source of information for North Carolina. And if we don't have the answer, we'll find it for you.



Medical Mutual
Medical Insurance Agency, Inc.

Medical Mutual. We'll be there when you need us.

Medical Mutual Insurance Company of North Carolina and its subsidiary, Medical Insurance Agency, Inc., are located at 222 North Person Street, Raleigh, NC 27611 919/828-9334 800/662-7917

Hospital Ethics Committees

Edited by Eugene W. Linfors, M.D.

How should hospital ethics committees function?
Who should be included?

From Jack Hughes, M.D., Coppridge Urologic Group, Durham.

The role of a hospital ethics committee should be to provide advice and counsel on pertinent ethical issues to patients, their families, and all who are concerned with a patient's care. The committee should identify prospectively those issues which are most likely to arise and prepare guidelines for appropriate responses. It is likely that sometimes there will not be a consensus, in which event reasonable alternatives will be appropriate. The committee should be prepared to respond on short notice to unusual and unexpected situations.

The committee should be composed of individuals who collectively have an understanding of ethics and who are knowledgeable about pertinent laws and the customs and mores of both the patient population and those who provide the care, and who, further, are able to apply that knowledge in a practical and straightforward manner. The committee members should have an interest in medical ethics and be willing to devote the time and energy necessary to make the committee function successfully. The members should come from medicine, nursing, law, business, the clergy, and such other areas of the community as seem appropriate. Seven members or fewer would be a good size to permit an efficient operation.

As a postscript it can be noted that in the past hospital ethics committees have been formed with outstanding membership and great expectations. With only a few exceptions the committees ceased to function in a year or two because there were few or no occasions when their services were needed. Currently, it seems that ethical issues are being debated and settled more at the state and national levels and more on the basis of law than ethics and morals. Hospital ethics committees still may have too little to do.

From Allen R. Dyer, M.D., Ph.D., Professor and Associate Chairman, Department of Psychiatry, Albany Medical College (formerly Duke Psychiatrist).

Ethics committees are increasingly becoming a feature of the medical landscape. The first such committee to attain much publicity was the Seattle committee charged, now two decades ago, with selecting which candidates should receive scarce kidney transplants. Because questions of who should live were inescapable, this committee was sometimes referred to as the "God Squad."

This same derogatory appellation was applied to the teams that were formed to respond to notification of selective non-treatment of certain infants in neonatal intensive care units. There is much ambivalence and even outright hostility to the idea of an ethics committee. One hears objection to the idea that ethical decisions can be made by committee, which of course they cannot, and one sees much resistance to the formation and implementation of such committees.

But it should be appreciated that the medical profession is increasingly experiencing much of that same ambivalence at the hands of an increasingly well-informed and consumer-oriented population. It can no longer be assumed that medical decisions are simply the province of physicians alone. Patients are increasingly expecting to have a say in decisions that effect them especially given the complex technologies that may be applied.

Traditionally the locus of medical decision-making has been in the privacy of the doctor-patient relationship. The physician was and is supposed to be a trusted and trustworthy individual and the relation developed over time. Now the physician is often a stranger to his or her patient, especially in the modern medical center where so many life-or-death decisions take place. And now the physician is more likely to be a specialist, a consultant, practicing stand-

ardized routines or protocols, or may have a commitment to research which he or she either perceives or projects to be more important than listening to the patient.

It is in this setting that the modern ethics committee emerges. The ethics committee in its ideal functioning can serve as a forum in which conflicts can be resolved or at least aired. What sorts of conflicts might come before an ethics committee? Perhaps a patient would like to object to a treatment or operation or investigation that a physician is proposing. Or perhaps it is a parent or other family member who would like to review the course of treatment or a particular decision. Perhaps it is another member of the health care team who has a concern that she or he would like to have reviewed. Presumably anyone should be able to raise an issue for the committee's consideration.

This does not mean that the committee can make or reverse a decision made by the responsible physician. It has neither the legal standing nor the background to do this; and in fact, it would not be possible in a relatively brief review to have sufficient insight into the details of a case to be able to make a wise and responsible decision. The role of the committee can only be advisory, it can only provide perspective, insight, another way of looking at things, another vantage point. It should not be assumed that conflict is necessarily adversarial. All parties to a decision may be genuinely perplexed and the deliberations quite congenial.

Another function an ethics committee can serve is educational. The process of reviewing cases may in itself be educational to those involved. Furthermore ethics committees may sponsor public discussions that serve the community, those who deliver care and those who receive care.

Committees should be interdisciplinary. They should include physicians of several specialties. They should include at least one nurse. They should include a chaplain, possibly several representing different denominations. They might include a representative of hospital administration, a lawyer, and certainly a lay person, who of course could not represent all lay people, but could assure that discussions are not arcane or self-serving. It could be very useful for an ethics committee to include a "humanist," someone trained in one of the humanities disciplines, because those people have a way of dealing with the data of human experience which often gets overlooked in the specialized and relatively precise scientific curriculum.

One caveat about the functioning of ethics committees should be kept in mind. Although it is generally accepted that anyone should be able to trigger review by an ethics committee, it should also be remembered that if there are non-professionals on the committee, as there should be, issues of confidentiality will apply. The members of the committee should be reminded of this. But more importantly, the patient should be advised that such a review is considered, and the patient should have the right to consent or refuse.

From Paul H. Wright, M.D., Chairman, Ethics Committee, Durham County General Hospital.

The main role of the ethics committee should be to respond to the needs of the hospital. In our community hospital, the ethics committee has three broad functions: to advise the medical staff and hospital administration of specific questions and issues which are brought to the committee; to encourage education concerning bioethical issues; and to review research proposals. In fulfilling these functions several guidelines are considered with regard to patients, medical staff, hospital staff and administration. Confidentiality and patient rights are held foremost with regard to patients — and patients always come first. Assisting with bioethical education and conflict resolution are directives with regard to the medical staff. Providing advice in policy decisions is helpful to the hospital administration.

Key adjectives that should describe ethics committee actions are voluntary, advisory and educational. The ethics committee does not replace the responsibility of the individual attending physician in patient care decisions. The ethics committee has no "police" function.

Each hospital ethics committee will need to have voluntary members representing different areas of medical specialties. From time to time, specific areas of expertise may be required. However, committee members do not have to decide the ultimate "right" or "wrong," but the committee should help reach agreement in areas of conflict or question.

James Weaver, M.D., Durham Thoracic Surgeon.

I think it's best to view hospital ethics committees the same way we view any specialized member of the health care team. The nutrition team, cardiac team, and burn team each have something specific to give to the overall health care effort. An ethics committee should contribute to this effort from its own "limited" perspective. The unique aspect of an ethics committee is that it deals with ethical issues.

The hospital ethics committee's functions can be viewed as covering three main areas.

First is the area of education. Most physicians practicing today received little formal training in medical ethics. It has always amazed me that I have probably had 10 to 20 hours of lectures on traumatic transection of the thoracic aorta during my eight formal residency years, but I can't remember one teacher sitting down with me and teaching me how to deal with a dying patient. In the 18 years since my graduation from medical school I have personally been involved with six traumatic transections of the aorta, but I could not begin to count the number of patients and families that I have had to help with the issue of death. Questions on termination of treatment, patients' rights, and physician refusal of treatment are complex issues requiring education

just as much as choosing the proper antibiotic for a specific infection. The hospital ethics committee should be a catalyst and provide the forum for the constructive exchange of ideas and continuing education of the hospital staff on issues of medical ethics.

Second is the area of consultation. Any sensible practitioner will call in an expert upon recognizing a clinical problem that is beyond his or her particular area of knowledge. It is not the place of the consultant to get in between the patient and the primary physician, but rather to provide guidance and suggestions for dealing with the problem at hand. Because of their special interest and concern, members of a hospital ethics committee should know the relevant principles, distinctions, and concepts to expedite the process of resolving moral conflicts in medical practice. If you have a complicated kidney problem you call in a nephrologist. I see no reason the same should not apply to problems with "DNR" (do not resuscitate) orders, or to treatment of the incompetent patient without a family, or to withdrawal of treatment in a terminal patient. The hospital ethics committee should be available for consultation not to supply the "right" answers, but rather to develop broadly acceptable and carefully considered suggestions in response to moral questions that arise in the patient care setting.

Finally, the hospital ethics committee should help the medical staff in the development of ethical policy guidelines for the hospital. One major area of concern is human experimentation. Research protocols must be reviewed to be certain they do not violate patient confidentiality or patients' rights. Guidelines in areas of "DNR" orders, organ procurement and transplantation, and allocation of scarce resources are just a few of the questions that require the specialized input of the hospital ethics committee.

Who should be members? I think the first requirement of members of these committees is not that they be from diverse disciplines, but rather that the individuals chosen possess two special qualities: an interest in medical ethics, and a mind, open to difference, suggestion, and learning new ideas. Once these individuals are found, it is best if they represent diverse disciplines including medicine, nursing, surgery, theology, law, and social work. "Lay members" must possess the above two qualities to function effectively. Hospital ethics committees are too important to allow appointment of persons simply because it seems like a nice "community service thing to do."

I am convinced that because of their unique training and experience physicians should lead the way in the development of medical ethical thought. Physicians are the only group to experience, first hand, the agony and the joy of the decision making process in health care. It is unfortunate that ethical issues are not more generally recognized as crucial in the care of our patients. I would wager that the greatest changes in health care over the next 10 years will not come from medical discoveries, but rather in areas of medical ethics. Allocation of resources and rationing, ter-

mination of treatment, access to health care, organ donation, the profit motive in health care, and conflict of interest in physician-owned health care institutions are just a few of the conflicts we will need to address. The future of Medicine may depend on physicians' input into these vital questions.

Arlene J. Diosegy, Attorney, Faison, Brown, Fletcher & Brough, Durham.

Most health care facilities have struggled with the concept of institutional ethics committees (IECs). Since 1976, when the Supreme Court of New Jersey, in the *Karen Ann Quinlan* case, suggested that a hospital ethics committee has an appropriate role in confirming a patient's diagnosis and prognosis when termination of life support is at issue, hospitals and physicians have received conflicting and ambiguous legal advice on the role of IECs. Based upon my practice, I suggest that an IEC has important educational and consultative purposes, and should be established with those goals in mind.

Specifically, the goals should include: (1) establishing the IEC as a forum for discussion of issues and cases referred to the committee by the medical and nursing staffs or others as permitted by the IEC guidelines; (2) developing educational programs on biomedical ethical issues; (3) serving in an advisory or consultative capacity, or as a resource, to health care providers involved in biomedical decision-making; and (4) assisting in the establishment of hospital-wide protocols or policies involving biomedical issues. The IEC should never usurp the role of the physician in making treatment decisions, but should offer the physician and other health care providers a compassionate and thoughtful system to support the physician's rendering of medical care. Assuming these types of goals are adopted, the IEC should be representative of many specialties and disciplines. For example, physicians, nurses, administrators, clergy, social workers, attorneys, and ethicists should be invited to participate. This range of expertise will enhance the committee with a broad range of perspectives and will lend credibility to its processes.

Additionally, the IEC should request specific legal guidance on a number of procedural and substantive issues, for example (this list is intended to be illustrative, not exhaustive): Will patients or their families be permitted to access the IEC? Will the IEC keep records of their meetings? If so, how will their confidentiality be maintained? Are the IEC's members immunized from liability regarding the good faith exercise of their duties? If not, can their exposure to liability be minimized?

An IEC can serve as a conduit through which a hospital and medical staff may integrate ethical issues into the mainstream of its operations. It must be established, however, with great care to avoid legal and medical conflicts.

J. Dale Simmons, M.D., Health Director, Surry County Department of Health, Dobson.

I believe that hospital ethics committees should provide a multidisciplinary approach. There should be representatives not only from each segment of the medical community, but from the clergy, business community, legal community, industrial community, and the population at large. These committees should act as a forum for discussion of ethical issues and as an educational forum for the health care community and the community at large.

When physicians are first confronted with the suggestions of an ethics committee often their reaction has been one of anxiety and apprehension. Those physicians I have known who served on ethics committees have soon changed posture and are often the strongest supporters of ethics committees. Bringing in other disciplines often results in advocacy for health care providers' position.

James L. Travis III, Ph.D., Chaplains Service, Duke University Medical Center.

In the early 1980s, in the wake of several critical situations involving "to treat or not to treat" decisions regarding seriously impaired newborns, ethics committees were increasingly proposed as a means of helpfully addressing such situations. Since then, in varying formats and with varying purposes, ethics committees have been set in place in many hospitals, especially the larger ones. Sometimes these were specific to certain clinical areas, e.g., neonatal, and sometimes the committees included the entire hospital in their concerns.

Early on, caution was urged that such mechanisms not supplant the decision-making of physicians and families. This concern seems generally to have been heeded. This type of committee should not be the decision-maker, rather should be a resource to enable as good a decision as possible by those more appropriately making the decision.

Indeed, three purposes have emerged that make sense to me in viewing the work of ethics committees: (1) continuing education and consciousness-raising as to the significance or moral/ethical dimensions of health care; (2) contributing to the institution's policies which set stages for struggling with difficult decisions; and (3) consultation to primary decision-makers in times of impasse (again, not to make the decision, but to assist in clarifying the issues).

To work toward such ends, it then seems reasonable to include a variety of individuals on the committee to bring various and important perspectives to bear on the issues. These individuals may include physicians, nurses, administrators, social workers, clergy, and ethicists. Individuals within and outside the institution add balance to the group.

That would also bridge some gaps between providers and consumers of health care.

George C. Barrett, M.D., Chairman, Bioethics Committee, North Carolina Medical Society, and Chairman, Bioethics Resource Group, Ltd., Charlotte.

Dr. H. Tristram Engelhardt, Jr., in his book *The Foundations of Bioethics*, states that many of the major and rapid technological changes in health care have forced us to reflect philosophically about the manner in which we practice medicine today. We are all aware of the ever-widening concern about the allocation of resources that has resulted from increasing health care costs. We are aware of the many questions centered around who should get what health care, when, and who should pay. Most physicians over 40 are aware that we have moved from a paternalistic view of medical practice to one centered on patients' rights. A patient has a right to make a decision about a procedure after being informed of its consequences. The decision is his or hers, not the physician's. It has only been 20 years since an article appeared in the *Journal of the American Medical Association* discussing the concept of a brain-oriented definition of death rather than the traditional maxim of no pulse, no blood pressure, no respiration. It has been only within the last ten years that an article appeared in the *New England Journal of Medicine* discussing policies for limitation of treatment that would only postpone death. An editorial in the same issue stated that what had previously been done without written orders should be subjected to public scrutiny and to debate.

Dr. Engelhardt takes note of the fact that the above reflects a significant role being played by health care providers and biomedical sciences in a major societal change in our country. I believe this description is quite accurate and that these changes call for the development of a new blueprint for dealing with the many vexing policy and practice decisions in medicine today. I strongly suggest that this new blueprint include the creation of institutional ethics committees (IECs).

My experience suggests that IECs in hospitals are best established by the medical staff with their experience formalized by action as required by the by-laws of the institution. If the medical staff is reluctant to establish a committee, a forward-looking hospital board should select key staff members and "lead" them to an awareness of the value of an IEC. Some of the medical staff will view an IEC as a risk and as a group that will pose problems. Some will feel that an IEC represents merely another level of review, that it creates an environment arousing attitudes of suspicion, mistrust and hostility, that an IEC will intrude upon the patient-physician relationship and interfere with the autonomy of the health care provider, that an IEC will become

meddlesome, that it will be dominated by one individual or by a narrow interest group or by a group that will have a self-serving ideology. Some may think that an IEC will become another complaint department for the hospital or that it will function as an institutional protection committee or a risk management team. These perceptions can become realities unless the committee does its homework and develops in a manner that explicitly precludes these potential problems. If it does follow some of the suggestions included here, the IEC can be an in-house forum for discussion, for clarification, for dialogue, and for advice. The IEC will not permit itself to become a decision making group. The IEC will provide support and guidance for the health care providers who are forced to make some very difficult decisions. The IEC will help increase individual, departmental and institutional sensitivity to some of the ethical decisions that we face today. It will provide a resource for the institution which is based on trust, good will and fairness. The IEC will become a group of increasingly knowledgeable and competent professionals in bioethical matters, and as it becomes more knowledgeable it will demonstrate how complex some of the ethical issues really are.

Composition of the committee should reflect not only the broad makeup of the institution but also the community that the institution serves. The size of the committee is critical. It should not be so large that it is difficult to convene on relatively short notice. It should have less than 50% of its members as physicians. It should include critical care physicians and nurses, it should include a minister or ministers, an attorney (preferably not an attorney retained by the institution), and a representative from the administration. Social workers should be represented, and if the committee is being formed in a teaching institution, trainees should be included. I found that adequate representation can be obtained with a committee composed of between 12 and 16 individuals. This size seems to be quite functional and with careful selection quickly becomes a cohesive working unit.

If a medical ethicist is available in the community that person should be included. If no such person is available, a rabbi, a minister, or a priest may function as an ethicist. A community college may have a philosophy instructor who is interested and can study enough to function as the ethicist for the group. If a person from the religious community is selected, it is extremely important that the individual be made aware that his or her religious perspectives must be moved into the somewhat more secular orientation because of the pluralistic nature of today's hospitals, communities and society at large.

Once formed, the committee should spend from six to 12 months studying major principles and precepts from the literature and traditions on ethics. All should be basic and *not* include esoteric or extraneous theories or abstraction. We have called this "Ethics 101." The committee should meet on a monthly basis and have assignments to be discussed at the meetings. After a few months of this kind of study and ethics review, actual after-the-fact cases should

be studied. These are easily located from physicians or nurses on the committee. The committee should discipline itself to attempt to arrive at a group consensus about the "advice" it would offer. If these are reviewed as "real" cases, the committee will gradually move into a procedural format that will function for it in obtaining the facts, identifying the ethical issues and principles involved in the case, and arriving at a decision based on the facts and the ethical questions posed by the case. Early on, committee members must develop a strong sense of interprofessional ethics. IEC members who do not treat each other in an ethical manner may not have the mindset to tackle ethical problems involving patients. To develop this mindset it is important for the IEC members to respect one another as professionals, as persons, and specifically to respect the moral sensitivities of every member of the committee. Committee members should respect one another as individuals. IEC members must also develop an ability to be honest and forthcoming in their deliberations with one another. It must be understood and accepted that questions about reasons do not reflect criticisms of positions and at the same time there should be no reluctance to express doubts. It is through this process of developing respect and being candid that the IEC members will become a cohesive group.

The committee should develop a mission statement. The statement should say exactly what the committee feels its realistic function for the institution will be. IECs should not function as risk management committees. I believe they should function to help patients, patients' families, nurses, and physicians to arrive at decisions about care where there are questions of ethical conduct or where there are areas of disagreement between patient and physician, patient and nurse, nurse and physicians, or family or any other combination of affected persons. I do not believe that ethics committees should be decision making bodies. I believe they should function in a manner that will encourage communication between parties. This includes parties who *may agree* but who are having difficulty in arriving at a decision. The IEC may be able to obtain information which will make the decision making process more comfortable for one or all of the parties. This kind of forum frequently turns a confrontational situation into one of accommodation.

An IEC is going to have to make a decision about how authority will be distributed throughout the committee. The experience of our group strongly indicates that working in a trust model is the most effective. In this model each member has equal authority and an equal vote. This does not imply equal knowledge or expertise but it does provide equal opportunity for input and influence.

When an IEC has achieved a level of education that provides it with a sense of competence and which will assure that it will be viewed as a group with ability and integrity, it should go "public." The IEC should be available to help develop institutional policies on ethical issues, and one of the first of these may be "do not resuscitate" orders. That will be extended to nutritional support and other life sus-

taining techniques. The IEC should be accessible to patients, patients' families, nurses and physicians for consultation. The committee should develop educational programs for staff about bothersome issues. Doing this will diminish requests for consultation.

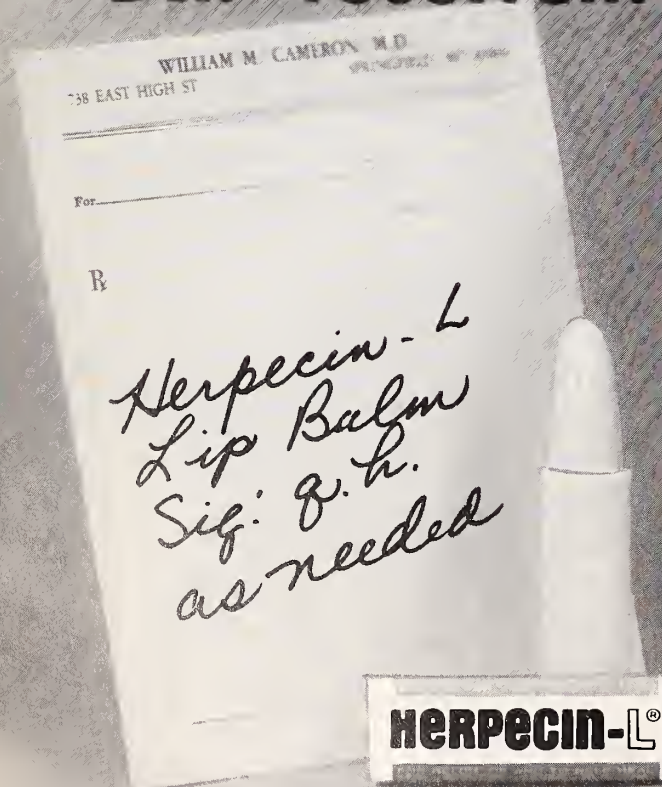
I have tried to provide a brief overview of why health care institutions need ethics committees today. There is a perception among medical staff members that institutional ethics committees pose a threat to the manner in which they practice medicine. However, if the ethics committees have done their homework, if they are properly structured, if they develop careful procedures for discussing cases, they can provide ethical guidance for physicians, for administrators,

for nurses and families. If the committee functions in an atmosphere of trust and if it establishes as its principal goal encouragement of communication between various parties, the medical staff will view the IEC as a resource, not a threat.

An IEC provides a forum that can provide ethical guidance to patients and to care givers working for these patients. It will bring to the staff the understanding that quality of care and quality of life go hand-in-hand as the patient's needs and desires are met by the workers in the institution.

[We gratefully acknowledge the assistance of Dr. Lin-court in the preparation of this essay.] ■

Dx: recurrent herpes labialis



"HERPECIN-L is my **treatment of choice** for perioral herpes." GP, NY

"HERPECIN-L appears to actually **prevent** the blisters . . . used **soon enough**." DDS, MN

"HERPECIN-L® . . . a **conservative approach** with low risk/high benefits." MD, FL

"Used at **prodromal symptoms** . . . blisters **never formed** . . . remarkable." DH, MA

"(In clinical trials) . . . **response was dramatic**. HERPECIN-L . . . **proven far superior**." DDS, PA

"All patients claimed **shorter duration** . . . at **prodromal symptoms** . . . HERPECIN-L **averted the attacks**." MD, AK

OTC. See P.D.R. for information. For samples to make your own clinical evaluation, write: CAMPBELL LABORATORIES, INC., P.O. BOX 812-MD, FDR STATION, NEW YORK, N.Y. 10150

In North Carolina HERPECIN-L is available at all *Crown, Eckerd, Kerr, Mutual Drug, Revco and RiteAid* and other select pharmacies.

George J. Baylin, M.D.

A Tribute

George J. Baylin, M.D., was born in Baltimore, Maryland.

His father, a Russian immigrant, was a well-known practitioner in the city. After graduating from Johns Hopkins University, the young Baylin entered the newly established Duke University Medical School, graduating in 1937. Dr. Baylin retired in 1981, having spent his entire professional career at Duke. The North Carolina Medical Journal is pleased to pay tribute to this remarkable man by publishing these reminiscences from his former students, residents and colleagues at Duke.

When I came to Duke in January of 1947, I was young and full of beans. After seven years in a white suit and becoming a full professor at the age of 33, I was not easily cowed. I met my comeuppance when I had to cross swords with George Baylin in the weekly clinical-pathological conferences (CPCs). The x-ray interpretations recorded in the chart were of little help to me. George wrote out his own interpretation and it had insights in it that were missed by the other roentgenologists. Indeed, he never trusted his own original interpretations. He found new insights between his original interpretations and the CPC presentation. Baylin was hard on my ego, but great for my learning.

George was a doctor's doctor. He would always stop, listen to your problems, pull out the film, do the fluoroscopy and advise on the next studies. His early training in anatomy was useful and he was a frequent observer in the autopsy room. He loved to teach and we all loved to watch him as he drew out persons around him by his own personal skills. Wherever I go, doctors want to stop and reminisce about George Baylin. When I tell a Baylin story, my stock goes up.

I'm glad that his colleagues are sharing some of their thoughts about George through the medium of the North Carolina Medical Journal.

Eugene A. Stead, Jr., M.D.

Florence McAlister Professor Emeritus of Medicine

Recently, while sorting through the effects left by Dr. George Baylin, I found a number of old reel-to-reel tapes labeled "Duke Town Hall, 1953." I asked Dr. Jerome Harris about this. In the early 1950s Dr. Baylin instituted and moderated a series of public forums to present medical issues to the Durham community. These were taped for broadcast. One tape labeled "Wonder Drugs" presented a discussion of antibiotics by Dr. E.E. Menefee, Dr. Sam Martin, Dr. Ralph Arnold and Dr. William DeMaria. It was intriguing to listen to a young Dr. Baylin, with his inimitable blend of philosophy and science, discuss the development of antibiotic therapy. His opening remarks related to the dichotomy of scientific investigation, on one hand a quest for life, on the other a search for more effective weapons of mass destruction.

As I listened to this voice from the past, memories of our 25 years of association flooded over me, the evolution of our relationship from a respected and admired colleague to a dear and beloved friend.

Two factors enhanced our early friendship. First, I came to Duke following the death of Dr. Baylin's close friend and colleague, Dr. Ralph Arnold, and second, Dr. Baylin's lifelong interest in the anatomy and radiology of the head and neck. This subsequently led to a joint appointment for him in otolaryngology and to the establishment of the Ralph Arnold Radiology Suite in the Division of Otolaryngology. His office was moved to our area and daily contact was established with this remarkable man.

Saturday morning x-ray conferences became a legend. An x-ray to George was not a simple black and white image. More often than not, he knew the patient and had observed

From Dr. Baylin's colleagues, whose names appear after their respective contributions. Facilitated by Dr. Hudson. Duke University Medical Center, Durham 27710.



Dr. George J. Baylin
(reprinted from the *Duke Aesculapian*, 1969)

the surgery. With his remarkable memory he would recall patients with similar pathology, even names and unit numbers. His conferences were a blend of radiology, medical history, philosophy, ethics, humor and personal vignettes. A generation of residents absorbed his wisdom. One past resident recently told me he did not appreciate how much he had learned from Dr. Baylin until he entered practice.

Retirement was only a brief hiatus. Dr. Baylin continued almost daily contact with our residents in the clinic and in conferences.

Students are observant and critical. Among his many honors, I am sure George most appreciates the Golden Apple Award for teaching excellence and the dedication of the yearbook, *Aesculapian*, to him. That dedication expresses the feelings of both students and faculty toward George. Though written in 1969, the tribute exemplifies George's entire career at the Duke University Medical Center and deserves quoting:

"At first one is awed by the man; by the way he thinks,

speaks and argues. The formidable depth of his knowledge is an endless source of amazement. One is constantly reminded of the respect given him by students and physicians of all levels; when he speaks, we listen, for we know we can depend on what he says. But such qualities are not rare at Duke; the rarity of Dr. Baylin is that he combines these assets with a personal warmth and integrity which makes him a truly great teacher and not just another brilliant doctor. The beauty of his knowledge is not just in its quantity, but in his genuine desire to share it with others."

Through funds contributed by former residents in radiology and otolaryngology, a George Baylin Lectureship has been established. Fittingly, the first Lecture was given by his son, Steve, a professor of medicine at Johns Hopkins. Recently, the Fifth Annual Baylin Lecture was given. Rather expansive tributes were paid to George from the podium. In response, George noted that he used to be embarrassed by such accolades but then added, "I finally decided, what the hell, I deserved them." This produced a standing ovation.

George is far from one-dimensional. His breadth of knowledge courses the broad range of human experience. He is an artist, a potter of note. Music and literature command a prominent role in his life. Above all, he is honest with himself and honest in his relationship with others. He and his delightful wife, Sarah, have raised three talented and successful sons, attesting to his success as a father.

Sir William Osler, in his essay *Aequanimitas*, expresses the feeling of our residents and staff:

Whatever way my days decline,
I felt and feel, tho' left alone,
his being working in my own
the footsteps of his life in mine.

William R. Hudson, M.D.

Professor and Chief, Division of Otolaryngology
Department of Surgery

George Baylin is a doctor of the old school. The derivation of the word doctor, of course, is teacher and at this he excels. I have never known him to be so busy that he will not take time to help anyone with a problem. It makes no difference whether this individual is the chief of a department or a first-year medical student. Time is always available. The only requirement is that this person has a problem and is interested in learning.

Whenever I consult with him I always come away not only satisfied but wiser. One of the reasons for this is that his knowledge is not bounded by roentgenology. He is a wise physician with expertise in many areas who happens to be primarily a roentgenologist. His prior training and teaching in anatomy enable him to see and appreciate many changes in a plain film of the abdomen when I see only gas bubbles.

He cannot abide incompetence and is highly critical of

it. On one occasion when he was very upset I said, "Calm down George, you're going to get an ulcer." His reply was, "I won't get an ulcer; I'll give somebody else one."

He is in his element at a CPC because it is here that he is able to correlate the changes in the x-ray films with the clinical data. Whenever I had a CPC in which he was involved, I always went over all the films with him beforehand. This was my means of self defense. I wanted to be able to explain all the changes that he could see. And there were many. If I were able to explain everything he saw, there was then no difficulty in explaining the entire case to the clinician and the audience.

Bernard F. Fetter, M.D.
Professor, Department of Pathology

I have been privileged to enjoy a third of a century contact with Dr. George J. Baylin. His influence and presence has impacted upon my life and career as perhaps no other colleague and teacher could possibly do, and I am privileged to share with the reader the various ways and times in my career in which this has happened.

I was a medical student at Duke from 1955 to 1959, and during that time my first contact with Dr. Baylin was to see him "in action" at the weekly clinical-pathological conferences (CPCs).

As students, we were in awe of the man and his ability to analyze a clinical problem based on the radiologic findings, and his legendary knowledge of anatomy, physiology, and pathologic changes which were reflected in radiographic densities. I suppose most of all we enjoyed his willingness to take on a challenge, to play the role of a devil's advocate, and to engage in a fight, intellectually speaking. In his quest for intellectual honesty, he often assumed a minority position, but once committed to a principle or a diagnosis, he never wavered from his conviction, no matter how unpopular it might be in the eyes of the clinician or pathologist. As medical students, we were impressed with this man's integrity!

In my senior year of medical school, I opted for an elective quarter with Dr. Baylin. This was a favorite rotation for students intending to pursue radiology as a career. I had no intention of doing so, but I felt that any time I spent in close association with Dr. Baylin would be a very special learning experience, and I was not disappointed! Just watching him read films and dictate his observations and impressions gave me a clear notion as to how he viewed the radiograph as a biological window to observe the workings and malfunctions of the human body. Most of all though, to me he became a role model for life-long learning by the example he set in his day-to-day practice of medicine and radiology.

Subsequent to my graduation and after a year of internship, I returned to Duke as a resident in otolaryngology. Once again, I was exposed to Dr. Baylin on a regular basis through his weekly radiology conferences, but more espe-

cially on an almost daily basis through radiology consultations. He was trained and practiced as a general radiologist, but his special interest was in the field of temporal bone and head and neck radiology. As such, his expertise was especially valuable to me and I continued to learn and to grow as the result of almost daily contact with Dr. Baylin.

In 1965 I joined the faculty in the Division of Otolaryngology, Department of Surgery. Shortly thereafter, Dr. Baylin devoted full time to head and neck and temporal bone radiology, eventually moving his office and radiology laboratory to the Division of Otolaryngology. It was from this time forward that I consider my association with Dr. Baylin to have been the truly golden years. I had virtually daily contact with the man for consultation, and regular radiologic teaching rounds which he conducted not only on a formal scheduled basis, but also any time that one or more residents or faculty members approached him with a clinical or radiologic problem. His ability to analyze a clinical problem based on morphology, function, disease, reaction to injury, treatment, and the healing process was nothing short of an extraordinary learning experience and privilege. Rare was the day that I did not learn from the man. He was the consummate teacher, and from a personal, if indeed almost selfish point of view, these were his most productive years because of the impact his teaching and philosophy had upon me.

Dr. Baylin supposedly retired from clinical practice and teaching in August 1981. This was a mere formality, of course, because he never stopped teaching, continuing every Monday afternoon and Saturday morning with his otolaryngology/radiology conferences which I was privileged to attend. This continued until recent months when first the health of his wife, Sarah, and later his own health problems made it impossible to regularly participate in these weekly radiology conferences. That his physical presence and regular teaching is missed is an extreme understatement, because as his student, colleague, and friend, I have come to recognize Dr. Baylin as being part of the heart and soul of the institution he loved and served so well for so many years. Oh, he criticized the system, to be sure. That he was argumentative to the point of being downright feisty at times is not to be denied, but always out of a deep sense of conviction as to what was right or wrong. Besides being a superb clinical radiologist and teacher, he was most of all a philosopher who never compromised in his quest for truth and excellence.

It is a special privilege to share my reflections upon one-third of a century of association with George J. Baylin. His impact upon my life has been extraordinary and intense. He has been my teacher, colleague, confidant, and role model. Most of all though, he has been my friend. There are few things I cherish as much as my 33 years' association with Dr. George J. Baylin.

Patrick D. Kenan, M.D.
Associate Professor, Division of Otolaryngology

For over forty years I have had the good fortune and privilege of being a colleague, student and friend of George Baylin's. As colleagues, George and I have conducted weekly Pediatric X-ray Rounds for perhaps forty years and weekly Pediatric Grand Rounds for over fifteen years. Throughout that time I was thoroughly baffled by his unerring ability to extract information from black and white images. I now know he has a remarkable and complex computer stored in his head. First, like the machines in a grocery store, it can scan a film in micro-seconds and unerringly pick out the important details. This is quite a feat. If we divide a chest x-ray into a grid of $\frac{1}{2}$ mm squares (and George has to do at least that well in the obnoxious temporal bone), we can calculate that George has scanned 614,230 picture elements (pixels) while I am trying to determine whether it is a PA or lateral view. Then this computer compares the findings with a multimegabyte memory of the details of thousands and thousands of films stored over the course of 45 years. Simultaneously, the extensive anatomy memory bank (George taught anatomy for many years) and the imposing clinical bank are consulted. This is very time-consuming, taking all of a few milliseconds. Then the output, "Ralph Arnold and I saw such a case in 1940," going into the clinical story in detail and finally reaching behind his chair to unerringly pluck that very film from a jumble of folders. Still unexplained by all these computers, however, is George's ability to quickly riffle through a stack of twenty or more films and pick out the only one to show pathology after you had previously and painstakingly gone over each film for hours and saw nothing. Perhaps George has ESP or computers at his finger tips.

But computers alone don't tell the Baylin story. After all, anyone with a scanning ability of one-half million pixels per millisecond, a readily accessible memory bank of all films seen over forty-five years, another bank for clinical details and another for fundamental knowledge should be able to do this. But it is the operating system controlling the computer which is distinctly George. And that brings me to my second role, that of a student. I have never failed to learn in every professional contact I have had with George.

This operating system is dedicated to the welfare of patients and to the teaching of students. It is characterized by clarity of thought, precision of logic and soundness of deduction. His teaching is always gentle, never condescending, never meant to impress, but always designed to get the student to think and to increase his knowledge. No student was ever made to feel stupid, though I have often said to myself "Stupid! How could you have missed that?" His teaching sessions are legendary and have resulted in many honors from both students and faculty. He can spend hours profitably on a single film and, with the active participation of the student, transfer a torrent of knowledge and the ability to think in true Socratic fashion.

My third role, and the most cherished, is that of a friend. I could go on about our many contacts over the years. But

I will mention only one, square dancing. About thirty years ago Sarah and George became interested in square dancing and formed a group which met monthly in the homes of the members. We were a motley crew! The members included the Arnolds, Busses, Dais, Schmidt-Nielsons, Cohens, Handlers, Penrods, Predmores and Heymans. These exhilarating (and frequently exhausting) evenings brought out another of George's many talents, an unexpected and superb sense of rhythm. Coupled with a magnificent set of vocal cords, this resulted in lilting, liquid, highly syncopated notes ranging over octaves in avant-garde jazz. In fact, George could easily have made a career of singing, to the detriment of the medical profession. And, in square dancing, George was wondrous to behold. Everything moved and rippled in perfect harmony with the swing-your-partner, do-si-do beats, and with a few inimitable intercalated steps of his own!

In closing, I would like to single out a truly great achievement of George's, an achievement which profoundly influenced his life, shaped his character and brought happiness to him, his family and his friends. Some fifty years ago, he had the extraordinary foresight to ask and to convince a young woman, Sarah Hartman, to live their lives together. Bless them, and may they have many, many more happy years together.

Jerome Harris, M.D.
Professor Emeritus, Pediatrics

I am pleased to contribute to this tribute to George Baylin, since it provides an opportunity to reminisce about our friendship. As a medical student in Baltimore, I was aware that George's father was a prominent and highly respected physician with an office on Eutaw Place (the Harley Street of Baltimore) and that George, his only son, had gone to study at the new Duke Medical School in Durham.

My first meeting with George, however, was in 1952 and occurred on board the famous French ocean liner, the *Ile de France*, en route to Europe. Looking over the ship's passenger list the first day out of New York, my wife was excited to discover that George and Sarah were fellow cabin-class passengers. She and George's sister were close friends at college and the four of us promptly arranged to meet on board. George was, at that time, taking a sabbatical leave from Duke to tour the major European radiology clinics, and I was embarking on a WHO fellowship to study social (not socialized) medicine.

That five-day ocean voyage gave us a chance to become acquainted and was the beginning of a long friendship. Although our itineraries on the continent were quite different, we managed to get together in Paris. George's knowledge of French restaurants was impressive and I'll never forget having lunch at an earthy mid-town bistro he had strongly recommended. "Only the French working men knew about this place," he said, and, after eating there, I understood why.

Years later, when I joined the Duke faculty, we renewed our friendship in two main areas. The first was in the Duke Hospital Amphitheatre where the weekly CPCs were held. Here George always gave a colorful performance, vividly describing the radiologic aspects of the case under consideration. Although his presentations were never intended to hide the correct diagnosis, they nevertheless succeeded in obfuscating the clinician much to the delight of the audience comprised of the junior and senior student body and the entire medical staff.

The other area in which George and Sarah were adept was the Saturday evening square dance. Here he displayed an innate talent to "do-si-do and turn-your-partner." At these occasions I learned to quickly distinguish my right from left sides, information which proved quite useful for a neophyte neurologist.

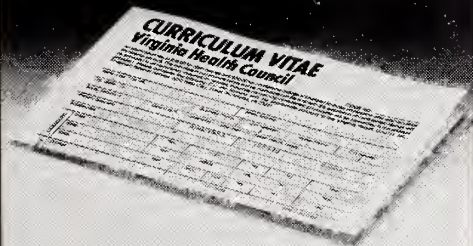
At work George taught me how to interpret the various shadows on the x-ray films of the skull of my neurological patients. He was known particularly for his expertise in the radiological diagnosis of acoustic neuroma and I never failed to consult him when any of my patients had symptoms suggesting this disorder.

In recent years George and I had offices in the same area of Duke Hospital and we rarely passed each other in the hallways without stopping to chat about mutual medical interests, our children and friends. Thus, our friendship, now approaching 36 years, has a social and academic foundation and my wife and I are glad that George and Sarah were on that same ocean liner crossing the Atlantic.

Albert Heyman, M.D.

Professor Emeritus, Division of Neurology
Department of Medicine

What Does It Take To Practice In Virginia?



Good Form.

The curriculum vitae form from the Virginia Health Council is the smart way to locate practice opportunities in Virginia. After all, the Council has been helping place physicians for nearly 40 years. To receive a form, contact the Virginia Health Council at 3312 W. Cary St., Richmond, Va. 23221; (804) 358-9946.

Virginia Health Council

PHYSICIANS Ambulatory Care Clinics Nationwide

John Short & Associates, Inc., an internationally recognized health care management and consulting firm, is actively seeking **PHYSICIANS** with experience and credentials in **FAMILY MEDICINE/GENERAL PRACTICE** and **PRIMARY CARE SPECIALTIES**.

Full or part-time positions are available in multiple states to staff existing Primary Care Clinics and to prepare for potential sites throughout the nation. Qualifications, except for General Practitioners, include Board Certification or Board Eligibility.

John Short & Associates Inc. offers competitive compensation including paid malpractice insurance, professional development fund and incentive programs. **For additional information please contact: Susan Bray, Recruiting Director, John Short & Associates, Inc. Box 1305, Columbia, MD 21044.**

Anorectic Agents in the Control of Obesity

A message from the North Carolina Board of Medical Examiners

The Board of Medical Examiners has had a policy for some years, consistent with that of the North Carolina Medical Society, regarding the use of various anorectic agents for the control of obesity.

In an effort to upgrade and keep abreast of all of the most recent developments, the North Carolina Board of Medical Examiners has sought the opinions of eminent physicians within the state who are acquainted with the subject of use of anorectic agents in the control of obesity. With this in mind the Board makes the following statement as of October 2, 1987:

It is the opinion of the North Carolina Board of Medical Examiners that under special circumstances anorectic agents may fill a limited adjunct role in the treatment of obesity in individual patients, if such treatment primarily involves diet, exercise, behavioral therapy and frequent supervision by the physician.

If used, anorectic agents should be used for short-term, non-repetitive periods of not more than twelve weeks.

Anorectic agents may produce drug dependency in some patients.

The policy of the North Carolina Board of Medical Examiners regarding the use of amphetamines and methamphetamines for treatment of obesity is still in effect. There are no indications for use of these drugs in weight control.

In view of the fact that some people are still using anorectic agents and even amphetamines, this statement needs to be reemphasized.

From Eban Alexander, Jr., M.D., Chairman, NC Board of Medical Examiners. The Bowman Gray School of Medicine, Wake Forest University, Winston-Salem 27103.

Letters to the Editor

A response to Dr. Ravenel's editorial

To the Editor:

If DuBose Ravenel submits a commentary to the *North Carolina Medical Journal* arguing that drivers' education should be abolished, I will not be surprised. Ravenel's logic would be that since 17-year-olds who have passed drivers' education courses get into more accidents than 12 year olds who have not completed such training, drivers' education is, ergo, the cause of the increase in accidents. That is the thought process exhibited in Ravenel's "American teens and birth control" printed in the Journal's November issue (1987;48:606-7).

DuBose Ravenel begins his commentary by "revealing" unreported findings from the Planned Parenthood/Louis Harris poll on American teens. He has discovered that the tables of that poll show that teens who have talked to their parents about sex and birth control and teens who have had a comprehensive sex education course that includes information on contraception are more likely to be sexually active than teens who have not been given information on contraception in school or at home.

Ravenel ignores the key difference between the teens with information and those without — their age. In the Planned Parenthood/Harris poll, twice as many 16- and 17-year-olds reported having had conversations with their parents about sex and birth control than did 12- and 13-year-olds.¹ Three times as many 16- and 17-year-olds reported having had a comprehensive sex education course than did 12- and 13-year-olds.² Over 51% of the 16- and 17-year-olds said they were sexually active while 7% of the 12- and 13-year-olds reported having sexual intercourse.³

To support his thesis, Ravenel would need data that are controlled for all other factors and are age specific — that show that 15-year-olds with information about birth control are more likely to engage in sexual activity than 15-year-olds without that information. The Planned Parenthood poll does not provide that data nor does any other existent study.

The belief that access to contraceptive information and services leads teenagers to become sexually active has not been validated by research. The Olsen and Weed study that Ravenel uses to strengthen his thesis shares Ravenel's proclivity to jump to faulty conclusions by assuming that association is causation. Olsen and Weed found that as the number of family planning programs for teenagers increased so did the number of teenage pregnancies.⁴ So availability of services causes the increase, right?

Wrong. Weed and Olsen's analysis ignores the most important statistic that we have about adolescent sexuality — that the percentage of sexually active teenage girls rose

52.9% from 1971 to 1983.⁵ During that same time period the adolescent pregnancy rate rose 15%.⁶

The pregnancy rate among teens who are sexually active has actually decreased. CDC researchers have found that from 1974 to 1980 the pregnancy rate dropped 5.7% and then dropped another 6.0% from 1980 to 1983.⁷

Ravenel ends his commentary by recommending a single cure for the multifaceted problems of adolescent sexuality, pregnancy and childbearing. His sole prescription is the promotion of premarital abstinence. Planned Parenthood, the National Research Council's Panel on Adolescent Pregnancy and Childbearing and every other organization involved in the problem of teen pregnancy agree on the need for programs that encourage the postponement of sexual involvement. But to suggest that "Just Say No" is the only advice that this country should give to its sexually active teenagers is to promote a national policy of punitive births and punitive abortions for the young people who do not follow that directive.

Charlotte Brody, R.N.

Associated Director

Planned Parenthood of Greater Charlotte

700 E. Stonewall St., Suite 430

Charlotte, 28212

References

- 1 Louis Harris and Associates, Planned Parenthood Federation of America. American teens speak: sex, myths tv and birth control. New York: Planned Parenthood Federation of America, 1986, p.44.
- 2 Ibid., p.52.
- 3 Ibid., p.16
- 4 Olsen JA, Weed SE. Effects of family-planning programs for teenagers on adolescent birth and pregnancy rates. *Family Perspective* 1986;20:153-70.
- 5 National research Council. Risking the future-adolescent sexuality, pregnancy, and childbearing. Washington, DC: National Academy Press, 1987, p.42.
- 6 Ibid., p.54-5.
- 7 Maciak et al. Pregnancy and birth rates among sexually experienced US teenagers - 1974, 1980, and 1983. *JAMA* 1987;258:15.

A comment on Dr. Levitin's article

To the Editor:

While walking through our medical library the other day I chanced upon the November 1987 issue of the *North Carolina Medical Journal*. Having moved away from the state almost fifteen years ago I picked up the issue with curiosity and opened to a random page which had an article entitled "Oy Oy Oy — My Back: An Unusual Cause of Back Pain Secondary to Adult Gaucher's Disease" (Levitin PM. 48:577-8). Both from the standpoint of taste and scientific content I cannot understand why you chose to publish the article

under that title. Although I am sure the author and perhaps others thought the title was "cute" I found the first three words to be an obvious ethnic slur and that they had nothing to do with the information the author was trying to convey.

I mention this because the day before running across the article I met the wife of a physician who had just moved from a large North Carolina city to Portland. They had only lived in North Carolina for a few months and when I asked her why she had moved away from my home state so quickly she replied that her husband had run into subtle but frequent and rampant episodes of anti-Semitism and they had decided not to raise their family in that environment. Is it possible that the New South is not so enlightened after all? Perhaps you should take this into account when choosing or accepting titles of articles for your journal.

Michael A. Wall, M.D.
Associate Professor Pediatrics
UNC Medical School Class of '73
The Oregon Health Sciences University
3181 S.W. Sam Jackson Park Road
Portland, Oregon 97201

Dr. Levitin's reply to Dr. Wall:

In response to Dr. Wall's letter, there was no intent at any ethnic slur. "Oy" can be used to express many ideas including pain.¹ It was only used to bring humor and attention to my article about an unusual cause of back pain. I have given similar presentations to many North Carolinians (medical and nonmedical, Jewish and Gentile) without any allusion to antisemitism.

I am Jewish, originally from the north, and have lived in North Carolina for 13 years. My wife, my three children and I have not had a similar experience to that described by Dr. Wall's physician friend's wife. Unfortunately, a person can read bias, prejudice, or racism into anything he or she wants. Certainly I did not intend any misunderstanding in the title of my article. I hope Dr. Wall can comprehend the title in the vein it was meant to be.

Peter Mark Levitin, M.D., F.A.C.P.
Tannenbaum Medical Associates
1904 N. Church St.
Greensboro, NC 27405

Reference

Rosten L. The Joys of Yiddish. New York: Pocket Books, 1968, pp. 277-9.

Editor's response to Dr. Wall:

You are good for my learning. With the aid of my Jewish colleagues, I also found a book by Mr. Rosten on the joys of Yiddish.¹ Below is his list of the many uses of "Oy."

- 1 Contentment: "How we enjoyed that lunch — oy . . ."
- 2 Relief: "Oy, she's home safe."
- 3 Uncertainty: "What should I wear? Oy."
- 4 Startledness: "Oy! Who's there?"
- 5 Surprise with a note of apprehension: "Oy! What was that noise?"

- 6 Minor dismay: "Oy, he's come early."
- 7 Joy: "Oy! What a lucky break!"
- 8 Revulsion: "You expect me to eat *that*? Oy!"
- 9 Awe: "He actually scored 99 on the test?! Oy."
- 10 Irony: "Oy, are you clever."
- 11 Irritation: "Take that mess away. Oy!"
- 12 Large astonishment: "Oy *gevalt*! He wants to be a pilot!"
- 13 Pain (moderate): "Oy! That hurt."
- 14 Pain (considerable): "O-o-oy."
- 15 Pain (extreme): "O-o-oy, *Gotenyu!*"
- 16 Anguish: "Please, I beg you, o-o-oy. . ."
- 17 Horror: "You swallowed an open safety pin? Oy!"
- 18 Despair: "What's the use? O-oy."
- 19 Shock: "What? Her? Here?! Oy!"
- 20 Flabbergastication: "What in God's name can we do now? O-oy!"
- 21 Lamentation: "Oy . . . what a man to lose . . . what a mind . . . what a heart . . . O-oy."
- 22 Outrage: "Never bring that swine into this house! Oy!"
- 23 Numbed disbelief: "My own child . . . a thing like that . . . Oy."
- 24 Utterly at-the-end-of-your-wittedness: "I can't stand another minute! Go! Go! O-o-o-oy!"

Eugene A. Stead, Jr., M.D.
Editor

Reference

Rosten L. Hooray for Yiddish. New York: Simon & Shuster 1982, pp. 246-7.

A comment on Dr. Dykers's article To the Editor:

The article, "Aids: Discrimination and Justice," by Dr. John R. Dykers, Jr. (NCMJ 1987;48:661-3), would have been more appropriate if published as an editorial or as a letter to the editor.

To eliminate and forestall the deadly immuno-deficiency virus, I, as every other physician in North Carolina, wish there were a comprehensive, easily adaptable, quickly implemented, socially acceptable, and an enthusiastically endorsed program. Regrettably, Dr. Dykers's article fails in many ways because of its false assumptions and counterproductive suggestions.

With the publication of this article in our Journal, I have several major concerns, i.e., it could be used as a sole reference or an adjunct in building credibility to any presentation to lay media, possibly even in a commentary at governmental hearings — all of which add "fuel to the fire" of the already rampant misinformation concerning the disease, AIDS.

On October 19, 1987, the office of Technology and Assessment report of the U.S. Congress published a review of the accuracy of HIV antibody testing. It contradicts the basic assumption of Dr. Dykers's article, that it is possible to determine antibody status accurately, in large, low prev-

alence populations. It is not!!! To test the population that Dr. Dykers proposes to test would result in a tremendous amount of inaccurate data. Huge numbers of people would incorrectly believe that they are positive when they are not. Many people would believe that they are free of the virus when they are indeed infected. It would be impossible for anyone to rely on one's test results, either to observe one's own health or to protect others.

The total cost of testing such large numbers would be immense, and cost-effectiveness of identifying each true positive would be insupportable. The drain on our resources would be substantial, diverting money from actions that can actually change behaviors — education and counseling. Further, the expenditures required for mass testing would also hamper our ability to create and fund alternatives and more effective means of caring for the growing number of people who are going to have AIDS, increasing the total cost to society.

In summary, Dr. Dykers's recommendations run counter to the policies of the American Medical Association (physicians do not have the right to refuse care to a person based solely on antibody status, if the physician is otherwise qualified to provide care); and the American Hospital Association (defensive testing of a patient to protect health care workers should not be done because of the unreliability of data that the testing would produce and the false security that false negatives would produce among workers). To follow Dr. Dykers's ill-advised course of action would be to ignore totally what we have learned so far about this disease, how the transmission of it can be stopped, even if one never considers the cost-effectiveness or the limitations of the technology that we have at our disposal today.

Don C. Chaplin, M.D.

Kernodle Clinic, Inc.

316 North Graham-Hopedale Road
Burlington 27215

Dr. Dykers's reply to Dr. Koontz's letter

To the Editor:

My thanks to Dr. Jack Koontz (letter to the Editor, NCMJ 1988;49:59) for re-reading my article (AIDS: discrimination and justice; NCMJ, 1987;48:661-3), but it certainly is fear and paranoia to compare AIDS testing to the "final solution" of Nazi Germany.

Unfortunately, Dr. Koontz has not realized that the world is already divided amongst those persons infected or not infected with the virus. Testing only brings that division out of the darkness and into the light where we may function on the basis of knowledge. I suggest that he re-read the article a third time to see that the first issue addressed was financing care for those infected with the virus.

Positivity should be defined as a positive ELISA repeated and confirmed by Western Blot and the same process completed on a second specimen from the same person. This has already been done cheaply and effectively by the Army.

A low incidence rural midwestern population was found to have a false positive rate of less than one in 135,000. The anxiety that an individual may experience during the first stages of such testing in which an ELISA may be falsely positive is an opportunity for counseling rather than a tragedy. A far greater problem is that of denial, especially the denial of young people who think this can never happen to them. That brief time of anxiety is a small price to pay to avoid even one tragedy of a young person devastated by this rapidly fatal disease process.

The problem of false negatives and "the window" should be reduced by using the antigen test. Further protection is needed for other special work groups that I ignored in my article, such as funeral homes, meat packing plants, collision sports, emergency responders to highway accidents, etc.

Detecting HIV-positivity offers the HIV-positive person the opportunity not to knowingly transmit a fatal disease to someone they love. They have an opportunity then to function on the basis of knowledge and to receive good medical care based on that knowledge.

We must function from knowledge and not be paralyzed by our fear and denial. The best we can do is utilize AIDS in attacking all sexually transmitted diseases. Is that asking too much?

John R. Dykers, Jr., M.D.

P.O. Box 565

Siler City 27344

In Appreciation of the special issue on breast cancer To the Editor:

What a wonderful gift the October issue of the North Carolina Medical Journal was for me (1987;48). Suddenly and unexpectedly I found that I had breast cancer and needed information to help assess my situation — all that was about to happen both short and long term. What were the alternatives and outcomes? Basically, I wanted information which would help me select from available options those medically appropriate and compatible with my lifestyle. Medical professionals and friends were supportive and helpful, yet it was not enough. Realizing that there was no way to competently select relevant or appropriate material from the library, I was feeling lost and bewildered when a friend handed me a copy of your journal which was entirely dedicated to the present status, medical/patient detection, and management of breast cancer. It was the most important single resource I could have gotten, in that it answered questions I had thought about, raised questions I had not considered and provided information about situations I had not perceived as relevant to my condition. The articles were focused, the illustrations and charts were clear and meaningful, the language was marvelously understandable and the content covered those areas that were of interest to me as a woman with breast cancer.

Your journal rests on my bookshelf and is a resource that

I have returned to continually, discovering data that I was now ready to integrate and/or clarifying information which originally had been unclear. Many thanks.

Rosa Caruso
P.O. Box 96
Merritt, N.C. 28556

To Ms. Caruso:

Many thanks to you for sharing your experience. We are gratified that our journal was of use to you.

Thank you also for the subscription order. Perhaps a future issue will be helpful to you or someone you know.

Eugene A. Stead, Jr., M.D.
Editor

Comment on a financial services advertisement.

To the Editor:

As a physician with strong ties in both North Carolina and Florida, I have watched the evolution of socio-economic medical development in those two states for a little over twenty years. During this time things have, in my judgment, deteriorated more in Florida than in North Carolina. Although things certainly are far from ideal in either locale, I do feel that the traditional ideals of dedication, altruism, and placing the welfare of others ahead of one's own pocketbook has been a course more closely followed in North Carolina than in Florida. Certainly I do not pretend to know all the reasons for these developments.

Hence it is with concern that I see an advertisement in the *North Carolina Medical Journal* (1987;48:617). The advertisement clearly is one designed to appeal to greed. What a sorry example it sets for the lay individual who picks up the journal and reads it. And we encourage such lay readers to look at the center yellow pages in the journal!

Such an ad is precisely the type of thing I have seen in Florida for many years. I have lamented these developments, feeling that their crass lack of good taste would add a small weight to the anchor already dragging us down. Perhaps things in North Carolina are destined to follow the same path as Florida, just as Florida followed the path of California and New York. Nevertheless, at the risk of being an old curmudgeon, I would hope for something better from my profession.

Philip M. Catalano, M.D.
1416 59th Street West
Bradenton, Florida 33529

Reply:

I share your view to some extent. All advertising attempts to persuade one to do something that one should not do without the advertising. The advertiser traditionally gains more than the one who responds to the ad. With this background I approach the specific problems. Should people know that doctors as a group work hard and have incomes above the average? People know our average incomes and I see no reason that they should not have this knowledge. Can doctors support and educate their children through college and medical school if they are ignorant of the implications of taxation and of the legitimate conservation of capital? I do not believe they can. Therefore, I have no apology for the ad that you decry.

I wish we lived in the simple days. Over a cup of coffee, I imagine, we would find more areas of agreement than disagreement.

Thank you for sharing your thoughts with our readers.

Eugene A. Stead, Jr., M.D.
Editor

Before prescribing, see complete prescribing information in SK&F LAB CO. literature or PDR. The following is a brief summary.

Contraindications: There are no known contraindications to the use of 'Tagamet'.

Precautions: While a weak antiandrogenic effect has been demonstrated in animals, 'Tagamet' has been shown to have no effect on spermatogenesis, sperm count, motility, morphology or in vitro fertilizing capacity in humans.

In a 24-month toxicity study in rats at dose levels approximately 9 to 56 times the recommended human dose, benign Leydig cell tumors were seen. These were common in both the treated and control groups, and the incidence became significantly higher only in the aged rats receiving 'Tagamet'.

Rare instances of cardiac arrhythmias and hypotension have been reported following the rapid administration of 'Tagamet' HCl (brand of cimetidine hydrochloride) injection by intravenous bolus.

Symptomatic response to 'Tagamet' therapy does not preclude the presence of a gastric malignancy. There have been rare reports of transient healing of gastric ulcers despite subsequently documented malignancy.

Reversible confusional states have been reported on occasion, predominantly in severely ill patients.

'Tagamet' has been reported to reduce the hepatic metabolism of warfarin-type anticoagulants, phenytoin, propranolol, chlordiazepoxide, diazepam, lidocaine, theophylline and metronidazole. Clinically significant effects have been reported with the warfarin anticoagulants; therefore, close monitoring of prothrombin time is recommended, and adjustment of the anticoagulant dose may be necessary when 'Tagamet' is administered concomitantly. Interaction with phenytoin, lidocaine and theophylline has also been reported to produce adverse clinical effects.

However, a crossover study in healthy subjects receiving either 'Tagamet' 300 mg. q.i.d. or 800 mg. h.s. concomitantly with a 300 mg. b.i.d. dosage of theophylline (Theo-Dur®, Key Pharmaceuticals, Inc.),

demonstrated less alteration in steady-state theophylline peak serum levels with the 800 mg. h.s. regimen, particularly in subjects aged 54 years and older. Data beyond ten days are not available. [Note: All patients receiving theophylline should be monitored appropriately, regardless of concomitant drug therapy.]

Lack of experience to date precludes recommending 'Tagamet' for use in pregnant patients, women of childbearing potential, nursing mothers or children under 16 unless anticipated benefits outweigh potential risks; generally, nursing should not be undertaken in patients taking the drug since cimetidine is secreted in human milk.

Adverse Reactions: Diarrhea, dizziness, somnolence, headache, rash. Reversible arthralgia, myalgia and exacerbation of joint symptoms in patients with preexisting arthritis have been reported. Reversible confusional states (e.g., mental confusion, agitation, psychosis, depression, anxiety, hallucinations, disorientation), predominantly in severely ill patients, have been reported. Gynecomastia and reversible impotence in patients with pathological hypersecretory disorders receiving 'Tagamet', particularly in high doses, for at least 12 months, have been reported. Reversible alopecia has been reported very rarely. Decreased white blood cell counts in 'Tagamet'-treated patients (approximately 1 per 100,000 patients), including agranulocytosis (approximately 3 per million patients), have been reported, including a few reports of recurrence on rechallenge. Most of these reports were in patients who had serious concomitant illnesses and received drugs and/or treatment known to produce neutropenia. Thrombocytopenia (approximately 3 per million patients) and a few cases of aplastic anemia have also been reported. Increased serum transaminase and creatinine, as well as rare cases of fever, interstitial nephritis, urinary retention, pancreatitis and allergic reactions, including hypersensitivity vasculitis, have been reported. Reversible adverse hepatic effects, cholestatic or mixed cholestatic-hepatocellular in nature, have been reported rarely. Because of the predominance of cholestatic features, severe parenchymal injury is considered highly un-

likely. A single case of biopsy-proven periportal hepatic fibrosis in a patient receiving 'Tagamet' has been reported.

How Supplied: Tablets: 200 mg. tablets in bottles of 100; 300 mg. tablets in bottles of 100 and Single Unit Packages of 100 (intended for institutional use only); 400 mg. tablets in bottles of 60 and Single Unit Packages of 100 (intended for institutional use only), and 800 mg. Tiltab® tablets in bottles of 30 and Single Unit Packages of 100 (intended for institutional use only).

Liquid: 300 mg./5 ml., in 8 fl. oz. (237 ml.) amber glass bottles and in single-dose units (300 mg./5 ml.), in packages of 10 (intended for institutional use only).

Injection:

Vials: 300 mg./2 ml. in single-dose vials, in packages of 10 and 30, and in 8 ml. multiple-dose vials, in packages of 10 and 25.

Prefilled Syringes: 300 mg./2 ml. in single-dose prefilled disposable syringes.

Plastic Containers: 300 mg. in 50 ml. of 0.9% Sodium Chloride in single-dose plastic containers; in packages of 4 units. No preservative has been added.

ADD-Vantage® Vials: 300 mg./2 ml. in single-dose, ADD-Vantage® Vials, in packages of 25.

Exposure of the premixed product to excessive heat should be avoided. It is recommended the product be stored at controlled room temperature. Brief exposure up to 40°C does not adversely affect the premixed product.

'Tagamet' HCl (brand of cimetidine hydrochloride) injection premixed in single-dose plastic containers is manufactured for SK&F Lab Co. by Travenol Laboratories, Inc., Deerfield, IL 60015.

* ADD-Vantage® is a trademark of Abbott Laboratories.

BRS-TG-L73B

Date of Issuance Apr. 1987

SK&F LAB CO.

Cidra, P.R. 00639

© SK&F Lab Co., 1988

In peptic ulcer:

**RELIEF
REASSURANCE
REWARD**



Tagamet®
brand of cimetidine
First to Heal

You'll both feel good about it.

RESULTS

A better alternative for hypertensives who are going bananas...

Spare your patients the extra cost—
in calories, sodium and dollars.

Spare your patients the rigors of
dietary K⁺ supplementation.

DYAZIDE[®]

25mg Hydrochlorothiazide/50mg Triamterene/SKF

Effective antihypertensive^{*}
therapy...without
the bananas

DAW

'DYAZIDE' AS WRITTEN.

^{*} Not for initial therapy. See brief summary.

Before prescribing, see complete
prescribing information in
SK&F CO. literature or PDR.
The following is a brief summary.

* WARNING

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be re-evaluated as conditions in each patient warrant.

Contraindications: Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K⁺ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K⁺ intake. Associated widened QRS complex or arrhythmia requires prompt additional therapy. Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or

without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.

Precautions: The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of triamterene and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Angiotensin-converting enzyme (ACE) inhibitors can elevate serum potassium; use with caution with 'Dyazide'. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin [ACTH]). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The

following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function. Thiazides may add to or potentiate the action of other antihypertensive drugs. Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth, anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.

Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak[™] unit-of-use bottles of 100.

BRS-DZ-L45

a product of
SK&F CO.
Citra, P.R. 00639

© SK&F Co., 1987

Bulletin Board

New Members

Alamance-Caswell

Joseph Paul Narins (OBG), 316 N. Graham-Hopedale Rd., Burlington 27215

Denny Cook Tate (IM), 316 N. Graham-Hopedale Rd., Burlington 27215

Cabarrus

James Patrick Moon (OBG), 1054 Burrage Rd. NE, Concord 28025

Caldwell

Kenneth John Dolls (ORS), 401 Mulberry St., Ste., 103, Lenoir 28603

Catawba

Nicholas Frankel (DR), Box 308, Hickory 28603

Steven Bruce Taylor (R), Rt. #3, Box 331, Ste. 22, Fairgrove Prof. Bldg., Hickory 28601

Cleveland

Daniel Eugene Brewer (FP), 1198 Wyke Rd., Shelby 28150

Craven-Pamlico-Jones

Bertha Bowen Harvey (P), 3510 Canterbury Rd., New Burn 28560

Khaled F. Jreisat (N), PO Box 2588, New Bern 28561

Cumberland

William Earl Sanderson (FP), 2175 Village Dr., Fayetteville 28305

Durham-Orange

Joyce Elizabeth Barbee (STUDENT), 407 Hillsborough St., Chapel Hill 27514

John Mark Brown (IM), Box 93 Polks Landing Station, Chapel Hill 27514

Scott Anthony Buchanan (STUDENT), Box 2710, DUMC, Durham 27710

Yong Dae Chang (STUDENT), Royal Park-2F, Carrboro 27510

Richard Francis Cody, Jr., (STUDENT), 321 W. University Dr., Chapel Hill 27514

Cornelius Alexander Davis, III (STUDENT), 501-G Downing St., Durham 27705

Paul Dominic Edwards (STUDENT), 311 S. Lasalle St., #41-G, Durham 27705

Valerie Jean Etzold (STUDENT), Rt. #3, Box 338, Pittsboro 27312

William Matthew Figesthaler (STUDENT), 113 Coleridge Court, Carrboro 27510

Guido Peter Gutter (PS), 300 Crutchfield Rd., Durham 27704

Ann Rhamy Johnson (STUDENT), 44 Laurel Ridge Apts., NC 54 Bypass, Chapel Hill 27514

Kenneth Rand Lamm (STUDENT), 105 Fidelity St. A-4, Carrboro 27510

Daniel Laskowitz (STUDENT), Box 2760, DUMC, Durham 27710

Gary Blaine Loden (STUDENT), 114-A High St., Carrboro 27510

Jerry Dale Nix (STUDENT), B-5 Tar Heel Manor, Carrboro 27510

Richard John Pollard (STUDENT), 124 Fidelity St., #20, Carrboro 27510

J. Gardiner Richards Roddey, Jr. (STUDENT), 109 Isley St., Chapel Hill 27514

Gregory William Suits (STUDENT) B-39 White Oak Apts., Carrboro 27510

Frederick Michael Weeks (STUDENT), The Villages Apt., O-1, Carrboro 27510

Edward Howard Wrenn (STUDENT), 154 Ridge Trail, Chapel Hill 27514

Daniel Alan Yohay (RESIDENT), 3-M Post Oak Rd., Durham 27705

Charles Chung-Hyup Yue (STUDENT), 109 Twisted Oak Pl., Durham 27705

Forsyth-Stokes-Davie

Peter T. Alford, 300 S. Hawthorne Rd., Winston-Salem 27103

Eldon Severin Beard (FP), 3640-A Westgate Center Cir., Winston-Salem 27103

Arthur Searle Foreman (AN), 300 S. Hawthorne Rd., Winston-Salem 27103

David Dean Hood (AN), 1658 S. Marblehead Rd., Clemmons, 27102

Harold Sidney Klopfenstein (CD), 300 S. Hawthorne Rd., Div. of Cardiology, Winston-Salem 27103

Susan Elizabeth Knowles (STUDENT), 312 Grove Park Ave. #4, Winston-Salem 27103

Mark Paul Knudson (FP), 300 S. Hawthorne Rd., Winston-Salem 27103

Michael Kevin O'Brien (STUDENT), 2418 Lyndhurst Ave., Winston-Salem 27103

Burton Victor Reifler (P), 300 S. Hawthorne Rd., Winston-Salem 27103

Donald Paul Shackelford, Jr. (STUDENT), 4260 Brownsboro Rd., Apt. D-5, Winston-Salem 27106

John Kelton Southard, Jr. (D), 3111 Maplewood Ave., Ste. 107, Winston-Salem 27103

Kevin Lewis Speight (AN), 1825 Gaston St., Winston-Salem 27103

Susan Jean Williams (FP), 300 S. Hawthorne Rd., Dept. of Family Med., Winston-Salem 27103

High Point

Samuel Craig Kirby (D), 624 Quaker Ln., Ste. 302, Bldg. B, High Point 27262

Greensboro Society of Medicine

Nigel Thomas Goodchild (ON), 1200 N. Elm St., Greensboro 27401

Henry Ward B. Smith, III (IM), 1904 N. Church St., Greensboro 27405

Haywood

Jeffrey Paul Zervas (OPH), 116 Hospital Dr., Clyde 28721

Henderson

Marion Perkins Van Kirk (OPH), 1701 Old Village Rd., Hendersonville 28739

Iredell

Samuel Timothy Bowen (IM), PO Box 490, Davidson 28036

Mark Lawrence Prendergast (OTO), 702 Hartness Rd., Statesville 28677

Mecklenburg

Helen Roemer Fraser, 4116 Pomfret Lane, Charlotte 28211

Donald Bailey Kamerer, Jr. (OTO), 1350 S. Kings Dr., Charlotte 28207

Steven R. Kessel, 1350 S. Kings Dr., Charlotte 28207

Robert Mark Stiegel, 1960 Randolph Rd., Charlotte 28207

James Wm. Scott Wallace (P), 2040 Randolph Rd., Charlotte 28207

Moore

Peter Gary Allinson (AN), PO Box 266, Southern Pines 28387

Nash

Robert Patrick Dorion (PTH), Nash General Hospital, Rocky Mount 27804

New Hanover-Pender

Virgil Edward Bean (AN), 605 Rose Ave., Wilmington 28403

John Ronald Bobitt (OBG), 2131 S. 17th St., Wilmington 28401

Elizabeth Anne Coleman (P), 2450 Delaney Ave., Wilmington 28403

Thaddeus Leland Dunn (IM), 1515 Doctors Circle, Wilmington 28401

Charles Edward Hunter, Jr. (CD), 1414 Medical Center Dr., Wilmington 28401

Brian Jay Kornblatt (EM), 1800 Eastwood Rd. #267, Wilmington 28403

John Wilson Lovett (U), 1905 Glen Meade Rd., Wilmington 28403

Marshall Clarke McCoy (EM), Cape Fear Mem. Hosp., Emergency Dept., Wilmington 28403

Gregory Frank Schimizzi (RHU), 1202 Medical Center Dr., Wilmington 28401

Robert William Swan (OBG), 2131 S. 17th St., Wilmington 28402

Northhampton

Ashby Jeffries Burton, III (FP), PO Box 710, Rich Square 27869

Person

Stephen N. Long, PO Box 797, Roxboro 27573

Rockingham

George Daniel Gonzalez (GS), 515 Thompson St., Eden 27288

Paul William Sasser (FP), 518 S. Van Buren Rd., #8, Eden 27288

Sampson

Richard Lane Young (ORS), 603 Beaman St., Clinton 28328

Surry-Yadkin

David Leon Soulsby (ORS), 414 W. Lebanon St., Box 1544, Mount Airy 27030

Wake

Kevin Dehan McMahon (OPH), 3100 Blue Ridge Rd., Ste. 200, Raleigh 27612

John Rubino (IM), 3521 Haworth Dr., Raleigh 27609

Glenn Alan Zerby (EM), PO Box 30788, Raleigh 27622

Wayne

Lloyd Hamlin Smith, Route #9, Box 241-F, Goldsboro 27530

AUTHORS

INSTRUCTIONS FOR SUBMITTING PAPERS

Copyright of an article published in the *North Carolina Medical Journal* is retained by the author, but the copyright to each entire issue is the property of The North Carolina Medical Society, and permission to reprint all or any part of a published article must be negotiated with the author and the editor jointly. The reprinted material must carry a credit line signifying that it appeared in the *North Carolina Medical Journal*.

Medical articles, editorials, patient oriented articles, letters to the editor and all other text submitted for publication must be double-spaced throughout, including references and legends. The material should be typed on one side of the paper with 1¼ inch margins all around. Do not use an all-caps or a script typeface. Submit one original and one copy. Please be sure to include your phone number.

The author is responsible for the accuracy of all statements and references. Acronyms and other abbreviations should be kept to a minimum; *any acronym used should be fully translated in the text*. Refer to pharmaceutical products by their generic names; brand names may follow in parentheses. Units of measure should appear in the metric system. References, typed double-spaced, should be listed in the order of their citation in the text, not alphabetically. They should follow the style used in the *Journal*.

Illustrations should be black and white glossy prints or color or black and white slides, with legends typed in double-space on a separate sheet of paper. Since the *Journal* has a limited budget for color, it may be a factor in publishing color illustrations.

Attach to the two copies of the manuscript a cover letter giving the address and telephone number of the person who will correspond about it, and address the completed communication to the Editor, Box 3910, Duke University Medical Center, Durham, NC 27710.

All manuscripts are subject to editorial changes. If extensive revision is necessary, the author may be sent a draft of the edited article for approval before publication. The author will be sent galley proofs if the paper is published.

Authors interested in more effective writing may find *The Elements of Style* by Strunk and White and *How to Write and Publish a Scientific Paper* by Day helpful.

Extracted, with permission, from *Virginia Medical* with thanks.

Bulletin Board

Continuing Medical Education

Please note: The Continuing Medical Education Programs at Bowman Gray, Duke (DUMC), East Carolina (ECU) and UNC Schools of Medicine, and Dorothea Dix are accredited by the American Medical Association. Therefore CME programs sponsored or cosponsored by these schools automatically qualify for AMA Category I credit toward the AMA's Physician Recognition Award, and for North Carolina Medical Society Category A credit. Where AAFP credit has been obtained, this also is indicated.

March 25-26

Artherosclerotic Cerebrovascular Disease 1988: Current Concepts and Controversies

Place: Winston-Salem

Info: Sally Hudson Gulley, Div. of CME, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4450

April 5-8

Diagnostic Ultrasound (physicians and non-physicians)

Place: Winston-Salem

Credit: 7 hours/day Category I AMA

Info: Registrar, Ultrasound Center, Bowman Gray School of Medicine, 300 S. Hawthorne Rd., Winston-Salem 27103. 919/748-4505

April 7

North Carolina Clinical Neuro-Ophthalmology Review

Place: Chapel Hill

Info: Baird Grimson, M.D., Dept. of Ophthalmology, CB #7040, 617 Burnett-Womack Bldg, UNC-Chapel Hill 27599. 919/966-5296

April 7-8

Rehab Medicine Workshop: Prosthetics/Orthotics

Place: Greenville

Info: Mary C. Valand, MSW, ACSW, Office of CME, ECU School of Medicine, P.O. Box 7224, Greenville 27835-7224. 919/551-5200

April 8-9

Practical Pediatrics

Place: Winston-Salem

Credit: 9 hours Category I AMA

Info: Sally Hudson Gulley, Div. of CME, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4450

April 9, 13, 18, 21

Malpractice Awareness: 1988

Place: (on respective dates): Research Triangle Park, Greensboro, Greenville, Wilmington

Credit: 2 hours Category I AMA (each)

Info: Medical Mutual Insurance Co., P.O. Box 26088, Raleigh 27611. 919/828-9334

April 10-13

Administrative Skills II: Planning Change and Conflict Resolution

Place: Rougemont

Info: Cindi Easterling, CME, Box 3108 DUMC, Durham 27710. 919/684-6878

April 11-15

Diagnostic Ultrasound

(See April 5-8 for information)

April 18-22

Diagnostic Ultrasound

(See April 5-8 for information)

April 20-21

1988 Public Health Nutrition Update Conference

Place: Charlotte

Info: Registrar, Office of CME, UNC School of Public Health, CB #8165, Miller Hall, Chapel Hill 27599-8165. 919/966-4032

April 22-23

Advanced Cardiac Life Support Provider Course

Place: Asheville

Credit: 16 hours Category I AMA, ACEP, AAFP

Fee: \$200

Info: Daniel L. Dolan, M.D., MAHEC, 501 Biltmore Ave., Asheville 28801-4686. 704/257-4419

April 22-23

Frank R. Locke Symposium (OB-GYN)

Place: Winston-Salem

Credit: 9 hours Category I AMA

(See April 8-9 for information)

April 25-29

Diagnostic Ultrasound

(See April 5-8 for information)

April 25, 28, May 4

Malpractice Awareness: 1988

Place: (on respective dates): Charlotte, Asheville, Pinehurst

(See April 9 for information)

April 29-May 1

NC Ultrasound Society 7th Annual Symposium

Place: Raleigh

Credit: 16 hours Category I AMA

Info: 919/748-4505

May 2-4

Diagnostic Ultrasound

(See April 5-8 for information)

May 4-7

Clinical Skills Workshop

Place: Winston-Salem

Credit: 31 hours Category I AMA, AAFP

(See April 8-9 for information)

May 5-6

Advanced Cardiac Life Support Providers

(See April 8-9 for information)

May 5-6

Diagnostic Ultrasound

(See April 5-8 for information)

May 9-13

Diagnostic Ultrasound

(See April 5-8 for information)

May 13-14

Hemodynamic Monitoring

(See April 8-9 for information)

Medical Mutual Insurance Company Offers Malpractice Awareness Programs

A panel of experts will offer new perspectives on medical practice in "Malpractice Awareness: 1988," a joint program of Medical Mutual Insurance Company and the East Carolina University School of Medicine. The new program will be held at convenient locations across the state as part of Medical Mutual's continuing effort to keep policyholders informed.

The focus of "Malpractice Awareness: 1988" is on the forces confronting physicians individually and collectively. Charles Inlander, President of The People's Medical Society, will speak for consumers. Mr. Inlander will consider the distrust and fear of many consumers of medical care and explain why he feels these emotions, and the litigation that results, are often justified.

Joe McLeod, of McLeod, Senter & Winesette, will present the plaintiff attorney's point of view. Participants will learn about the attitudes of victims and families considering litigation against a physician, factors convincing the attorney to accept a case, and ways physicians contribute to building the case against themselves.

Defense attorneys will be represented by Edward C. Bryson of Newsome, Graham, Hedrick, Bryson & Kennon. Mr. Bryson will discuss missing components in the medical record and other factors that make a case indefensible, and practical ideas to help physicians defend themselves in the event of a claim.

The panel discussion builds on Medical Mutual's popular loss prevention seminars, which have included Malpractice Awareness: STAT, Records and Other Necessities, and last year's Crisis Then and Now. Two hours of Category I AMA continuing Medical Education Credit will be offered through East Carolina University.

All Medical Mutual policyholders, office support personnel, and other North Carolina physicians interested in reducing their exposure are encouraged to participate in the program at one of the following locations:

Research Triangle	Saturday, April 9, 10 a.m.-noon, Sheraton Imperial Hotel and Towers
Greensboro	Wednesday, April 13, 7 p.m.-9 p.m., Moses Cone Memorial Hospital AHEC
Greenville	Monday, April 18, 7 p.m.-9 p.m., Brody Auditorium, East Carolina University School of Medicine
Wilmington	Thursday, April 21, 7 p.m.-9 p.m., AHEC Auditorium
Charlotte	Monday, April 25, 7 p.m.-9 p.m., Presbyterian Hospital Auditorium
Asheville	Thursday, April 28, 7 p.m.-9 p.m., Mountain AHEC Auditorium
Pinehurst	Wednesday, May 4, 2 p.m.-4 p.m., Pinehurst Hotel

In Memoriam

Henry Clay Harrill (1909-1987)

Dr. Henry C. Harrill was born at Ellenboro in Rutherford County, North Carolina, on July 22, 1909, and died peacefully at home in Greensboro on October 30, 1987 after an extended period of poor health. He graduated with a B.S. in Chemistry from Davidson College in 1929, attended the two-year medical school at the University of North Carolina, and graduated with an M.D. from Johns Hopkins Medical School in 1933. After an internship of one year at St. Mary's Hospital in Pierre, SD, he returned to Johns Hopkins as a Fellow in Pathology (1935-36), followed by an Assistant Residency in Urology (1936-37). He served a Residency in Urology at Ancker Hospital in St. Paul, MN, for two years, and again returned to Johns Hopkins as Chief Resident in Urology for 1939-40. Despite an invitation to remain in Baltimore as an associate of Dr. Hugh Young, Henry chose for his future private practice in Greensboro and arrived here in 1940.

Private practice was soon interrupted by 'Greetings from the President' and for four years he was at Ft. McPherson in Atlanta, serving as Chief of the Surgical Service at the Station Hospital there. Henry told amusing stories of orders to go elsewhere which were repeatedly countermanded when mentioned to the retired generals in Atlanta, who valued Henry's dexterous finger(s). Upon his return to Greensboro, Henry brought major urology here, and interrupted the flight of such patients to Charlotte. The local demands that he uncovered soon attracted other qualified urologists, to whom he extended a hand of welcome, and with whom he maintained friendly competition.

Henry was a member of the County, State and American Medical Associations, of the State, Southeastern and American Urological Societies, and was a Fellow of the American

College of Surgeons. He was president of the Guilford County Medical Society in 1957.

Henry retired in 1980, unable to continue a limited office practice because of exorbitant liability insurance rates, but he continued a useful part-time service as director of the Blood Serum Collection Station until one month before his death.

Henry was an avid reader, a friendly and gregarious personality, a reservoir of jokes and amusing recollections, with particular interests in maps, geography, railroads, and the Bible, the latter acquired at Davidson. He was a 32nd degree Mason, joined the First Presbyterian Church when he came to Greensboro in 1940 and there his funeral service was held, with interment at Forest Lawn Cemetery.

Henry was happily married in 1934 to Miss Patricia Stout, a daughter of a Pierre, SD, Physician. She preceded him in death eleven years ago. He is survived by two daughters, Mrs. Joan Trimble of Macon, GA, and Mrs. Judith Distelhorst of Houston, TX; a brother, Jesse Harrill of Greensboro; and five grandchildren.

BE IT RESOLVED that this memorial tribute to the outstanding medical career of Henry C. Harrill, M.D., Urologist, be spread upon the Medical Society minutes, a copy be sent to the family with our sympathy in their bereavement, and a copy to the North Carolina Medical Journal.

James H. Busick
Executive Director
Guilford County Medical Society
612 Pasteur Drive, Suite 404
Greensboro, 27403

Classified Ads

CONSIDER the cost-effective potential of adding a physician assistant to your practice. The North Carolina Academy of Physician Assistants will help you advertise to a large pool of qualified PAs at no cost to you. For information on how you can advertise your PA employment opportunity, contact: Bob Franks, PA-C, NCAPA Employment Chairman, 206 Camelia Dr., Goldsboro 27530. 919/731-3225 (work); 919/734-4657 (home).

FAMILY PRACTITIONER to join four man Family Practice group in Southern Piedmont area, 20 miles south of Charlotte, NC. 160 bed community hospital. New office with full lab and x-ray facilities. Please contact William Deskins, M.D. or Paul Kitchin, M.D. at Monroe Family Medical Center, P.A., 1420 E. Franklin St., Monroe, NC 28110. 704/289-8427.

PRACTICE SALES, mergers, equity associateships, or appraisals from the nations oldest practice transition firm. Aftco Associates — Practice Transition Consultants, since 1968. 454 S. Anderson Road, Rock Hill SC 29730. 803/329-9655. Charlotte Metropolitan Area.

FAMILY PHYSICIAN BC/BE needed to replace retiring member of four physician F.P. group. OB not required. Available 1-88 or after. Pine Ridge Family Practice, PA. 147 Columbine Drive, Winston-Salem 27106.

VERY BUSY TWO-MAN OB-GYN office seeks physician. BE/BC preferred. Located in the foothills of beautiful North Carolina, county population of 70,000 and town 18,500. Participating hospital located across the street is undergoing additions now. New OB facility almost complete. Reply to P.O. Box 2640, Lenoir, NC 28645.

ACTIVE AND WELL ESTABLISHED work-compensation, personal injury practice in Los Angeles. We need one orthopedic surgeon and one neurologist, B/E. Please contact Gloria Gravino at 213/557-2743 from 10:00am to 5:00 pm PST.

JACKSONVILLE, Onslow County, NC 28540 — Doctors Offices/Medical Suites. Most upfitting complete 1500 to 5100 + square feet. Exceptional location, Memorial Drive, adjacent to entrance to Onslow Memorial Hospital. Contact Robert E. Lock, 8:30 to 5:00 weekdays, 919/347-3200; after 6:00 pm and on weekends, 919/346-8093. Post Office address: P.O. Box 592, Jacksonville, NC 28540.

GENERAL INTERNIST to join an eight-physician internal medicine group in Charlotte, NC. Travis Medical Clinic, 217 Travis Ave., Charlotte 28204. Call 704/372-3350.

RADIOLOGIST: Nice, small, well located North Carolina town. Join active hospital based, service oriented practice. General DX, NM, US, CT — future arteriography. Reply with C.V. to: code 60, NCMJ, Box 3910, DUMC, Durham 27710.

MEDICAL ONCOLOGIST: Opportunity for Board Certified/Board Eligible oncologist to join established practice in the Tampa Bay Area of Florida. Supported by ACOS accredited cancer center affiliated with a 750+ bed tertiary care community hospital. Guaranteed salary and insurances to start with partnership potential. Contact Jim Davis, Tyler & Co., 9040 Roswell Rd., Atlanta, GA 30350. Call 404/641-6411.

OB/GYN: Solo practitioner seeking partner for small community in the scenic mountains of Virginia. Competitive compensation package with liberal benefits. Supported by full service, 150+ bed community hospital. Area offers an abundance of recreational activities. Contact Jim Davis, Tyler & Company, 9040 Roswell Rd., Atlanta, GA 30350. Call 404/641-6411.

INTERNIST to join established multi-specialty group. Cardiology experience preferred. Practice is based in scenic, waterfront community; hospital with three nursing homes. Near Norfolk, VA. Competitive salary/benefits. Send CV to: Box 429, Edenton, NC 27932.

NORTH CAROLINA: Modern, well-equipped hospital located in Edenton, seeks primary medicine physician to practice in the Emergency Department. 24-hour shifts; 7,000 patient volume. On beautiful Albemarle Sound close to the beaches. Call Beth Barlowe or Jud Walker, Coastal Emergency Services, Inc., 3200 Croasdaile Dr., Dept. SM, Ste. 503, Durham 27705; 919/383-0367, 800/672-1665 in NC; 800/334-3306 in US.

PUBLIC HEALTH PHYSICIAN II: Wake County (Raleigh), NC seeks a Public Health Physician for its Health Department. Interested candidates should possess an M.D. from an accredited institution, including completion of an approved hospital internship and at least 1 yr. of professional medical experience, preferably in Internal Medicine, Family Practice or Obstetrics and Gynecology (eligibility for NC licensure required). Responsible for providing clinical services in family planning, communicable diseases, health promotion and supervision of physician extenders. Acts as a consultant for Adult Health Services in program planning and in the development of policies and procedures. Salary: \$55,272 and competitive benefits package. Wake County applications *only* must be received/postmarked by March 15, 1988. Apply to: Wake County

Personnel Dept., P.O. Box 550, Raleigh 27602, 919/755-6482. EOE/AA.

NORTH CAROLINA — Emergency Medicine opportunities with local Emergency Medical group in central N.C. in two medium volume E.D.'s. Board certified/prepared in E.M., F.P./I.M. preferred. Competitive salary, CME, ACEP dues, malpractice paid. Replies and C.V.'s to James Strickland, M.D.; P.O. Box 464; Burlington, NC 27215. 919/228-0768.

URGENT CARE PHYSICIANS needed to staff several free-standing acute care facilities to open soon in Central and Western NC. Attractive salary, benefit, and incentive package with flexible scheduling. BC/BE in IM, FP, EM, or previous urgent care experience required. Send CV in confidence to: Attention R. Reavis, M.D., Physician Recruitment, Southeastern Health Services, P.O. Box 2952, Burlington, NC 27215.

FAMILY PRACTITIONER NEEDED for full-time solo practice in a progressive community in Sherrill's Ford, NC, near beautiful Lake Norman. Guaranteed income plus benefits. Please send CV to Richard Blackburn, Executive Director, Lake Norman Regional Medical

Center, PO Box 360, Mooresville, NC 28115, 704/663-1113.

DIRECTOR, MEDICAL SERVICES — 480 bed ICF/MR facility. Graduation from accredited school of medicine, completion of residency or specialty training; and three years experience in practice of a particular specialty of medicine. BC and eligible for licensure in NC. Administrative/management and mental retardation experience preferred. Excellent benefits. Salary negotiable. Location convenient to resort areas and major medical schools. Contact or send VITA to Recruitment Coordinator, O'Berry Center, PO Box 247, Goldsboro, NC 27530, 919/731-3650.

FOR SALE: Ames Seralyzer, 1987. Modules for 7 tests; can do 15 tests if desired. \$2100. Call 703/638-3941.

FAMILY PRACTITIONER needed for full-time solo practice in a progressive community in Troutman, NC, near beautiful Lake Norman. Guaranteed income plus benefits. Please send CV to Richard Blackburn, Executive Director, Lake Norman Regional Medical Center, PO Box 360, Mooresville, NC 28115, 704/663-1113.

NCMJ Classified Ads . . .

Send your ad to:

**Managing Editor
Box 3910
Duke University Medical Center
Durham 27710**

Please specify the number of issues in which you'd like it to appear. Include your name, address, and phone number.

Closing date is the 25th of the second prior month. For cost and billing information, call 919/684-5728.

Index to Advertisers

Baron Advisory Services, Inc.	128	MRI, Ltd.	124
B & B X-Ray, Inc.	135	Palisades Pharmaceuticals	144
Burroughs Welicome Co.	139	Republic Health	167
Campbell Laboratories, Inc.	162	Roche Laboratories	141, 143-144, Cover 3-4
Charter Northridge Hospital	136	Smith Kline and French Laboratories	172a-b
Crompton Company	Cover 2	Southern Medical Association	122
Eli Lilly & Company	136b	Unique Boutique	121
Hinrichs Financial Group	138	U.S. Air Force	132
Marion Laboratories	136-136a	U.S. Army	140
Medical Mutual Insurance Company of N.C.	156	Winchester Surgical Supply Co.	180
Medical Protective Company	137	Wyeth-Ayerst Laboratories	128a-d

Winchester®

"CAROLINAS' HOUSE OF SERVICE"

Winchester Surgical Supply Company

200 South Torrence St. Charlotte, N.C. 28204

Phone No. 704/372-2240

Winchester Home Healthcare

Medical supplies and equipment for your patients at home

Charlotte, N.C. Greensboro, N.C. Hickory, N.C.

704/332-1217 919/275-0319 704/324-0336

704/547-0708

**Serving the MEDICAL PROFESSION of NORTH CAROLINA
and SOUTH CAROLINA since 1919.**

We equip many physicians beginning practice each year and invite your inquiries.

Our salesmen are located in all parts of North Carolina.

*We have DISPLAYED at every N.C. State Medical Society Meeting since 1921
and advertised CONTINUOUSLY in the N.C. Journal since January 1940 issue.*

Journal

North Carolina
Medical Society
April 1988
Volume 49
Number 4

Carolina Medical Journal

For Doctors and their Patients

As researchers compile more information on the most common known cause of mental retardation, more doctors and families are asking . . .

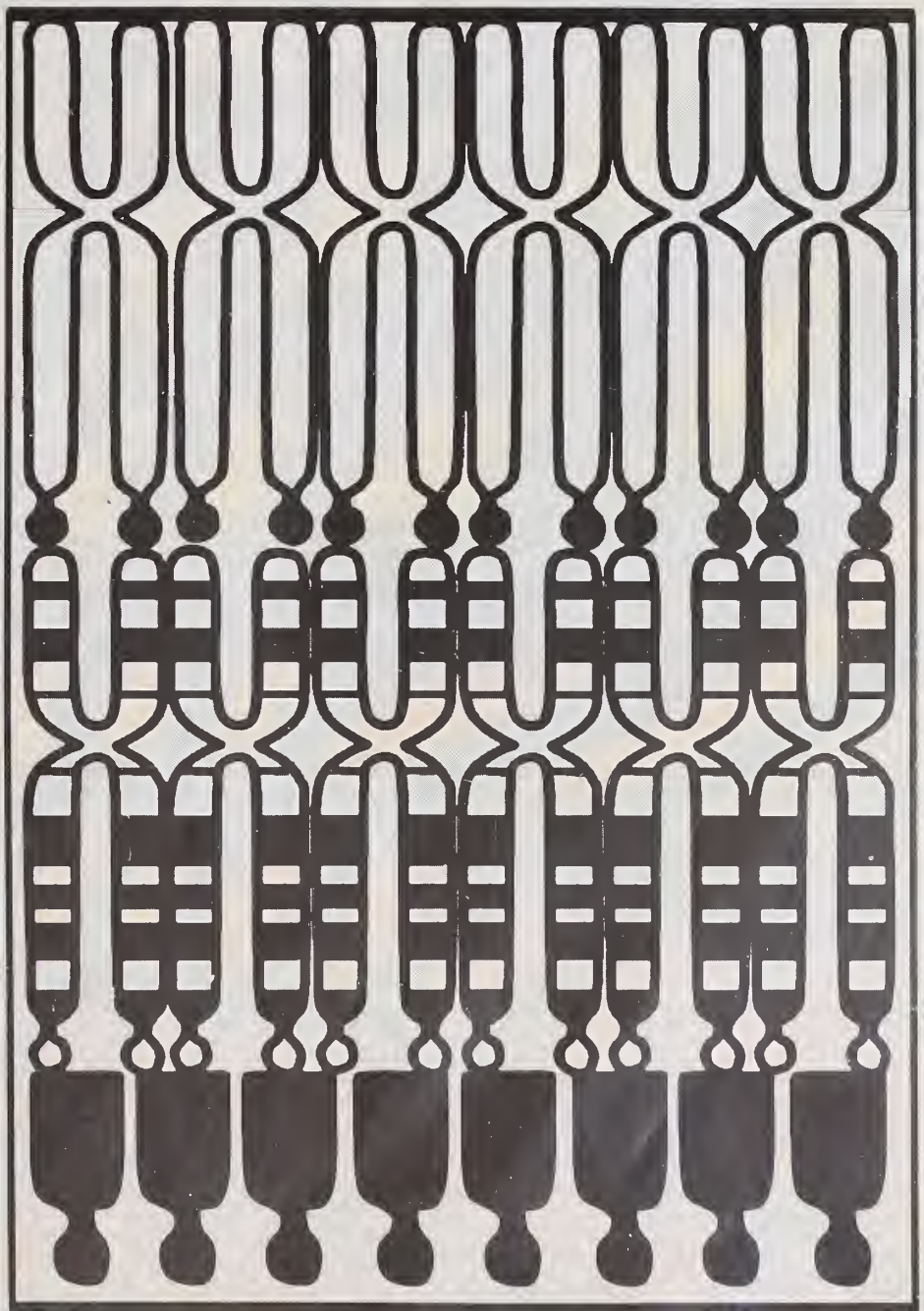
What Is the Fragile X Syndrome?

Ave Lachiewicz, M.D.
Cora Harrison, M.Ed.
Gail A. Spiridigliozzi, Ph.D.
Nancy P. Callanan, M.S.
Jean Livermore, ACSW

Medicine — Present and Future

Duncan Yaggy, Ph.D.

Annual Session
May 5-7
Pinehurst



THERE IS
SOMETHING
IN OUR NAME
THAT BRINGS YOU
A FEELING OF
SECURITY.

CRUMPTON COMPANY.

Why do so many NC physicians participate in the Crumpton Plan of Disability Income Protection?

THE ANSWER is the 47 years of successful relationship and personal service at claim time!

Yes, the feeling of security as well as economic advantage in knowing the program is a plan of carefully designed benefits.

The plan is not filled with a lot of "purple duck feathers," but provides income when you are unable to produce — not promises, but performance.

Why not call us today to obtain the latest details for your group practice? We are delighted to offer our broadened portfolio of professional insurance.



Commercial Insurance Company

Crumpton Company
Box 8500 Academy Center, Durham 27707
800/672-1674 919/493-2441

NORTH CAROLINA MEDICAL JOURNAL

For Doctors and their Patients

April 1988, Volume 49, Number 4

Published Monthly as the Official Organ of the North Carolina Medical Society

(ISSN-0029-2559)

STAFF

Eugene A. Stead, Jr., M.D.
Rt. 1, Box 194, Bullock
EDITOR
919/693-4531

Francis A. Neelon, M.D.
Durham
ASSOCIATE EDITOR

F. Maxton Mauney, Jr., M.D.
Asheville
ASSOCIATE EDITOR

Eben Alexander, Jr., M.D.
Winston-Salem
ASSOCIATE EDITOR

William B. Blythe, M.D.
Chapel Hill
ASSOCIATE EDITOR

William W. Fore, M.D.
Greenville
ASSOCIATE EDITOR

Edward C. Halperin, M.D.
Durham

ASSOCIATE EDITOR

Laurel Ferejohn
Durham

MANAGING EDITOR
919/684-5728

Jane Whalen
Durham
EDITORIAL ASSISTANT
George E. Moore
Raleigh
BUSINESS MANAGER

EDITORIAL BOARD

Charles W. Styron, M.D.
Raleigh

CHAIRMAN

Edwin W. Monroe, M.D.
Greenville

Robert W. Prichard, M.D.
Winston-Salem

Louis deS. Shaffner, M.D.
Winston-Salem

Jay Arena, M.D.
Durham

Jack Hughes, M.D.
Durham

William B. Blythe, M.D.
Chapel Hill

Margaret C. Swanton, M.D.
Clinton

The appearance of an advertisement in this publication does not constitute any endorsement of the subject or claims of the advertisement.

The Society is not to be considered as endorsing the views and opinions advanced by authors of papers delivered at the Annual Meeting or published in the official publication of the Society. — *Constitution and Bylaws of the North Carolina Medical Society*, Chapter IV, Section 3, page 4.

NORTH CAROLINA MEDICAL JOURNAL

Box 3910, Duke University Medical Center, Durham, NC 27710 (919/684-5728), is owned and published by The North Carolina Medical Society under the direction of its Editorial Board. Copyright © The North Carolina Medical Society 1988. Address manuscripts and communications regarding editorial matters, advertising, subscription rates, etc., to the Managing Editor at the Durham address. All advertisements are accepted subject to the approval of a screening committee of the State Medical Journal Advertising Bureau, 711 South Blvd., Oak Park, Illinois 60302 and/or by a Committee of the Editorial Board of the North Carolina Medical Journal in respect to strictly local advertising. Instructions to authors appear in each issue (see table of contents). Annual Subscription, \$12.00 (+ tax in NC). Single copies, \$2.00. Publication office: The Ovid Bell Press, Inc., 1201-05 Bluff St., Fulton, MO 65251. *Second-class postage paid at Raleigh, North Carolina 27611 and additional mailing offices.* Postmaster: Send address changes to North Carolina Medical Society, 222 N. Person St., Raleigh, NC 27611.

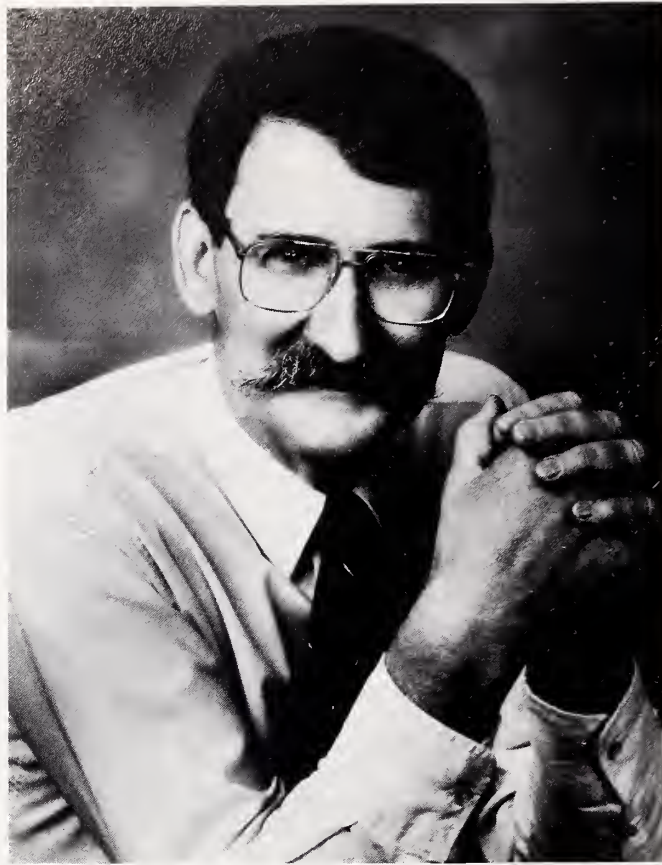
THE ULTIMATE TAX SHELTER - POST TRA 1986

- Fund your pension plans at 25% at a cost of only 5-11% staff employees.
- Add a Supplemental Income Plan (SIP) for key employee physicians only and spend no additional funds for staff.
- Result: 85-95% of all retirement funding benefits allocated to key employee physicians.

CALL OR WRITE FOR INFORMATION:

Joseph M. Gordon, CLU, ChFC, CFP
BARON ADVISORY SERVICES, INC.
Registered Investment Advisor
4110 Wake Forest Road, #211
Raleigh, NC 27609
790-9904/(800) 222-8783

THE SECRET IS OUT



“I joined the Southern Medical Association in 1980 initially because of the insurance programs that were offered. I’ve found that they have been very responsive to my needs and I feel as though they probably offer the best rates and the best premiums that are available.”

**John F. Nelson, M.D.
Psychiatry
Gainesville, FL**

Since 1906, the Southern Medical Association has been the best kept secret in the South. No longer! The word is out and everybody’s talking.

They’re talking about the educational benefits of belonging to the largest regional multi-specialty association in the U.S. and the diversity of the Annual Scientific Assembly.

They’re talking about a non-political association whose only mission is to provide the best educational and financial benefits available anywhere.

They’re also talking about unrivaled member benefits including the SMA Insurance Program, the Physicians’ Purchasing Program, the SMA Retirement Program, SMA Travel Services, Dial Access, the *Southern Medical Journal* and many, many more.

But most of all, they’re talking about how SMA can offer so much at such a low cost.

Call the SMA for more information and a membership application. Find out why more and more physicians are joining the SMA every day.

Join the SMA today . . . You’ll be talking about us too!

Post Office Box 190088
Birmingham, Alabama 35219



1-800-423-4992
(205) 945-1840

North Carolina Medical Journal

FOR DOCTORS AND THEIR PATIENTS

Contents / April 1988, Volume 49, Number 4

Cover illustration by Nancy Marshburn, Durham

SOCIOECONOMICS

- 185 North Carolina Workers' Compensation *Coin T. Page*

EMERGENCY MEDICINE

- 192 Emergency Medical Technicians' Exposure to AIDS and Hepatitis: Current Infection Control Practices in North Carolina *Kathleen A. Cline*

THE NAMES AND FACES OF MEDICINE

- 195 Hippocratic Nails *Peter N. Barboriak and Francis A. Neelon*

SPECIAL ARTICLE

- 197 Medicine — Present and Future *Duncan Yaggy*

LEARNING EXPERIENCES FROM UNC

- 201 On the Occasional Horror of Being Healed in a Hospital *William B. Blythe*

FOR PATIENTS

- 203 What Is the Fragile X Syndrome? *Ave Lachiewicz, Cora Harrison, Gail A. Spiridigliozzi, Nancy P. Callanan, and Jean Livermore*

EDITORIALS

- 211 The North Carolina Medical Society: Are We on the Right Track? *John R. Gamble*
213 I Got Sick on July Twenty-Five, Two Thousand *Radford Butler and Kenneth G. Tomberlin*

LETTERS TO THE EDITOR

223

BULLETIN BOARD

- 220 New Members
209 Instructions to Authors
221 Continuing Medical Education
228 In Memoriam
231 Classified Advertisements
232 Index to Advertisers
227 Official Call — House of Delegates

Med-Care

The Office Management System

6512 Six Forks Road, P.O. Box 19701
Raleigh, North Carolina 27615
NC 1-800-634-8016; USA 1-800-247-6094
919-847-5110

Med-Care's Software

Our software has been in development for over 11 years. It has been in use by private practice and community health centers for over 8 years.

Over these years, we have received a tremendous amount of suggestions from administrators, physicians, office staff, and accountants. The result? A system that is extremely flexible with a wide comprehensive data base.

Yet, it is efficient and simple enough to be used by staff without prior computer education or experience.

Med-Care reduces paperwork:

- automatic insurance processing includes refiles, aged claims, and C.O.B.
- alternate fee and coding schedules
- **paperless claims to Medicare and major carriers**
- family or patient billing option
- **clinical tracking with mailing labels**
- on-line help messages and scroll/file maintenance from any entry screen
- on demand patient statements, cycle billing, year-end statements, reminders
- appointment scheduling, encounter form printing, chart pull list, daily patient list
- general ledger, payroll, accounts payable, and word processing

- referral utilization reporting
- **HMO processing and management made easy**

Starting with the encounter form, the appropriate plan will be identified by patient. The proper information from that point on will be handled automatically. By tracking patients on each plan and doing the cross-referencing **Med-Care** can help evaluate the efficiency of your health care plans.

Med-Care is developing a new fourth generation cobol that allows more flexibility, such as windowing, etc.

Med-Care's Support

At **Med-Care** we understand, first and foremost, that support is critical to the successful installation and



IBM Personal System/2™

operation of a computer system. This was confirmed recently in a **Computer World** article which surveyed 350 computer users.

Supporting over 100 private and CHC offices, as a **single-source** vendor **Med-Care** provides installation, training, hardware and software maintenance, updates and enhancements, and on-going technical assistance and consultation.

Med-Care's Hardware

We feature T.I. and I.B.M. computers. This gives us and our customers a complete range of compatible, upgradeable computers for growth — 1 to 128 terminals. The **Med-Care System** is also available on Unix or Xenix based systems.

At Med-Care

Our Customers Are Important!

*"In my opinion, **Med-Care** has everything I would want in a company — excellent products, a well-trained staff, professional sales and service and good response time."*

Loraine McCaskill
Business Manager
Raleigh Ear, Nose & Throat,
Head & Neck Surgery, Inc.

*"I would highly recommend **Med-Care** and their system to any practice considering automation. Their continued commitment to customer satisfaction has earned for them a reputation matched by none."*

Donald B. Campbell, M.D.
Wake Internal Medicine Consultants, Inc.

North Carolina Workers' Compensation

Coin T. Page, M.D.

The North Carolina Workers' Compensation system can be frustrating and confusing for physicians. Withheld payments, low fees, interruptions and hearings can make involvement unappealing. But, since Workers' Compensation is the only insurance available to some workers, physicians should make every effort to understand and cope with its intricacies.¹

This paper outlines what the physician should expect from Workers' Compensation. It covers several aspects of the system: definition and notice of injury; job security; payments and filing; Industrial Commission Form 25M; the physician's medical record; referrals; light duty; temporary and permanent disability; and occupational disease.

North Carolina Workers' Compensation insures people who are hurt in work accidents. It also covers occupational diseases, discussed as a separate category below. Most employers purchase compensation insurance from private insurance companies, called "carriers," which are responsible for payment of claims.

Workers' Compensation covers doctor's bills, hospital costs, and rehabilitation expenses. It pays Temporary Disability wage benefits during the recovery period, and Permanent Disability benefits when irremediable scarring, damage, or disability arises from the injury.

North Carolina Workers' Compensation is required for companies with three or more workers, but does not apply to railroad workers, casual workers, domestic servants, prisoners, farm laborers, or federal employees (Federal Workers' Compensation is a different system not discussed here).

Injury Defined

North Carolina Worker's Compensation extends limited

coverage, requiring that injuries — except for back injuries sustained since July 20, 1983 and hernias since August 5, 1987 — be the result of an *accident* or *unusual occurrence* and not of the usual work routine.² If a worker is hurt while lifting an unusually heavy weight, or through a slip, trip, or fall, that is generally considered an accident. But unless it qualifies as an occupational disease, an injury sustained in the course of a worker's usual work is not covered, even if there are significant objective findings, such as bone or soft tissue destruction. In one case, an acute Achilles tendon rupture which occurred during usual work was not covered.

Back injuries and hernias are held to a somewhat less restrictive standard. They must be "the direct result of a specific traumatic incident of the work assigned."³ Under North Carolina law, the acute rupture of a disk during usual work is often compensable. But a gradual disk rupture will often go uncompensated because it was not caused by a specific traumatic incident.

Notice of Injury

Since prior authorization for treatment is generally required, a person who sustains a work-related injury should report it to a supervisor immediately and obtain written permission to seek treatment under Workers' Compensation. The worker is then obligated, in most cases, to provide detailed written notice of the injury to the employer on Industrial Commission Form 18 within 30 days or risk denial of future claims

From P.O. Box 25042, Durham 27702.

for medical attention. Some large companies have in-house versions of Form 18, and some allow a visit to the company physician to constitute notice, but the worker should always cover the bases by giving written notification of an accident.

The employer's obligation is to see that the injured worker gets treatment. The employer usually determines where and from whom the treatment will be received, rarely allowing the worker to select a personal physician. But the patient can seek help on his or her own in three instances: if there is an emergency (which should be documented by the physician involved); if the employer or carrier denies the claim for compensation or refuses authorization; or with the written permission of the employer, carrier, or Industrial Commission.

Payments for Medical Treatments

Authorization for initial treatment may come from the employer, but the insurance carrier will ultimately decide if the claim will be paid. After receiving notice of an injury or disability, the carrier — or the self-insured employer — either pays the related bills or contests them.

Expenses incurred in the treatment of acute injury are seldom contested; the physician can be reasonably certain of compensation in such cases. This is because the carrier can pay medical expenses without admitting liability, leaving itself free to contest payment of future disability claims. But the physician should seek authorization from the carrier before providing continuing or complex care, since this is the only sure way of knowing whether specific treatments or diagnostic tests are covered.

The worker is responsible for medical expenses until the injury is reported and authorization for treatment is obtained, at which point a privately-treated case can be switched to Workers' Compensation. The physician should be certain that the patient is aware of this responsibility.

Occasionally, a physician is paid twice for the same treatment — once by the patient's private insurance and again by workers' compensation. The correct procedure is to refund the first payment directly to the insurance company, not to the worker.

In an uncontested case, a physician who agrees to treat a patient under Workers' Compensation cannot require payment in advance, knowing it will ultimately be received from the carrier. In a contested case, the worker, worker's lawyer, or private insurance company may make payments while liability is being determined or the physician can defer payment. The patient's lawyer can often help decide the best action to take. However, private insurance will often refuse payment if the record suggests the injury is work related.

Frequently, insurance carriers offer a lump sum, called a "clincher," to relieve themselves of future liability. All such settlements must be approved by the Industrial Commission, and all must include payment of outstanding medical expenses. Clinchers can look very attractive, but aren't

always adequate to cover future expenses and should, therefore, be evaluated carefully by the injured worker.

Job Security

In North Carolina, a worker cannot be fired for filing a Workers' Compensation claim, but inability to work — or the employer's inability to hold a job open through a convalescence — are legitimate grounds for dismissal. A worker can also be fired because of a permanent disability, except where handicap protections apply. Union members are protected in many cases, and large companies are less likely than small ones to fire an employee for missing work, but the average North Carolina worker neither belongs to a union nor works for a large corporation. There is no recourse for him or her.

Under these circumstances, some people are reluctant to miss work, apply for temporary disability, or even to report an accident. Many will avoid filing claims until medical costs outstrip their personal resources.

Physicians should bear in mind that the worker decides whether or not to seek coverage under Workers' Compensation and often has excellent reasons for choosing to pay for treatment of minor injuries privately. The physician should take care not to bill Workers' Compensation indiscriminately, as he or she would any other insurance policy. But, if an injury is work related, that should be charted even when the patient pays medical bills privately.

Industrial Commission Form 25M

When a patient does file a claim under Workers' Compensation, the physician applies for payment by sending Industrial Commission Form 25M to the carrier, which forwards it to the Industrial Commission. The Commission reviews all claims and decides whether fees charged for service rendered are reasonable. A list of approved fees appears in the Fee Schedule.⁴ Separate copies of Form 25M, or a duplicate of the original with updated attachments, must be submitted each time the doctor sees the patient. Copies of all documents related to a patient's case should be sent directly to the patient so he or she will know where matters stand at any given time.

The carrier is most interested in two basic facts: the nature and motivation of specific treatments and the date the patient can return to work. If this information is not provided, clarification will be requested. Sending a copy of the medical notes along with Form 25M is the surest way to avoid this time-wasting exchange of paper. It also protects the worker from unnecessary expense, since the time spent preparing medical reports for the carrier cannot be charged to Workers' Compensation and the patient often ends up footing the bill for endless reclarifications.

The form itself needs some clarification. Line 14, for

instance, asks physicians to list procedures performed by number; those numbers can be found on the Fee Schedule.⁴ Line 20 requires special caution: before indicating that a patient has suffered permanent disability the doctor should give full consideration to all reasonable possibilities for improvement. And on line 22, which asks when the worker can return to the job, answers like “don’t know” or “will see in follow-up” are preferable to a hard and fast date until the physician is certain that no further treatment is necessary. Once submitted, a date is hard to change.

Deadline for Filing Claims

All claims for payment of medical costs and wage benefits must be made within two years of the accident. If the worker fails to comply with this deadline he or she forfeits the right to file a claim with the Industrial Commission and the physician cannot ask for payment under Workers’ Compensation.

Medical Record of Injuries

The physician plays a crucial role in determining whether a worker qualifies for Workers’ Compensation benefits. Keeping an accurate medical history is, therefore, one of the most important things a doctor can do for a patient.

The *history* should include a description of the accident, including where and when it took place, and a description of any preexisting or related injuries or disabilities. The carrier will need enough facts to determine whether or not the injury resulted from an accident or unusual occurrence in the workplace, but any differences between the worker’s version of the accident — as described on Form 18 — and the physician’s history can be used to contest or deny the claim.

Industrial Commission officials appreciate a complete medical record; the history is regarded as one of the more reliable prior hearsay documents at Commission hearings. An incomplete or inaccurate history can seriously jeopardize the patient’s chances for a favorable hearing.

One of the first questions to ask a patient is whether the injury is work-related. If the patient thinks an injury is minor, he or she may not report it, seeking private treatment instead. But when the injury gets worse, it is often too late to call it work-related and get compensation. And while it is true that the patient is ultimately responsible for reporting an accident in time to secure the right to future compensation, the physician can save a great deal of heartache by documenting the patient’s history of work-relatedness.

The *physical examination*, as it pertains to the injury, should be fully documented. All pertinent physical signs of injury should be recorded, even if the diagnosis is obvious without them.

The *assessment* is also important and should include an

accurate description of the injury. If the physician has an opinion that the injury is work-related, he or she should say so. Written assessments of improvement or deterioration in the patient’s condition need to be made after every follow-up examination.

The *plan* should include what the physician did and why and an outline of the required treatment. It should also indicate when the patient can return to work — or why the physician cannot make that determination — and when follow-up examinations will take place. These appointments must be no more than two months apart, and an employee’s failure to appear for scheduled follow-up exams may result in termination of employment and compensation.

The physician determines when *maximum medical improvement* has occurred, and with it, the end of Temporary Disability benefits. This determination should never be made lightly or without thorough consideration. In the past, North Carolina Workers’ Compensation did not cover medical expenses for injuries that were not improving, but a recent North Carolina Supreme Court decision, *Little v. Penn-Ventilator*, held that continuing care and medically indicated monitoring are covered under the “give relief” clause.⁵

Shifts in the latitude of coverage belong to an emerging area of law, so any final medical notes on a particular case should include recommendations for future care, observation and monitoring.

The medical record in compensation cases is open to the worker, the insurance carrier, the Industrial Commission and the employer. Refusal by the worker to release records results in refusal of compensation.

Referrals

The primary doctor can give any treatment or referrals “reasonably” needed to “effect a cure or give relief.”⁶ Requests for consultations with specialists are almost always approved if the physician maintains that the treatment or rehabilitation technique — artificial limbs, special beds, nursing care, vocational rehabilitation or counseling, physical therapy, pain clinics, psychological counseling, etc. — is “medically necessary.” The doctor must document all referral recommendations, be clear about their purposes and be prepared to back them up.

The worker can request a change of physician. This request must be approved by the Industrial Commission, and is usually approved only for appropriate specialists.

Second Opinions

The worker has a right to seek a second opinion, usually at his or her own expense, if the existence or extent of an injury is in dispute. Legal help is often needed to obtain Commission approval for treatments that are not recommended by the primary physician, but a secondary physician

selected by the patient is allowed to offer opinions at Commission hearings.

Sometimes the employer or Commission requests a second opinion. Though the worker's own physician may be present at this examination, the worker cannot refuse to be examined without losing benefits.

Hearings

If a claim is contested, the physician will probably be required to give an "opinion," either at a deposition or at a Commission hearing. The hearing resembles a trial, with lawyers for the insurance carrier and the worker and a deputy commissioner acting as the judge.

Since medical payments for acute injury are rarely contested, most hearings take place over issues such as continuing treatments, wage benefits and disability benefits. It is on these topics that the physician is usually called to testify.

The opinion should state the presumed cause of the injury in question, its work relatedness, the indicated treatments and their extent, observed improvements or aggravations and the extent of any determined disability.

A physician cannot be compelled to attend a hearing outside his or her county of practice, and a deposition may be taken in that county. Payment for time spent giving either form of testimony is determined by the presiding deputy commissioner.

Hearings, which only take place after all other methods of reconciliation are exhausted, can be frustrating for physicians. Written documents, including medical records, are inadmissible as evidence unless the writer is present to assure their authenticity.

Most lawyers and commissioners are sensitive to the fact that a doctor's time is valuable and will make prior arrangements for the physician to be on telephone standby for the hearing. The doctor can also expect two to three weeks' notice of a hearing. A short consultation with the attorney prior to the hearing is customary to let the doctor know what questions to expect.⁷ Physicians with much volume in compensation cases may be able to avoid hearings by conferring with attorneys.

The legal system moves in mysterious ways, and hearings are often waived or continued without notifying the physician. Unless the doctor makes prior arrangements for telephone standby he or she can expect to sit for several hours waiting for the case to be called.

Once at the hearing, the physician should stick to offering medical opinions and avoid being drawn into the dispute. However, since facts are often at issue, hypothetical questions are appropriate and should be answered carefully.

Temporary Disability

If a worker's injury requires seven or more days of convalescence or light duty at lower pay, the worker can file

for temporary wage benefits of two-thirds of the average lost wages (up to \$339 per week) under Workers' Compensation. These benefits are frequently contested, so the physician's assessment is most important here.

The assessment should state clearly why the worker is disabled and the extent of the disability, and give the physician's opinion of the work-relatedness of the injury.

North Carolina National Guard, deputy sheriffs, and State Highway Patrol have special disability rules, and should consult their employers or a lawyer for details.

Light Duty

If, in the doctor's opinion, there is a risk of further injury at work, the patient should be kept at home or in the hospital. But if reduced duties are appropriate, and if the employer has such duties available, the physician can help by being specific about what the injured person can and cannot do. Recommending "light duty" is not enough, because it leaves the determination of what constitutes light duty to people who are unqualified to make medical judgments. Workers on light duty have been fired for refusing to lift a weight they feared would cause reinjury, but the supervisor felt would not. Large companies with on-site health offices are often better at providing and enforcing light duty.

It is best to be specific. Sending a patient back to work with instructions such as "no use of the left arm," "no lifting over 10 lbs.," "no standing more than 30 minutes without a five-minute break," is the best use of the physician's authority. If the worker is then reinjured while work restrictions are in place, he or she has some recourse.

Permanent Disability

Impairment is determined by physicians. *Disability* is determined by administrators. These terms are frequently confused, especially in legal phrasing.⁸

Medical impairment describes functional loss and is the same for all workers with identical injuries. Examples include exertional capacity, environmental limitations and permanent injury to body parts or organs.

Disability describes the effect on the worker's wage-earning capacities, and will depend on his or her age, skills, opportunities for vocational rehabilitation *and* medical impairment.

Social Security and Medicare Disability, which may be necessary for injuries or continuing treatments not covered by Workers' Compensation, may carry their own criteria, quite apart from Workers' Compensation Disability. Information should be sought from a Social Security Administration office or a lawyer.

Permanent (or Lifetime) Total or Partial Disability is established when a worker reaches maximum recovery from an injury, but retains an impairment. The physician may be

asked to evaluate impairment alone or to lend an opinion in the broader consideration of disability, and he or she should know which question applies.

In North Carolina, every impairment is seated in a specific body part or organ and has a statutory rate and duration for compensation. For example, 100% impairment of the hand is compensated at two-thirds of the worker's average weekly salary (up to \$339 per week) paid for 200 weeks. Fifty percent impairment halves the compensation.

The percentage impairment of the body part is called a "rating." Ratings are usually determined by physicians hired by the carrier. The American Medical Association Guide to the Evaluation of Permanent Impairment,⁹ and the Fee Schedule, are two useful guides to ratings. The physician should discuss the rating with the worker.

If a worker disagrees with the rating, he or she may obtain a second opinion. If another rating is offered by the secondary physician, the Industrial Commission either accepts one of the two or works out a compromise, usually in a hearing. Again, the testimony of physicians is vital and should be clear and specific.

Total Permanent Disability carries lifetime compensation, but maximum rate and total disability findings are rare.

In the past, compensation was limited to the number of weeks prescribed by the ratings, but two recent cases, *Fleming v. K-Mart* and *Whitley v. Columbia Lumber Co.*, called that automatic practice into question.¹⁰ Now, a worker's total impairment must be considered in any determination of total disability. An unskilled older worker who loses her right hand may never find work again, but unless she is found to be totally disabled, her benefits will end after 200 weeks. The court decisions cited above are designed to keep such workers from falling through the cracks, and physicians should be familiar with their implications.

Scars may also earn compensation. Those of the head or face are compensated almost automatically, but body scars must be shown (usually by a physician's testimony) to affect earning capacity, and compensation for them depends on such factors as level of pain, diminution of future earning power, embarrassment and visibility. Scars on a rated limb are not separately compensated.

A lawyer is usually needed to negotiate settlements where scars are concerned.

Occupational Disease

Ninety percent of all occupational disease claims are contested.¹

At one time occupational diseases were limited to those found on a statutory list, but G.S. 97-53(13) covers "any disease . . . which is proven to be due to causes and conditions which are characteristic of and peculiar to a particular trade, occupation or employment. . . ." This covers all occupational diseases.

If a physician suspects occupational disease, he or she

should take some specific actions. First, make sure the patient is aware of the two-year time limit for filing claims (see below). Second, take detailed work and medical histories, paying particular attention to the time course and clinical symptoms of the disease and their relationship to work exposures or activities. Third, refer the patient to an expert who can confirm the diagnosis and perform specialized tests where necessary.

Occupational disease is difficult to prove, and once again, a doctor can make or break a patient's case. The primary physician's opinions are accorded much weight by the Industrial Commission and are enhanced when an accurate, detailed medical history has been kept.

A patient with advanced disease may die in the course of litigation. In that instance, the case will depend on the medical history.

The primary physician need not have recognized the work-relatedness of a disease for the history to be useful. Bronchitis may be noted, documented and treated for years before the occupational nature of the disease "COPD" (chronic obstructive pulmonary disease) becomes clear.

The primary doctor's record can also reveal the presence of underlying or aggravating conditions. The specialist then confirms the diagnosis and also gives an opinion on causation.

Physicians view *causation* differently from administrators, lawyers, and judges, which can be confusing for all concerned.¹¹ In the civil law applying to occupational disease, showing causation means establishing that factors peculiar to the worker's occupation "increased the risk" of contracting a disease and "significantly contributed" to the disease's development. If an exposure or accident at work aggravated a pre-existing medical condition, that exposure or accident becomes a legal cause of the problem, even though most physicians view the underlying condition as the *medical* cause.

Physicians also seek medical certainty, whereas legal experts must settle for such imprecise terms as "probability," "reasonable medical certainty," "more likely than not" and "evidence strongly suggests." A probability of 51% is sufficient for legal causation — quite a departure from the familiar "beyond a reasonable doubt" terminology found in criminal trials.

Further complicating the definition of causation is the fact that if a worker has been exposed to a disease in several workplaces, the last employer or carrier during exposure is liable to pay compensation, no matter how infinitesimally the last exposure contributed to the disease in question.

Patients with silicosis, asbestosis, lead poisoning and hearing loss should seek clarification of the special rules and time limits which apply.

Two-Year Time Limit

The physician has a legal and ethical duty to inform a patient

of an occupational disease diagnosis so that treatment can be initiated and further exposure minimized.

Once a patient has been told, he or she must notify the employer within 30 days and, more importantly, has only *two years* to file an occupational disease claim. Severely affected workers have been denied compensation because they were unaware of this deadline, so the physician should bear some of the responsibility for the patient's future by making sure he or she files in time. The doctor can satisfy ethical obligations by having the patient write to the Industrial Commission for complete and up-to-date information and by urging the patient to consult a lawyer. Everything a doctor does along these lines should be fully documented, since the grounds under which an occupational disease claim may be rejected are many and varied.

Conclusion

The North Carolina Workers' Compensation system is a legal specialty, just as disability determination is rapidly becoming a medical specialty. Both doctors and patients may need good advice to take best advantage of Workers' Compensation, and such advice is available. Questions and problems should be addressed to the North Carolina Industrial Commission, to attorneys versed in Workers' Compensation, to workers' organizations and to physicians with Workers' Compensation experience. ■

Acknowledgments

Woodhall Stopford, M.D., M.S.P.H., Carolyn McAllaster, J.D., Charles Hassel, J.D., Angela Bryant, past deputy

commissioner of the Industrial Commission, and Sally Baker, all provided many helpful comments and suggestions.

References

- 1 Miller S. Workers' Compensation handbook. Durham: North Carolina Occupational Safety & Health Project, 1984. (Available from: NCOSH (North Carolina Occupational Safety and Health Project), P.O. Box 2514, Durham 27705, 919/286-9249.)
- 2 North Carolina Industrial Commission. North Carolina Workers' Compensation Act annotated. Michie Company, 1984, GS 97-2, GS 97-52. (Both the Act and Fee Schedule below are available from: North Carolina Industrial Commission, Dobbs Building, 430 N. Salisbury Street, Raleigh 27611, 919/733-4820.)
- 3 GS 97-2, op cit.
- 4 North Carolina Industrial Commission. Fee Schedule for physicians and hospitals for services rendered under the North Carolina Workers' Compensation Act, 1986.
- 5 *Little v. Penn-Ventilator*, 345 S.E. 2d 204 (1986).
- 6 GS 97-52, op cit.
- 7 North Carolina Medical Society and the North Carolina Bar Association. Medico-legal guidelines of North Carolina, 1986. (Available from: North Carolina Medical Society, 222 N. Person St., P.O. Box 27167, Raleigh 27611, 919/833-3836.)
- 8 Kanner R. Impairment and disability evaluation: an overview. Chapter 6 in Environmental and occupational medicine, Rom W (Ed). Boston: Little, Brown & Co., 1983.
- 9 American Medical Association Committee on Rating of Mental and Physical Impairment. Guides to the evaluation of permanent impairment, 1984. (Available from: Order Department, OP 254, American Medical Association, P.O. Box 10946, Chicago, IL 53566, 312/280-7168.)
- 10 *Fleming v. K-Mart*, 324 S.E. 2d 214 (1985); *Whitley v. Columbia Lumber Co.*, 348 S.E. 2d 204 (1986).
- 11 Danner D. Medicolegal causation: a source of professional misunderstanding. Am J Law and Medicine 1977;3:303-8.



A better alternative for hypertensives who are going bananas...

Spare your patients the extra cost—
in calories, sodium and dollars.

Spare your patients the rigors of
dietary K⁺ supplementation.

DYAZIDE[®]

25mg Hydrochlorothiazide/50mg Triamterene/SKF

Effective antihypertensive
therapy...without
the bananas

DAW
'DYAZIDE' AS WRITTEN.

* Not for initial therapy. See brief summary.

Before prescribing, see complete
prescribing information in
SK&F CO. literature or PDR.
The following is a brief summary.

WARNING

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K⁺ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K⁺ intake. Associated widened QRS complex or arrhythmia requires prompt additional therapy. Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or

without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.

Precautions: The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of triamterene and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Angiotensin-converting enzyme (ACE) inhibitors can elevate serum potassium; use with caution with 'Dyazide'. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin (ACTH)). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The

following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function. Thiazides may add to or potentiate the action of other antihypertensive drugs. Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting; diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.

Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak™ unit-of-use bottles of 100.

BRS-DZ-L45

a product of
SK&F CO.
Cidra, P.R. 00639

© SK&F Co., 1987.



First hundreds...



Then thousands...

Soon more than a million.

Soon more than a million insulin users will be taking Humulin.


And no wonder. Humulin is identical to the insulin produced by the human pancreas—except that it is made by rDNA technology.

Humulin is not derived from animal pancreases. So it contains none of the animal-source pancreatic impurities that may contribute to insulin allergies or immunogenicity.

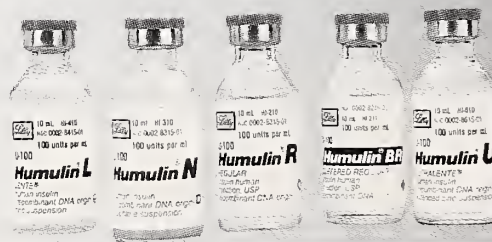
The clinical significance of insulin antibodies in the complications of diabetes is uncertain at this time. However, high antibody titers have been shown to decrease the small amounts of endogenous insulin secretion some insulin users still have. The lower immunogenicity of Humulin has been shown to result in lower insulin antibody titers; thus, Humulin may help to prolong endogenous insulin production in some patients.

Any change of insulin should be made cautiously and only under medical supervision. Changes in refinement, purity, strength, brand (manufacturer), type (regular, NPH, Lente®, etc), species/source (beef, pork, beef-pork, or human), and/or method of manufacture (recombinant DNA versus animal-source insulin) may result in the need for a change in dosage.

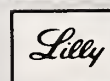
DIET...EXERCISE...

Humulin® 
human insulin
(recombinant DNA origin)

For your insulin-using patients



Lilly Leadership
IN DIABETES CARE



Eli Lilly and Company
Indianapolis, Indiana
46285

© 1987, ELI LILLY AND COMPANY

HI-2907-B

849313

Now America's oldest professional liability insurer has come to North Carolina.

The newest professional liability insurer in North Carolina is the oldest in the nation. The Medical Protective Company pioneered the concept of professional protection before the turn of the century and has been serving doctors exclusively ever since. Through good times and bad.

With the current liability crisis escalating, you need to take a close look at your coverage and the company that stands behind it. Then take a close look at us. You'll see we carry the highest

rating from A.M. Best, the firm that tracks the financial stability of insurance companies nationwide. Beyond that, you'll find complete protection at premium rates that are likely lower than you're currently paying. Plus the personal attention and claims prevention assistance you deserve.

Contact Stu Mitchelson today at 704/541-8020. He's the oldest company's representative in its newest state. And he's here to serve you.

**THE
MEDICAL PROTECTIVE COMPANY**

FORT WAYNE, INDIANA

Stuart Mitchelson, P.O. Box 13489
Charlotte, North Carolina 28211, (704) 541-8020

Emergency Medical Technicians' Exposure to AIDS and Hepatitis

Current Infection Control Practices in North Carolina

Kathleen A. Cline, M.D.

The need for infection control practices among ancillary healthcare personnel, specifically emergency medical technicians (EMTs), is great. Our recent survey collected information on infection control policies for EMTs who deal with AIDS (acquired immune deficiency syndrome) and hepatitis patients.

The study population consisted of the 75 Advanced Life Support Medical Directors in North Carolina. These are physicians who are intimately involved with the administration of prehospital squads functioning at the EMT-Intermediate, Advanced-Intermediate and Paramedic levels. They each received a six-item questionnaire in May 1987, and one reminder letter in June. Fifty-three completed questionnaires were returned over a three-month period, representing 71% of the study population. The results are summarized in table 1 (next page).

The questions covered three areas: caring for previously diagnosed patients; caring for patients with infection but without diagnosis at the time of contact ("innocent exposure"); and policies regarding infection control for prehospital personnel. Those respondents having written policies were asked to briefly describe them.

Survey Results and Discussion

Sixteen medical directors had written policies that were in place at the time of the survey. Ten of the policies address the problem of accidental needlesticks; eight address isolation precautions; two include subsidized vaccination against hepatitis B; and one addresses "innocent exposure," where the unknowing EMT is later sought out by the hospital health service.

Prompted by our EMTs' concern over potential exposure to AIDS, this survey looks at a large group of health care personnel. The majority of EMTs are not formally employed

by any health care institute and thus are on the periphery of the epidemiologist's network. However, awareness of prehospital personnel exposure to infectious diseases is increasing, if the avid interest shown by our medical director respondents is any indication.

In the majority of systems, prehospital personnel take isolationary precautions (item one). However, this study did not inquire about detailed procedures for these diseases. The appropriateness of specific measures needs to be looked at. For example, a 1984 study showed that while hospital employees had a good idea of how AIDS is transmitted and who is at risk, they had poorer comprehension of infection control precautions. Even physicians and nurses were uncertain about the routine use of masks, gowns and gloves.¹ This may be due to the fact that the media have been the primary source of education about AIDS for most people.

In 74% of the systems, nurses inform EMTs that the EMTs are transporting, or have just transported, a patient who has infectious potential. This means that such information may often come after the fact. In 8% of systems, the EMTs find out from the patient's family or friends.

It is interesting to note that there is less consistency in informing EMTs retrospectively of exposure to a patient who is later diagnosed (item three). A variety of people are held responsible for such information (item four). Since most respondents gave more than one answer, it seems that no single group is held accountable. The necessity of such a network could be challenged, since most cases of occupationally acquired AIDS or hepatitis have been associated with blood exposure, and the EMT would presumably take it upon himself or herself to report incidents such as needlesticks.

Furthermore, the duty of medical follow-up falls largely to the EMT's personal physician. This may be by choice, but it leads one to wonder if the EMS system should not provide a formalized means for such follow-up. It would be intriguing to find out if such care qualifies for worker's compensation.

The majority (67%) of EMS systems in North Carolina lack any written policy concerning infectious disease pre-

From The Department of Emergency Medicine, East Carolina University School of Medicine, Pitt County Memorial Hospital, Greenville 27858-4354.

Table 1
EMT Infection control practices: survey and results

- I. This section concerns the transport of patients known to have one of the two diseases listed (hepatitis, AIDS).
 1. When transporting patients known to have contagious diseases, do prehospital personnel in your area take special isolationary precautions?
44% Always 44% Usually 10% Occasionally 2% Never
 2. In most cases, how do prehospital personnel know of a contagious disease in a patient they transport? (Multiple responses)
**16% They find out from the chart
 74% Nursing informs them
 44% Physician informs them
 10% Other: (8% Patient or family, 2% Hospital Infection Control)**
- II. This section concerns the transport of patients for evaluation who are *subsequently diagnosed* with a contagious disease.
 3. Are prehospital personnel advised of their exposure to a patient who was subsequently diagnosed with a contagious disease?
35% Always 50% Usually 14% Occasionally 0% Never
 4. Who usually informs prehospital personnel of such exposure (Multiple responses)
**20% EMS Medical Director
 38% E.D. Physician on duty
 4% Patient's private physician
 52% Hospital health service
 28% Nursing
 6% Other: (2% "Anyone," 2% Health Department, 2% Neighbor)**
 5. Who does the EMT see for medical followup? (Multiple responses)
**24% EMS Medical Director
 45% E.D. Physician on duty
 53% EMT's personal physician
 18% Hospital health service
 2% Other: (2% Health Department)**
- III. This section concerns EMS policies for your system.
 6. Do you have a written policy that addresses contagious disease exposure for prehospital personnel?
33% Yes 67% No (6% have policy in development)
 If you checked "yes" please briefly describe the policy.
**21% address accidental needlesticks
 16% address isolation procedures
 4% include hepatitis immunization
 2% address innocent exposure**

cautions for prehospital personnel, although three of the directors who had no policy stated that they were currently developing one. The procedures outlined by the state Office of Emergency Medical Services² covers EMT hygiene and equipment care for patients with known disease, but does not specifically address accidental needlesticks, vaccination or notification of "innocent exposure."

Our EMTs are an integral part of the emergency health-care network, and they are appropriately concerned about occupational hazards such as infectious diseases. As medical directors we are ethically obliged to pursue this issue and develop reasonable guidelines for our system.

At Pitt County Memorial Hospital, we have specific policies for isolation precautions, equipment care, accidental needlesticks, and hepatitis immunization (which we chose not to provide routinely). We are currently establishing an "innocent exposure" notification procedure via the hospital epidemiologist, the county fire marshal, and the county health department.

All of us who choose to care for the ill and injured do so knowing that there is a degree of personal risk. By educating EMTs in infectious disease precautions, and developing contingency plans for notifying them of exposure, we can reduce their risk so that they can continue to provide sensitive, exemplary care without hesitation. ■

References

- 1 Valenti WM, Anarella JP. Survey of hospital personnel on the understanding of the acquired immunodeficiency syndrome. *Am J Infection Control* 1986;14:60-3.
- 2 Glass FW. Care and transport of patients with AIDS and hepatitis B. *Emergency Medical Services News*. NC Office of Emergency Medical Services. 1985;12:1-3.

For professionals, a major disability or illness can be financial disaster.

A disability income protection plan from Connecticut Mutual replaces earnings lost because of disability.

Our plan includes:

- high benefit limits that replace more of your income;
- special reduced rates for non-smokers;
- proportionate benefits when you can only work part-time but still

need a full-time income;

- the ability to increase your basic policy benefit as your income increases, regardless of your health;
- reimbursement for vocational and educational expenses during rehabilitation;
- an "Own Occupation" rider that pays full benefits if you are unable to perform the main duties of your own occupation, even if you earn income from a different job or business;
- we can also pay dividends that

reduce the cost of your coverage.

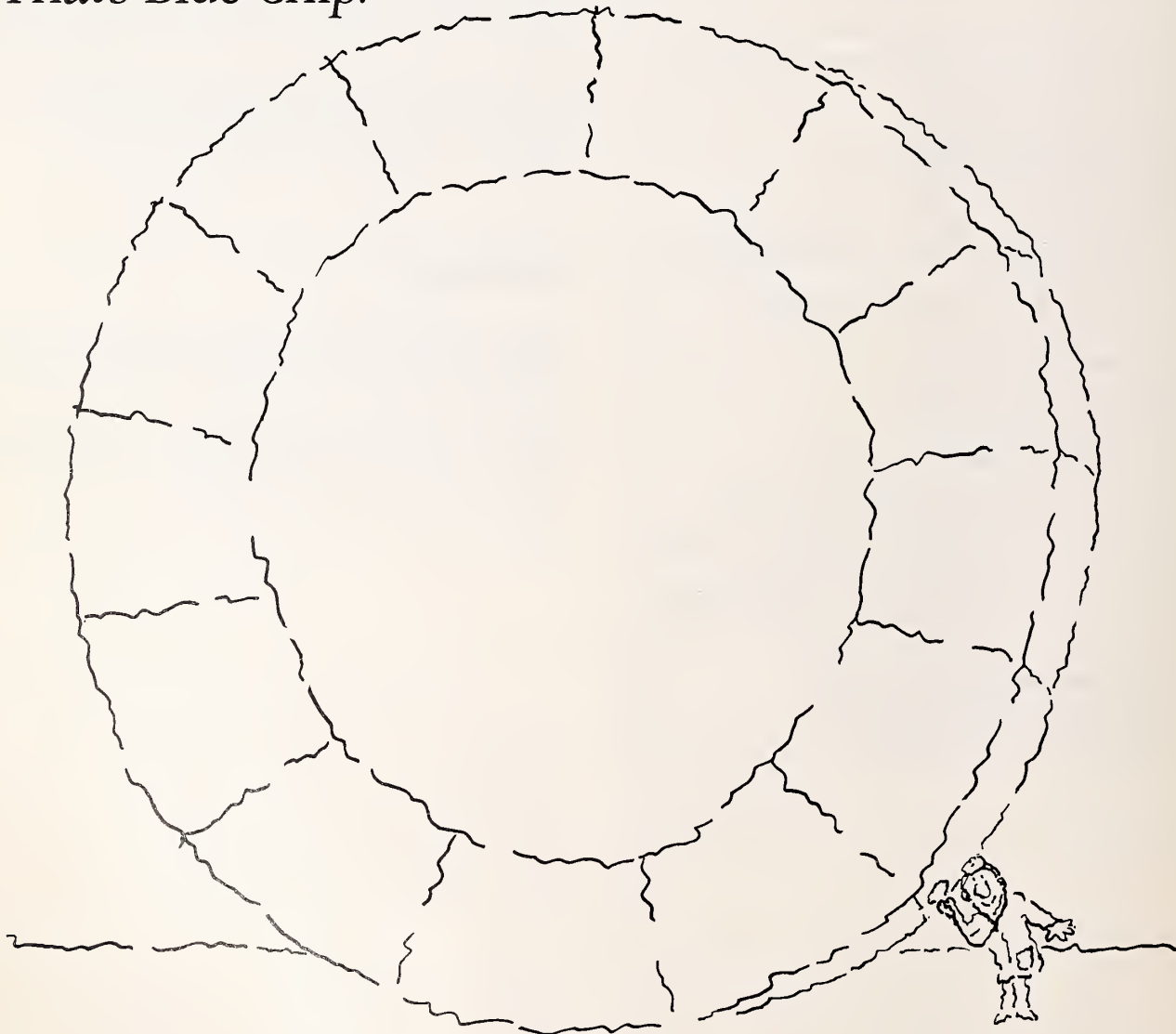
Call today to find out how we can custom design a Blue Chip protection plan to keep your income healthy.

The Hinrichs Financial Group

1600 Charlotte Plaza
Charlotte, NC 28244
(704) 371-8600

An affiliate of the  **Allyance**

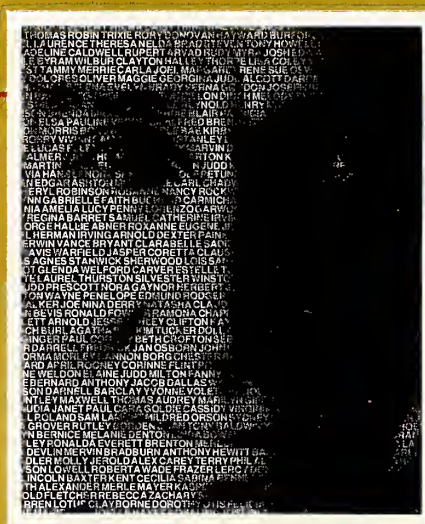
*Disability insurance that keeps your income healthy.
That's Blue Chip.*



Connecticut Mutual Life Insurance Company (Hartford CT)

EXPECT YOUR NEXT PATIENT ON INDERAL® LA TO...

(PROPRANOLOL HCl)
LONG ACTING CAPSULES 60, 80, 120, 160 mg



MILL

[illegible]

ON

...like the more than one million patients who have received **INDERAL® LA**.

In a recent survey, 4,120 participating physicians gave us their views¹ on **INDERAL LA** in the treatment of hypertension, angina and migraine.

INDERAL LA is their preferred beta blocker

...of the nearly three out of four physicians responding to the questionnaire, an impressive 97% rated **INDERAL LA** good to excellent for overall performance. Virtually all cited efficacy, tolerability, long-term cardiovascular protection and once-daily convenience as important factors in their choosing to prescribe **INDERAL LA**.

INDERAL LA promotes patient compliance

...Virtually every responding physician rated patient satisfaction with **INDERAL LA** to be as good as, or better than, other beta blockers.

Like conventional **INDERAL** Tablets, **INDERAL LA** should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree and bronchial asthma.

ONCE-DAILY
INDERAL® LA
 (PROPRANOLOL HCl) **LONG ACTING CAPSULES**
 60, 80, 120, 160 mg

The one you know best keeps looking better

Please see next page for brief summary of prescribing information.

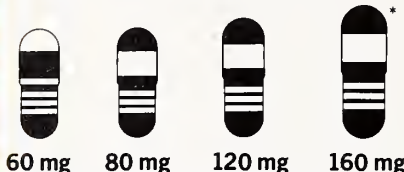
ROBERT KRISTEN ARNOLD
 ARCUS RHODA JEREMY
 LIAN FLOYD ELLIOTT HAF
 MYRA JOSH EDWARD A
 AMMY MERRIE CARLA JO
 LEY IRIS STEPHANIE CHA
 JESSICA BERNARD MA
 BLAIR PATRICIA MIL
 ANNON MORRIS BOND
 AHAME ELEANORE GIN
 MORE CLAY PEARCE G
 NICOLE PETUNIA HA
 LEE CHERYL ROBINS
 VIN HUNTER NEVIN
 TLAND COLEMAN
 ER PAINE JANE SH
 AWLEY KATHERINE
 EIRMA MYLES JULI
 NETTE LAUREL TH
 RANDALL PHYLLIS
 RION JULIUS GLENN
 JESSE ASHLEY CLIF
 ANCHE ROBIN JACO
 RK NOAH STEWART
 ORINNE FLINT PRESL
 RON NORTON JULIE
 SHIRLEY HARPER PE
 OLDIE CASSIDY VIRGI
 NLYDIA GROVER RUTL
 SIBYL NOEL HUMPHR
 L BILL LILLIAN MARLE
 ADE FRAZER LEROY DO
 SMEREDITH ALEXAND
 SMOND TONY HILAR
 ERTA LEONORA BAR
 ENNIS CULLEN TABIT
 RENDAN GUNTHER E
 MARIO JAYNE MELIS
 SPER VITO NICHOLA
 Y JONATHAN SALLY
 ON SEAN WALDEN RO
 RT DIANE JENNIFER LE
 LLEEN DWIGHT MITCH
 INGRID CHANNING LIN
 ANSON ANDREW GALL
 ER ROXANNE ASHBY HAR
 ATRIXIE RORY BAYARD CH
 JOSEPH PAGE JULIE REX RE
 LEONA RUDY MARCUS SLOAN E
 RA DONNA CRAIG ANNE ELMER F
 RAM ADELIN HALLEY MILFORD DE
 ON PRISCILLA WILSON RUPERT HARF
 ATH STEVEN BRONSON JEAN PETER DIA
 NE LORNA ROBERTA NOBLE TOM SABIN
 T MIA BARTLETT BEAU DINAH JIM FRITZ D
 NE CECILIA TAMARA BEN ROSABELLE JU
 LE SIMPSON BERNARD ERROL CORETTA
 VERETT MARGO LENA LORENZO CLIFF RI
 N MARTIN THOMAS TONY COLEMAN LUCIL
 EN REBECCA COURTNEY NICOLE BREWS
 ER RHONDA TURNER MADELINE ELLEN MC
 OWLER JANET TONY THOMAS ROBERT SO
 T ROBIN HARDEN BRETT NEIL BORDEN OT
 T WATSON GEORGIA BARCLAY ODESSA
 ADWICK APRIL TODD ARDEN LAUR
 A MABEL SHERWIN PAT IDA GINA
 ARD ARNOLD HILLIARD SILVES
 ORA DONAHUE EGAN MURRA
 AMDEN EDNA MILES ALBE
 RUSSEL AUDREY ELI DEWE
 RNOLD TONY WILFRED CI
 DAM TYSON LARISSA A
 ON LIBBY OSCAR PH
 OYD PHOEBE ARCH
 IS FRANKLIN LOT
 M RENEE CHA
 AN ZELDA
 AS MEGA
 Y CRY
 SHEE

Feel like a MILLION



ONCE-DAILY
INDERAL[®] LA
(PROPRANOLOL HCl)
LONG ACTING CAPSULES
60, 80, 120, 160 mg

The one you know best
keeps looking better



60 mg 80 mg 120 mg 160 mg

BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)

INDERAL[®] LA brand of propranolol hydrochloride (Long Acting Capsules)

DESCRIPTION. INDERAL LA is formulated to provide a sustained release of propranolol hydrochloride. INDERAL LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure, and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

INDICATIONS AND USAGE. **Hypertension:** INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock; 2) sinus bradycardia and greater than first-degree block; 3) bronchial asthma; 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. **CARDIAC FAILURE:** Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema) — PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T₄ and reverse T₃, and decreasing T₃.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL: Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL (propranolol HCl) is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure, or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenytin, phenobarbitone, and rifampin accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels of both drugs.

Antipyrine and lidocaine have reduced clearance when used concomitantly with propranolol.

Thyroxine may result in a lower than expected T₃ concentration when used concomitantly with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: Bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System: Light-headedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to cataplexy; visual disturbances; hallucinations; vivid dreams; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy, and vivid dreams appear dose related.

Gastrointestinal: Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: Bronchospasm.

Hematologic: Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: Alopecia, LE-like reactions, psoriasisiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg-for-mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION — Dosage must be individualized. The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS — Dosage must be individualized. Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE — Dosage must be individualized. The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximal dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS — 80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE — At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

Reference:

1. Data on file, Ayerst Laboratories.

D7295/188

**WYETH
AYERST**
PHILADELPHIA, PA 19101

© 1988, Wyeth-Ayerst Laboratories.

Hippocratic Nails:

Swelling of the soft tissues at the fingertips characterized by obliteration of the normal angle between the fingernail and the nail base and by convexity of the nail.

Also known as “clubbed” fingers, Hippocratic nails are a component of hypertrophic osteoarthropathy and associated with intrathoracic disease (especially lung cancer), chronic lung sepsis, and chronic interstitial pneumonia. Occurring without osteoarthropathy, they may accompany cyanotic heart disease, infective endocarditis, and some liver and intestinal diseases.



Hippocrates, the “father of physic,” has symbolized for millenia the ideal physician. Unfortunately, little precise information on his life exists. The earliest extant biographies date from centuries after his death. Furthermore, they disagree on many points and reflect the Hippocratic legend as much as the historical person. This has led some historians to question whether Hippocrates really existed. However, references to “Hippocrates the Aesclepiad” in the works of Plato, Aristotle, and other ancients suggest a real Hippocrates who was an eminent practicing physician and author of a number of admirable medical works.

The best information gives us a mere outline of his life. He was born in 460 B.C. on the island of Cos (in the Aegean Sea just west of Asia Minor). He was the son and grandson of physicians. He learned medicine from his father, Heraclides, and started a medical school on Cos. He is said to have conducted his lectures under a large plane tree, charging a fee for his educational services.

Hippocrates lived during the “Golden Age” of Greece. His famous contemporaries included philosophers Democritus and Socrates, Athenian politician Pericles, sculptor Phidias, historians Herodotus and Thucydides, poet Pindar, and the greatest playwrights of the Greek world: Aeschylus, Sophocles, Euripides, and Aristophanes. He was an ardent traveler, visiting many parts of Greece, and received honorary Athenian citizenship. He died in Larissa about 370 B.C., and the legends began. The mythical Hippocrates possessed an almost superhuman wisdom, helped save Greece from foreign invaders, befriended the atomist Democritus, and rid Athens of the Great Plague.

Apart from any legend, Hippocrates’s long-lasting fame in the medical world derives from the Hippocratic Corpus,

a collection of about 60 medical treatises associated with the Hippocratic school dating mostly from 430 B.C. to 380 B.C. Some parts slightly predate this period, including the Hippocratic Oath, now considered a manifesto of the Pythagorean school; others were written decades to centuries after Hippocrates’s death. The Corpus represents the collective work of a school of medical thought; the ancient Greeks were little concerned about individual authorship.

The medical philosophy of the Hippocratic Corpus represents a radical departure from previous medical systems. Hippocrates and his followers rejected the mysticism, religion, and magic that characterized the medicine of their day, believing instead that all diseases were caused by natural phenomena and stressing careful observation as the route to a true knowledge of medicine. To their credit, Hippocratic authors taught that environment and diet had a significant impact on illness, and advocated simple remedies. Many clinical descriptions found in the Hippocratic Corpus remain valid. The description of Hippocratic nails found in *Prognosis* is a good example. Describing empyema, Hippocrates wrote: “The finger-nails become curved and the fingers become warm, especially at their tips.”

It would be a mistake to consider Hippocratic medicine scientific in the modern sense. Hippocrates and his disciples rejected magico-religious medicine, but at the same time shaped medical thought in terms of their own philosophical principles. They were responsible for the humoral pathology based on water, blood, phlegm, and bile, which dominated medical thought up to the nineteenth century. Nevertheless, the rational conception of Hippocratic medicine was a magnificent achievement; with it Hippocrates and his disciples created the foundation of modern medicine. ■

The Number Of Blue Cross and Blue Shield Subscribers Is Reaching Epidemic Proportions.

More and more people are signing up for Blue Cross and Blue Shield coverage at a faster and faster rate. Today we have over a million subscribers in North Carolina.

And when you include subscribers' family members, the number is closer to two million. There are a lot of reasons for that success. But a large part of it is attributable to the variety of plans we offer. We provide a greater choice of group plans than any other carrier in the state. And we're giving



employers the opportunity to let each employee pick a plan that suits him or her best. We also offer coverage to people who don't qualify for group.

So next time you peek into your waiting room, chances are you'll be looking at a room full of our subscribers. Subscribers who have come to us for quality coverage and to you for quality care.



**Blue Cross
Blue Shield**
of North Carolina

The Choice Of Nearly
Two Million North Carolinians.
©1988 Blue Cross and Blue Shield of North Carolina



Medicine — Present and Future

Duncan Yaggy, Ph.D.

The commencement speaker at my college graduation was remarkable. He was brief, he was never pompous and he had a wonderfully sly and wry sense of humor. And his benediction, "an old Chinese saying," seemed just right: "May you live in interesting times."

We all thought that that was terrific. Here we were, full of energy, enthusiasm, and optimism. What better could anyone wish us than to live in interesting times?

And my life was interesting, especially after I got involved in health care 15 years ago. In fact, things became so interesting that after a few years I began to wish that they would become a little less interesting. And then two years ago I had a chance to go to China, where I discovered that the "saying" is in fact regarded as a curse!

Why are these times so interesting for those of us involved in health care? I think it is because we are trying to work and survive at the intersection of an irresistible force and an immovable object.

The irresistible force is comprised of factors that are driving up expenditures for health care. In North Carolina, there are at least five:

- The application of science and technology to the development of new diagnostic and therapeutic modalities. A study recently completed at Massachusetts Institute of Technology discovered that the acquisition of new technology contributed more to the increase in hospital expenditures between 1979 and 1983 than anything else. Why should this be? In other industries, the acquisition of new technology increases efficiency and frequently reduces costs. When an automobile manufacturing plant introduces robots, for example, workers are replaced, and the investment in new machines is more than offset by savings in labor costs. But in health care the introduction of new technology generally adds to costs. The new technology costs more to acquire, to maintain, and to operate than the services in place. And it does not replace those services but complements them. In the auto factory, robots replace workers. In the radiology department, the magnetic resonance imager and its staff are simply added to the existing array of scanners, X-ray machines, and their staffs.

- Growth in the number of patients. The population of North Carolina has grown at the rate of about 1% per year since 1970, and it seems likely to continue growing at least that fast. Moreover, the population is growing older and more in need of health care services. This is partly a result of our own successes, of course. To take one example, for reasons that are not entirely understood, the mortality rate from acute myocardial infarctions has dropped 28% since 1969, which means that lots of people who used to die prematurely and inexpensively from heart attacks survive and live to die of other, more expensive ailments like cancer.

- Changes in patients' circumstances and expectations. North Carolina is urbanizing; people increasingly live and work in cities or suburbs and get their medical care in those more expensive environments. The people of North Carolina are better insured than ever; while more than a million are either uninsured or underinsured, the development of Medicaid, Medicare, and other public programs and increased employment in industries that provide better health insurance have combined to reduce steadily the share of the population without adequate insurance. And the people of North Carolina are growing more sophisticated about health care, and their expectations are rising.

- The increase in the supply of physicians. Since 1972, the number of physicians practicing in North Carolina has increased at the rate of about 5% per year, while the population has increased at about 1% per year. In some quarters, this has sparked concern about a "physician surplus," and the matter was discussed at length at a conference at Duke two years ago. The physicians all seemed to think that there was a surplus, but the economists scolded them, pointing out that a true surplus of physicians will not exist until their services are not saleable at any price. I walked out of the conference behind two North Carolina physicians (one of them was Thad Wester, I think), and I heard one say to the other: "Well, there may not be a surplus, but there sure are too many of them." And how ever many there were then, there are 10% more today.

- Dramatic expansion of health care facilities in North Carolina. The number of hospitals has not increased, but the scope of services they provide certainly has. Meanwhile, ambulatory surgery facilities and clinics, providing on an

From the Director and Chief Planning Officer, Duke University Medical Center, Durham 27710.

outpatient basis services that used to be provided in the hospital, have sprung up all over the state.

Put all these factors together, and what do you get? First and foremost, you get more and better health care for more North Carolinians than ever before. But you also get a steady, relentless increase in expenditures for health care, and that is the irresistible force.

Set against that force is an increasingly immovable object: the determination of payors to reduce the rate at which health care costs increase. They have seen expenditures for health care grow from 4% of the gross national product in 1960 to 11% today. They have also seen the pressure that Medicaid, Medicare, and other public programs exert on public budgets and the effect of corporate expenditures for health care on the cost of American goods and services in the international market. And they have taken action.

For traditional indemnity programs, third-party payors are substituting alternative delivery systems:

- Managed indemnity programs, which introduce devices designed to eliminate unnecessary utilization and to encourage the substitution of less expensive services for more expensive. These devices include: the elimination of admissions on Friday and Saturday for therapy and procedures to begin on Monday or Tuesday; the elimination of admissions for testing that could be performed on an outpatient basis; the elimination of unnecessary surgery through requirements for second opinions; paying physicians more to perform procedures on an outpatient basis than on an inpatient basis; and requiring prior authorization for all but emergency admissions. Requiring prior authorization has been particularly effective; for one large employer, Blue Cross was able to reduce hospital utilization by more than 50% in two years. Overall, hospital utilization by members of North Carolina Blue Cross and Blue Shield was reduced by 25% between 1981 and 1985.

- Preferred provider organizations, which are nothing more than groups of providers which have agreed to discount their charges for the opportunity to provide services. Governments, of course, have required discounts for years, and employers and insurers are now following their example.

- Health maintenance organizations, which combine the utilization control devices of managed indemnity programs with the discounting of preferred provider organizations, in arrangements that pass to providers some of the financial risks carried by the payors.

Although alternative delivery systems have been slow to penetrate North Carolina, their share of the market is now increasing rapidly, and the effects of their success are obvious, particularly to hospital administrators. For acute hospitals in North Carolina, occupancy declined from 78.5% to 64.4% and admissions went down 12% between 1981 and 1985, even though the state's population increased 5% during that period.

Now let's think a little about the future. As a historian, I begin by looking at where we are, trying to understand how we got here, to see whether and how the things that got us here are likely to change. I look first at the irresistible force and ask if it will diminish. To be specific:

- Will the rate of change in medical practice as a result of the application of science and technology go down? If anything, the rate of change is increasing, to the point where clinical chairpersons at Duke will now tell you that they cannot predict with any certainty what the state of the art in their specialties will be five years from now.

- Will the number of patients decrease, or will they become less in need of health care services? The population of North Carolina is virtually certain to grow and to grow older in the years ahead.

- Will patients' circumstances and expectations change in a way that reduces the rate of increase in health care costs? Notwithstanding the growing impact of alternative delivery systems, that seems unlikely. North Carolina will continue to urbanize; insurance coverage will continue to improve; the people of North Carolina will continue to grow more sophisticated. As a result, the demands they put on the health care system are likely to continue increasing.

- Will the supply of physicians stop growing, or grow at a lower rate in the next five or ten years? That too seems unlikely. For the next five years at least, it will probably increase at a rate greater than 5% per year.

- Will the supply of facilities and services be reduced, or grow at a lower rate? Probably not. In fact, it seems likely that competitive pressures will stimulate continued expansion.

So the irresistible force is likely to grow stronger, and the pressures increasing health care expenditures will intensify. Unless, of course, the economy falters, in which case we will have problems of a different kind to cope with.

What about the immovable object? Is that likely to grow more movable? Probably not; if anything, payors are likely to grow even more determined, because:

- The payors have learned that, by becoming prudent buyers in a buyer's market, they can eliminate unnecessary services, substitute less expensive for more expensive services, and compel discounts in the charges that they pay. Figuring that nothing succeeds like success, they will press forward.

- The payors have learned that some providers can be made to accept financial risks.

- Health insurance is an increasingly competitive business. Not only must insurers compete with one another, but they must also compete with providers forming their own insurance arrangements and with employers who are choosing self-insurance.

- The effort to reduce the federal deficit is going to increase the financial pressure on publicly funded programs and intensify the search for savings.
- The effort to reduce the trade deficit and to improve the competitive position of American goods and services in the world economy will reinforce the efforts of corporations and their insurers to cut the rate of increase in expenditures for health care for employees and their dependents.
- The application of computerized analysis to health care data will focus and sharpen the scrutiny of provider behavior. Beginning last July, for example, the North Carolina Medical Database Commission began collecting more than 30 pieces of information about each discharge from an acute or psychiatric hospital in North Carolina, including demographic data about the patient, identification of his employer group or insurer, the name of his physician(s), the diagnosis, the procedures, charges, etc. Using these data, the Commission will generate routine and special reports that will make it possible to analyze with much greater precision than ever before the utilization and costs of hospital services in North Carolina.

In short, the irresistible force is likely to grow stronger, the immovable object is likely to grow more solid, and the stress that providers will experience is likely to intensify.

How can we as providers respond?

We can complain. We can be wistful about the good old days. We can be sorry for ourselves. We can demand that the clock be turned back and that providers be guaranteed reimbursement of their charges. And we can say that everything will go to hell in a handbasket if that isn't done.

The advantage to that approach is that it is entirely familiar. It is the way that physicians and hospitals have reacted to stress and to proposals for change over the last 25 years. It is a song that we know how to sing.

There are, however, three problems with that approach:

- It makes us sound entirely self-serving, and that makes it difficult to attract the support of patients and payors.
- Our predictions of doom and disaster in the face of impending change have turned out to be wrong too often. To take but one example, when Medicare introduced its prospective payment system four years ago, there were predictions that 30 to 40 small hospitals would close within a few years. In fact, only one has closed, and its demise had nothing to do with Medicare.
- Wishing and protesting are not going to make the irresistible force or the immovable object go away. The fact is that they represent values that the vast majority of Americans hold dear. On the one hand, Americans believe that people who need health care ought to get it, and that they ought to get good health care, not second-rate care. On the other hand, Americans also believe that people ought not to get more services than are needed and that they ought not to pay any more for them than necessary.

- If we spend our time weeping, wailing and gnashing our teeth, we will have no time for the business at hand, which is to figure out how to meet our obligations in a responsible manner.

As providers, we need to make a virtue of necessity and participate constructively in a discussion that will grow increasingly difficult and disagreeable. Some of the questions that will dominate conversation over the next five years are already clear:

- How much care and what kinds of care are necessary and appropriate?
- What constitutes good medical practice? Acceptable quality of care?
- How can we divert funds from the provision of unnecessary or unnecessarily expensive services to the provision of services for those with unmet needs?

Our society will struggle with these questions through the years ahead. If we participate constructively in the struggle, we will be able to exert an important influence on the way in which they are answered. If we choose not to participate, or to participate in no more than a self-serving fashion, we are likely to get answers we like even less, and we will have only ourselves to blame.

Postscript

Dr. Stead was kind enough to review the text of my talk for possible publication in the North Carolina Medical Journal. He returned it to me with the suggestion that I add a postscript offering a thought or two about the future.

My crystal ball doesn't work the way it used to, and I stumbled around until I remembered the lessons of my training in history, looked to the past, and recalled a talk by Paul Ellwood, godfather of the HMO.

Speaking at Duke in 1981, Dr. Ellwood described the impact of competition in medicine and of the growth of HMOs on the practice of medicine. He reported research indicating that well organized multi-specialty group practices are better able to compete on price and to cope with HMOs because they can "deliver a comprehensive range of services more efficiently than non-groups. . . ." He cited the experience of the St. Louis Park Medical Center and the Mayo Clinic, which were both achieving utilization rates of "pure prepaid group practices" *before* they became involved with HMOs. And he described "recent studies, which show that group-based HMOs tend to hospitalize less than non-group IPA-HMO models. The rate of admissions for IPA enrollees is 41% higher than for groups, while the number of IPA hospital days per 1,000 is 23% higher than the number for group model enrollees."¹

Ellwood acknowledged that "we do not know the reasons why some multi-specialty groups have succeeded in pro-

viding comprehensive medical care at lower costs than IPAs or the traditional health system," but he reported a "study of the effects of reimbursement on physician hospitalizing behavior which concluded that a cost-effective orientation could be better accomplished through peer interaction fostered by effective medical leadership, than it could by negative financial sanctions."² And he listed some other advantages "for achieving cost-effective practice" that groups enjoy:

"The ability to select each member of the medical group.

The incentive to match the numbers and specialties of group members with the needs of the group's patient population, so that all the members work at or near capacity in their own fields.

Easy, formal, and informal consultation in the office, which can often prevent unnecessary hospitalization.

Extensive resources for outpatient services."²

For Ellwood, the future was already becoming clear in 1981:

"The structure of the health industry will change dramatically as the incentives and mode of payment change.

Multi-specialty group practices will have significant advantages . . .

Solo practitioners may be squeezed out of the medical market unless they can devise arrangements that will allow them to achieve group utilization rates without actually joining groups. (Administrative arrangements with good information systems and utilization controls may provide the necessary mechanisms.)

Hospitals must find a way to profit from predictable shrinkage in inpatient use by becoming involved in the areas to which the action is shifting — primary outpatient care, ambulatory surgery, and so on."³

Ellwood suggests a focus for our efforts that we would do well to consider. In the past few years, physicians and hospitals alike have become deeply involved in the organization and operation of competitive medical plans. We have gotten involved in the insurance business. We are immersed in actuarial analyses, benefit plans, corporate structures, financing schemes, reinsurance provisions, stock offerings, etc. Some of that has been forced on us by the

intrusion of new actors on the North Carolina scene, but some of it we have elected for ourselves.

In the process, we have been drawn into a complex and risky business for which we have no training or experience, and we sometimes lose sight of the larger question Ellwood raised for us: how can we as physicians and hospital administrators work together to increase both the quality and the efficiency of the health care we provide?

With a population that is extraordinarily spread out, North Carolina is likely to remain a state with very few large multi-specialty group practices. Outside Charlotte and a few other cities, solo and small group practices will remain the rule rather than the exception. Can we help those physicians achieve the efficiency of physicians in large multi-specialty groups? Can we help hospitals find roles that are complementary and that allow them to cooperate in a competitive environment?

It may be argued that HMOs and PPOs, especially those organized by physicians and hospitals, are the best means, but I am dubious. Participants in these arrangements seem to end up feeling that they are compelled to focus on the dollar and not on the patient.

The more promising alternative appears to be the development of networking arrangements that link primary care practitioners, small hospitals, subspecialties, and tertiary care centers in systems of care that improve the quality of care for individual patients and maximize the efficiency of providers.

Recent experience suggests that the "supermed" corporations that Ellwood and others have predicted will not soon swallow the physicians and hospitals of North Carolina. I think we should use the time and flexibility remaining to us to develop systems of care that function with the efficiency of corporations but preserve the autonomy and integrity of providers, whether solo practitioners or large hospitals. Only by developing systems like these can we protect our patients and ourselves and prepare for the future.

■

References

- 1 Ellwood P, Jr. Competition: medicine's creeping revolution. In *Financing health care: competition versus regulation*. Cambridge, MA, 1982, pp. 78-80.
- 2 *Ibid.*, 80.
- 3 *Ibid.*, 70,71.

On the Occasional Horror of Being Healed in a Hospital

William B. Blythe, M.D.

Several weeks ago I received a telephone call from the 49-year-old, rustic son of the long-time caretaker on my family's farm up in Virginia.

"Bill, this is Bryant," said a distant, yet urgent, voice. "Daddy had a heart attack last night and they had to take him to the hospital in Halifax. The nurses told mama that he's right bad off, but she ain't been able to talk to no doctor yet.

"The rescue squad come and got him and I heered 'em say that if they hadna give him some octagan, he would'a gone away from here.

"I knowed he was bad sick, and all them machines and needles that they had with 'em almost scared him half to death again."

"Where's your mother, Bryant?" I asked.

"She's at the hospital in what they call the I.C.U. waiting room," he answered.

"I'll give her a call," I said. And I did.

"How's Buck, Kathryn?" I asked.

"Well, I don't know for sure, Bill; the doctor's gonna talk to me some time today, I heard. But I *can* tell you this for sure: he's scared, Bill, and he *don't* like it here."

"Why is he so scared, Kathryn?" I asked.

I think he's scared he's gonna die, and then, he's in the intensive care unit and that's enough to scare anybody. You know, Buck ain't never been out of his own bed — least, so far as I know. And this place is full of machines and noise, and there ain't no part of him that ain't got a tube going in or coming out of something.

"I reckon they know everything that's happening to Buck, 'cause they keep looking at all them machines, but ain't nobody told me nothing."

"I'll come up on Saturday to see Buck," I said. And I went.

I arrived at the hospital, explained my mission, and, after passing the grueling examination necessary for admission to the intensive care unit, was finally admitted to see Mr. Satterfield.

"How are you, Buck?" I enquired.

"Well, I ain't dead yet, and if I knew what all them numbers on them machines mean, I reckon I could tell you how I am. Them things sceer me and I ain't never slept in a room without winders, and the feller right next to me died last night.

"They tell me I went out of my head and they had to tie me down. I ain't never been in no place like this. I believe if'n they'll let me outta here, I'll make it."

After contemplating the profundity of that statement, I answered, "Buck, I think you're right." ■

From Department of Medicine, University of North Carolina School of Medicine, Chapel Hill 27514.

Are You Only Smiling For The Camera?



Or do you know someone who is?

Saint Albans Psychiatric Hospital in Radford, Virginia has been helping people deal with life since 1916. We offer comprehensive programs for adults and adolescents in chemical dependency, eating disorders, depression, out-of-control behavior and other life problems — all supervised by a skillful and compassionate staff.

When you know someone in need of psychiatric help call Saint Albans.

We build real smiles.

*In Virginia: 1-800-572-3120
Outside Virginia: 1-800-368-3468
P.O. Box 3608 Radford, Va., 24143*

 **Saint Albans
Psychiatric Hospital**
Radford, Virginia

NORTH CAROLINA MEDICAL JOURNAL

For Patients

VOLUME 49 / NUMBER 4 / APRIL 1988

What Is the Fragile X Syndrome?

AVE LACHIEWICZ, M.D., CORA HARRISON, M.Ed., GAIL A. SPIRIDIGLIOZZI, Ph.D., NANCY P. CALLANAN, M.S., and JEAN LIVERMORE, ACSW

The fragile X syndrome is the most common known cause of hereditary mental retardation. As many as one in 1,500 males may have this syndrome and one in 750 females may carry the gene for this condition.

The fragile X syndrome is often very difficult to diagnose. Children with the fragile X syndrome look normal at birth and often seem to develop normally for several years. As they grow older, they develop more features of the condition and they become easier to recognize. The purpose of this booklet is to review some of the known features of the fragile X syndrome and to provide a listing of resources.

Reprinted from the booklet, "What Is the Fragile X Syndrome?" which was produced with support from the Duke University Medical Center Child Development Unit, the Civitan International Foundation, and the North Carolina Council on Developmental Disabilities and the funds it receives through Public Law 98-527, the Developmental Disabilities Act of 1984. Copies of the booklet may be purchased by writing the Duke Child Development Unit, Box 3364, Duke University Medical Center, Durham, NC 27710. Illustrations by Nancy Marshburn. Her schematic design of the fragile X chromosome used on the cover was reprinted with the permission of Spectra Publishing Company, Inc., Denver, CO.

What Are the Characteristics of Males with the Fragile X Syndrome?

Males with the fragile X syndrome have several characteristics that help distinguish them from other males. These identifying characteristics are related to their physical appearance, their behavior, their language and their intellectual development. Some males with the fragile X syndrome have most of these characteristics, which help distinguish them readily. Others have only a few of these characteristics and they are much more difficult to identify.

Physical features. Males with the fragile X syndrome may have any of the following physical characteristics: a broad forehead, a long face, enlarged or prominent ears, and a large head size. Many males have enlarged testicles, which become especially noticeable when puberty is entered. Many are double jointed and have flat feet (figure 1; turn page).

Some males have eye problems, especially muscle weakness, and require surgery. Some have curvature of the spine, inguinal hernias, an abnormality of the palate called a cleft palate, or a heart murmur associated with a benign condition called mitral valve prolapse. Some have frequent ear infections.

Since all of these abnormalities occur often in the general population, just one or two of these features might

not make a doctor think of the fragile X syndrome. When several characteristics occur together, the fragile X syndrome should be suspected.

Behavioral characteristics. Certain behavioral characteristics are almost always associated with the fragile X syndrome. We do not know why these behaviors occur but they can be very important clues for diagnosis.

Many males flap their hands or make other unusual hand movements. They may engage in self-stimulatory behaviors like rocking. They may bite their hands or their shirt sleeves and develop callouses on their hands from biting them. Many make poor eye contact and give the impression of being very shy or timid.

Many males with the fragile X syndrome are hyperactive and have difficulty sticking with one activity. They are often very distractible. They are frequently impulsive and act without thinking. These characteristics can be very debilitating to the individual because they impede learning.

Some males seem to have a very difficult time coping with small changes in their lives or in their routines. Frequently, parents report that their children do best when they maintain a highly structured routine.

Some males with the fragile X syndrome have the autistic syndrome. They have abnormal language development and relate to other people poorly. On the other hand, many males with the fragile X syndrome relate well to their families and friends. They are very sensitive and affectionate.

Some males with the fragile X syndrome have severe temper tantrums and violent behaviors.

Language characteristics. Males with the fragile X syndrome have a pattern of speech and language abnormalities that can help distinguish them.

Often their speech has an unusual rhythm called *litany speech*. Some speak very rapidly and some stutter. Most have articulation problems.

Males with the fragile X syndrome often have a problem called *oral-motor incoordination*. They have trouble moving their tongues from side to side and licking their lips. They may have trouble repeating a word with many syllables. They may be unable to produce a complete sentence and speak by using only two or three words at a time. This can cause tremendous frustration.

Many males with the fragile X syndrome have repetitive speech. They talk or ask questions about the same subject over and over. A few have a condition called *echolalia*, which means that they repeat words or statements that others have just said.

Intellectual ability. Most males with the fragile X syndrome are mentally retarded. Some of the younger children function in the average or low average range of intelligence but many of these males seem to earn lower

scores on IQ tests as they get older and the tests begin to assess abstract reasoning skills. By adulthood, it appears that the majority will test in the moderately or severely retarded ranges of intelligence. There is no evidence that males with the fragile X syndrome lose skills as they grow older, but it appears that they fail to acquire some of the advanced skills that IQ tests measure. In spite of these discouraging findings, males with the fragile X syndrome often have very good self-help skills and can do a great deal for themselves. With effective early intervention programs, many may be able to develop valuable independent living and employment skills.

A small group of males with the fragile X syndrome function in the average or low average range of intelligence and do not become mentally retarded. These males have the other characteristics of the condition and their laboratory studies are positive for the fragile X syndrome.

Normal males with the gene for the fragile X syndrome. Some males carry the gene for the fragile X syndrome but they are completely normal. Their laboratory studies are also normal. Researchers are convinced that these males carry the gene for the condition because they come from families with members who have the fragile X syndrome and they transmit the condition to their grandchildren or great-grandchildren. It is not known how these men can be normal when they carry an abnormal gene.

Do Females Have the Fragile X Syndrome?

Yes. Available studies indicate that as many as one in two or 50% of females who carry the gene for the fragile X syndrome will be mentally retarded or have learning problems. The range of mental retardation can be from mild to severe.

Females can also have a short attention span or hyperactivity. Some show the same behavioral characteristics as males with the fragile X syndrome. Autism has also been described in some females with the fragile X syndrome.

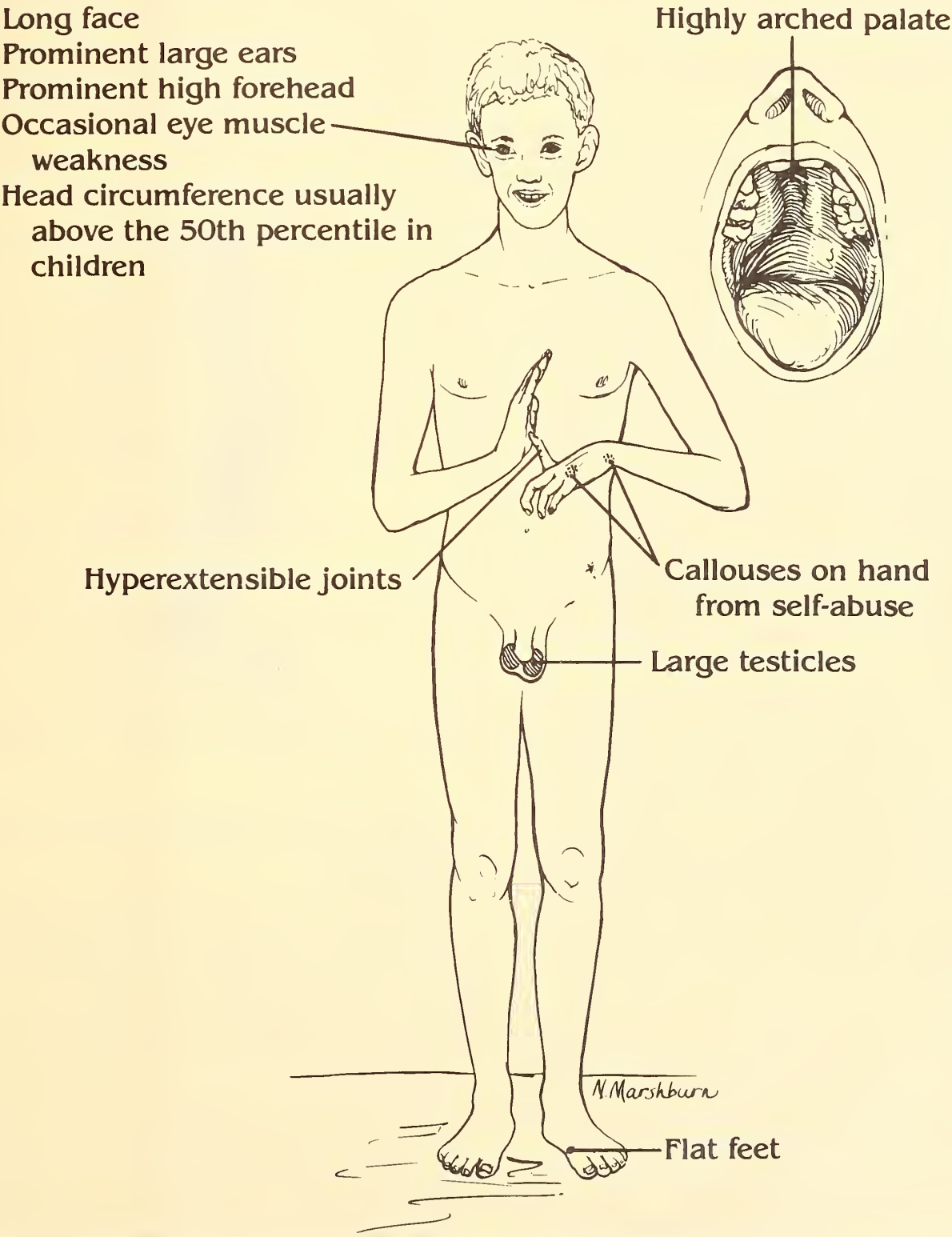
Some females who carry the gene also have some of the same physical characteristics as males with the fragile X syndrome such as enlarged ears; however, most appear completely normal.

Is the Fragile X Syndrome Inherited?

Yes. The main reason why children with the fragile X syndrome should be identified early is because their mothers and female relatives have a high risk of having other children with the fragile X syndrome. To explain how the fragile X syndrome is inherited, it is important to review some information about inheritance (turn page).

Figure 1.

Physical Features of Males with the Fragile X Syndrome



Important Information About Inheritance

- 1 Each cell in our bodies has more than 100,000 genes. We cannot see genes but they determine what each of us will look like and what many of our characteristics will be.
- 2 All of the genes in our cells are located on structures called chromosomes.
- 3 Each person has 23 pairs or 46 chromosomes in each of his cells, except for the cells that are responsible for reproduction.
- 4 The reproductive cells are called the eggs and the sperm and they carry only one set or 23 chromosomes.
- 5 The fertilized egg will receive 23 chromosomes from an egg and 23 chromosomes from a sperm and, therefore, will have 46 chromosomes.
- 6 A fertilized egg with 46 chromosomes will divide into many cells and eventually produce a child.
- 7 One pair of the 46 chromosomes is called the sex chromosomes because one of their main functions is to determine the sex of the individual. The sex chromosomes also have many other functions.
- 8 Males have one sex chromosome called an X chromosome and another sex chromosome called a Y chromosome.
- 9 Females have two X chromosomes.
- 10 An egg always contains one X chromosome.
- 11 A sperm may carry either an X or a Y chromosome.
- 12 If the fertilized egg receives a Y chromosome from the sperm at conception, the offspring will be a male.
- 13 If the fertilized egg receives an X chromosome from the sperm, the offspring will be a female.

Although we still do not know what causes the fragile X syndrome, we believe that the problem results from a defect in one of the genes on the X chromosome. One of the reasons why we believe this is because of the way this condition is passed from generation to generation.

If a woman carries the gene for the fragile X syndrome on one of her two X chromosomes, half of her eggs will have the X chromosome with the gene for the fragile X syndrome. As a result of this, there will be a one in two or a 50% chance that each of her children will carry the abnormal gene.

Men who carry the gene for the fragile X syndrome do not pass the gene to their sons because the sons always receive a Y sex chromosome. They will pass the gene for the fragile X syndrome to all of their daughters because the daughters always receive the X chromosome with the gene for the fragile X syndrome.

Most people who carry the gene for the fragile X syndrome have some degree of impairment. When a male has the gene for the fragile X syndrome in his cells, there is about a four out of five or an 80% chance that he will be mentally retarded. When a female has the gene for the fragile X syndrome in her cells, there is up to a one

in two or a 50% chance that she will be mentally retarded or have learning problems.

Some men carry the gene for the fragile X syndrome and they are completely normal. They usually have normal children; however, their daughters will all receive the gene for the fragile X syndrome. The daughters' children, who receive the gene for the fragile X syndrome, will have a high chance of being affected. Researchers do not understand how some of these people can carry an abnormal gene and be normal.

This information is very complicated. We recommend that families with relatives who have the fragile X syndrome obtain genetic counseling for more detailed information.



Figure 2. A chromosome with a fragile site.

How Do I Know if My Child Has the Fragile X Syndrome?

The fragile X syndrome is diagnosed by a special laboratory test called *karyotyping*. The doctor who is evaluating the child draws blood which is used for the test. The doctor informs the laboratory that he suspects that the child has the fragile X syndrome and a special karyotyping technique is used to confirm the diagnosis. The abnormality that is seen is a *fragile site* at the end of the X chromosome (figure 2). The fragile site is an area on the X chromosome, which appears to be missing some of its genetic material. The fragile site is located near the gene that causes the fragile X syndrome. The fragile site does not show up on all of the X chromosomes with the gene for the fragile X syndrome and laboratory personnel must examine X chromosomes from a large number of white blood cells to find the fragile sites.

Can Females Who Carry the Gene for This Condition Be Detected?

One very difficult problem has been trying to detect females who carry the gene for this condition. Often females who have brothers or cousins with the fragile X syndrome will seek genetic counseling. Sometimes, the X chromosomes in the white blood cells of these females will show the fragile sites. Then these females can be counseled about their risks for having children with the fragile X syndrome. Many females do not demonstrate the fragile sites on their X chromosomes but they may still carry the gene for the fragile X syndrome and be at risk for having children with the fragile X syndrome. Some studies have suggested that the younger a girl is, the greater her chances will be of showing the fragile sites if she is a carrier for this condition. For this reason, we recommend that girls who might carry the gene for the fragile X syndrome be tested when they are young.

A more sophisticated technique called DNA linkage analysis is being used experimentally to detect people who may carry the gene for the fragile X syndrome. This technique may become a very valuable tool for detecting females or males, who could transmit this condition, when their karyotypings have failed to show the fragile sites.

Is Prenatal Diagnosis Available?

In some medical centers, prenatal diagnosis is available. It is suggested that women who may be at risk for having children with the fragile X syndrome obtain counseling about this type of testing before they become pregnant. If they wait until they are pregnant, there may not be enough time to do the necessary studies that would make prenatal diagnosis possible.

Is There Any Treatment for This Condition?

At the present time, there is no cure for the fragile X syndrome. Some treatments, however, are widely used. Many individuals with the fragile X syndrome have been placed on stimulant medications to help control attentional problems and hyperactivity. This has been very helpful for some. Many have been treated with folic acid, a vitamin which is believed to improve the behaviors of some fragile X males. These medications have few negative side effects and are inexpensive.

Some males with the fragile X syndrome have severe behavior problems and may require treatment with other medications. These individuals may need to be followed by a psychiatrist or an individual who is very skilled at treating patients with severe behavior problems. Occasionally, these patients require treatment in a hospital to help manage their behaviors.

Young children with the fragile X syndrome should be evaluated at a facility that specializes in child development. Each child should be seen by a team which includes a physician, a psychologist, a speech pathologist and, possibly, an educational specialist, an occupational therapist or a physical therapist. These professionals evaluate each child individually to learn about the child's strengths and weaknesses. They recommend appropriate interventions for the child. Because individuals with the fragile X syndrome often have some excellent skills, it is important that the individuals' strengths receive as much attention as their weaknesses so that these strengths can be maximized.

What Kind of Research Is Being Done?

Many researchers are trying to learn more about the fragile X syndrome. Some areas of special interest include:

- 1 Searching for better ways to identify individuals with the fragile X syndrome through improved methods of karyotyping and DNA linkage analysis.
- 2 Looking more closely at physical and behavioral characteristics of children with the fragile X syndrome to characterize this condition better.
- 3 Studying ways to help children with the fragile X syndrome improve their speech and language skills.
- 4 Trying various medications to determine whether abnormal behaviors can be improved.
- 5 Trying to define the exact genetic abnormality that causes the fragile X syndrome.

How Can I Learn More About This Condition?

There has been an explosion of literature on this condition over the past few years but much of it is still confined to the genetics journals. Recently, a Fragile X Foundation was formed which has its headquarters in Denver, Colorado. It distributes an informative newsletter which all families who have members with the fragile X syndrome should receive. People who work with individuals with the fragile X syndrome may also profit from reading this newsletter. It is a practical way to keep informed about new developments in this field. This newsletter is available through the Fragile X Foundation, P.O. Box 300233, Denver, Colorado 80203.

In 1983, Drs. Randi Hagerman and Pamela McBogg edited a book called *The Fragile X Syndrome: Diagnosis, Biochemistry, and Intervention* which can be purchased from the Spectra Publishing Company, Inc., P.O. Box 1403, Dillon, Colorado 80435. Although our knowledge about the condition has increased significantly, this book continues to be a good resource.

In addition, most university medical centers will have one or more professionals who are knowledgeable about this condition. These professionals are important resource persons who can provide more detailed information about the fragile X syndrome. They are often

geneticists or developmental pediatricians with a special interest in this condition.

The Association for Retarded Citizens in your area may also be a good source of information and support. ■

Whom Can I Contact in North Carolina for More Information?

In North Carolina, there are many professionals who are familiar with the fragile X syndrome and work with families:

Duke University Medical Center:

Child Development Unit

Ave M. Lachiewicz, M.D.; 919/684-5513

Division of Pediatric Genetics & Metabolism

Stephen G. Kahler, M.D.; 919/684-2036

University of North Carolina at Chapel Hill:

Division of Pediatric Genetics & Metabolism

H. Neil Kirkman, M.D. and

Arthur S. Aylsworth, M.D.; 919/966-4202

Division of Child Psychiatry

Gail A. Spiridigliozzi, Ph.D.; 919/966-5171

Piedmont TEACCH Center

Joanna S. Dalldorf, M.D.; 919/966-5156

Center for Development and Learning

Mary H. Sugioka, M.D. and

Stuart S. Teplin, M.D.; 919/966-5171

Bowman Gray School of Medicine:

Division of Pediatric Genetics & Metabolism

Barbara J. Burton, M.D.; 919/748-4321

East Carolina University School of Medicine:

Division of Pediatric Genetics & Metabolism

Theodore Kushnick, M.D.; 919/551-2525

Charlotte Memorial Hospital & Medical Center:

Clinical Genetics Program

Frank S. Grass, Ph.D.; 704/338-3159

Genetic Associates of North Carolina in Chapel Hill:

Philip Buchanan, Ph.D.; 919/942-0021

Developmental and Behavioral Pediatrics in Chapel Hill:

Joanna S. Dalldorf, M.D.; 919/967-8208

Division of Health Services:

Western Regional Office in Black Mountain

Marna S. Barrett, M.S.; 704/669-3361

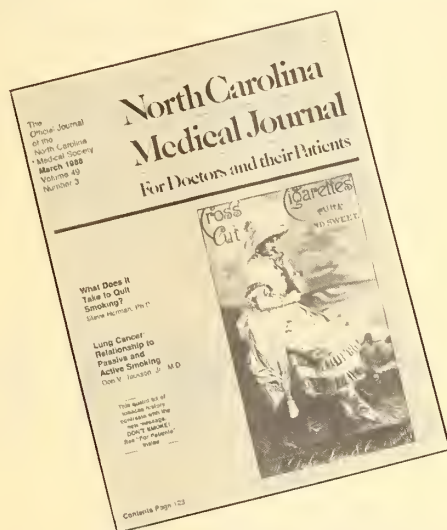
If these centers are not convenient for you, one of the above people may be able to help you contact someone closer to your home, who is familiar with the fragile X syndrome.

Bibliography

- 1 Blomquist HK, Bohman M, Edvinsson SO, et al. Frequency of the fragile X syndrome in infantile autism. A Swedish multicenter study. *Clinical Genetics* 1985;27:113-7.
- 2 Bregman JD, Dykens E, Watson M, et al. Fragile-X syndrome: variability of phenotypic expression. *J Am Acad Child and Adolescent Psychiatry* 1987;26:463-71.
- 3 Carpenter NJ, Leichtman LG, Say B. Fragile X-linked mental retardation. A survey of 65 patients with mental retardation of unknown origin. *Am J Diseases in Children* 1982;136:392-8.
- 4 Chudley AE, Hagerman RJ. Fragile X syndrome. *Journal of Pediatrics* 1987;110:821-31.
- 5 Chudley AE, Knoll J, Gerrand JW, et al. Fragile (X) x-linked mental retardation I: relationship between age and intelligence and the frequency of expression of fragile (X) (Q28). *Am J Medical Genetics* 1983;14:699-712.
- 6 Fryns JP, Jacobs J, Kleczkowska A, Van den Berghe H. The psychological profile of the fragile X syndrome. *Clinical Genetics* 1984;25:131-4.
- 7 Hagerman RJ. Misconceptions concerning the fragile X syndrome. *The Fragile X Foundation Newsletter* 1986;2:1.
- 8 Hagerman RJ, Jackson AW, Levitas A, et al. An analysis of autism in fifty males with the fragile X syndrome. *Am J Medical Genetics* 1986;23:359-74.
- 9 Hagerman RJ, Kemper M, Hudson M. Learning disabilities and attentional problems in boys with the fragile X syndrome. *Am J Diseases in Children* 1985;139:674-8.
- 10 Hagerman RJ, McBogg PM, eds. *The fragile X syndrome: diagnosis, biochemistry, and intervention*. Colorado: Spectra Publishing Co., Inc. 1983.
- 11 Lachiewicz AM, Gullion CM, Spiridigliozzi GA, Aylsworth AS. Declining IQs of young males with the fragile X syndrome. *Am J Mental Retardation* 1987;92:272-8.
- 12 Madison LS, Mosher GA, George CH. The fragile X syndrome: diagnosis and research. *Journal of Pediatric Psychology* 1986;11:91-102.
- 13 Nilsson L, Furuholm M, Ingelman-Sundberg A, Wirsén C. A child is born. New York: Dell Publishing Co., Inc., 1986.
- 14 Opitz JM, ed. *X-linked mental retardation*. New York: Alan R. Liss, Inc., 1984.
- 15 Partington MW. The fragile X syndrome: preliminary data on growth and development in males. *Am J Medical Genetics* 1984;17:175-94.
- 16 Saul RA, Harden KJ, Stevenson RE, et al. Clinical features in the fragile X syndrome. *Proceedings of the Greenwood Genetics Center* 1983;2:58-67.
- 17 Sherman SL, Jacobs PA, Morton NE, et al. Further segregation analysis of the fragile X syndrome with special reference to transmitting males. *Hum Genetics* 1985;69:289-99.
- 18 Sutherland GR, Hecht F. *Fragile sites on human chromosomes*. New York: Oxford University Press, 1985.

North Carolina Medical Journal

Subscribe for yourself or a friend



Please enclose a check or money order for:

☐ \$12.60 (NC Residents; this includes 5% sales tax)

☐ \$12.00 (out of state subscribers)

☐ New ☐ Renewal

Send to NCMJ, Box 3910 DUMC
Durham 27710. (919/684-5728)

Please print:

My Name _____

Address _____

City/State/Zip _____

Please send a gift subscription to:

Name _____

Address _____

City/State/Zip _____

AUTHORS: INSTRUCTIONS FOR SUBMITTING PAPERS

Copyright of an article published in the *North Carolina Medical Journal* is retained by the author, but the copyright to each entire issue is the property of The North Carolina Medical Society, and permission to reprint all or any part of a published article must be negotiated with the author and the editor jointly. The reprinted material must carry a credit line signifying that it appeared in the *North Carolina Medical Journal*.

Medical articles, editorials, patient oriented articles, letters to the editor and all other text submitted for publication must be double-spaced throughout, including references and legends. The material should be typed on one side of the paper with 1¼ inch margins all around. Do not use an all-caps or a script typeface. Submit one original and one copy. Please be sure to include your phone number.

The author is responsible for the accuracy of all statements and references. Acronyms and other abbreviations should be kept to a minimum; *any acronym used should be fully translated in the text*. Refer to pharmaceutical products by their generic names; brand names may follow in parentheses. Units of measure should appear in the metric system. References, typed

double-spaced, should be listed in the order of their citation in the text, not alphabetically. They should follow the style used in the *Journal*.

Illustrations should be black and white glossy prints or color or black and white slides, with legends typed in double-space on a separate sheet of paper. Since the *Journal* has a limited budget for color, it may be a factor in publishing color illustrations.

Attach to the two copies of the manuscript a cover letter giving the address and telephone number of the person who will correspond about it, and address the completed communication to the Editor, Box 3910, Duke University Medical Center, Durham, NC 27710.

All manuscripts are subject to editorial changes. If extensive revision is necessary, the author may be sent a draft of the edited article for approval before publication. The author will be sent galley proofs if the paper is published.

Authors interested in more effective writing may find *The Elements of Style* by Strunk and White and *How to Write and Publish a Scientific Paper* by Day helpful.

Extracted, with permission, from *Virginia Medical* with thanks.

You're The Experts In Medicine.

We're The Experts At Preventing Problems In Your Practice.

Medical Mutual is the physician-owned and physician-directed company committed to preventing problems in your practice *before* they occur. Through formal programs and day-to-day assistance, we help you identify areas of risk, reduce potential problems, and enhance your practice.

For example, our Medical Practice Survey brings specially trained staff to your office to audit the peripheral areas we've learned can create problems. The survey—which includes everything from documentation of patient drug

allergies to length of waiting time—offers practical suggestions for reducing your exposure.

Just as important, Medical Mutual provides ongoing assistance to respond promptly to your calls and questions. With 12 years of experience in professional liability coverage, we are the source of information for North Carolina. And if we don't have the answer, we'll find it for you.



Medical Mutual
Medical Insurance Agency, Inc.

Medical Mutual. We'll be there when you need us.

Medical Mutual Insurance Company of North Carolina and its subsidiary, Medical Insurance Agency, Inc., are located at 222 North Person Street, Raleigh, NC 27611 919/828-9334 800/662-7917

The North Carolina Medical Society — Are We on the Right Track?

John R. Gamble, Jr., M.D.

In 1987 the North Carolina Medical Society decided to take a look at the state's physician population growth. They found, as was probably suspected, that the proportionate growth in the NCMS had not kept up with the growth of licensed physicians in the state. The interest was in comparing *active* practitioners, so students, residents, retirees, and North Carolina licensed physicians living elsewhere were excluded.

From 1979 to 1987 licensed *active* practitioner membership in the NCMS increased 840, while the number of licensed *active* physicians in North Carolina increased 2,000 to about 9,400. Participation in the NCMS for the same period fell from 64.7% to 59.5%. The most significant decrease was in the 31 to 40 age group which dropped from 66% in 1979 to 47% in 1986.

The participation of women physicians in the NCMS fell even more. In 1980 women represented 6.5% of North Carolina physicians, and joined the NCMS at a 44.9% rate; but in 1986 they represented 10.5% of North Carolina physicians and joined the NCMS at a 34.6% rate.

There are no bright spots in NCMS membership when you look at specialty groups or the component societies' memberships. None of the large specialty groups has membership in the NCMS over 80%, while most of them range from 40% to 60%. By mid-1987, only 57.4% of Current Register Physicians (including retirees, but excluding students and residents) were members of the NCMS and their component societies; however, an additional 1% to 10% of local registered physicians joined their local component societies, but chose not to join the NCMS.

Trend analysis is a sophisticated business in the United States and I believe we need this objective guidance. The modicum of information cited above indicates a need to analyze what is required for organized medicine to survive and prosper. With changes occurring, do medical societies

need new agendas to maintain relevancy? John Naisbitt in *Megatrends* states, appropriately, "Societies, like individuals, can handle only so many concerns at one time." Then he says that "The Law of Situation asks the question 'What business are you really in?'"¹

Relevancy to the needs of the Society's members seems to be the key word in our current milieu. Should we hawk Gold Cards, investment plans, vacation packages or insurance to survive? Does an HMO employee have need of a medical society? What kind? Do young physicians resent older physicians' ongoing magisterialness; the same names up front on every entity the Society influences? Do women resent the "clubbiness" of the men? Is a specialty society and its CME enough for most specialists? Should the AMA be only a political action group for legislative action, and drop many of its other activities that may be antiquated, duplicated, or irrelevant? Should the upcoming Society president visit statewide before taking office?

Do medical societies need to study constitutional changes that would provide the aegis that unions use (without which collective action is illegal), and allow court and political actions which are limited now? Should the state Society have more advance planning? Should the NCMS provide an ombudsperson to help with the problems of dealing with third parties? Do medical societies need new legal staffs with new ideas? Are dues excessive for multiple Society memberships? Can the general Society be an umbrella to one or more specialty groups and all enjoy symbiosis? Can a medical society improve its political support with the public by demonstrating eclectic public interests — and loose its one-issue look? We may need to ask these and similar questions.

A physician joins a professional association for one or several reasons, which I believe are: (1) what it can do for me; (2) what it can do for the profession; (3) what it can do for the public weal; or (4) for the fellowship, and/or for a possible leadership role in decision making.

From P.O. Box 250, Lincolnnton 28092.

It is recognized that the growth of the specialty groups militates against the growth of the general Society. The specialties provide a full CME and offer fellowship into their own peer groups, and they have learned the politics of lobbying. So, it is in the division of these interests, funds, and leadership that the general Society fails to address the growth in the specialties — and their needs.

I feel that many physicians perceive general medical societies as impotent in dealing with the increasing dominion of government and the insurance industry. Physicians currently have two priorities: maintenance of their role as independent (respected) professionals; and freedom from coercion, arrogance, and harassment by PRO, Medicare, third parties, and malpractice. They want to see their lead organization aggressively and resourcefully wage their bat-

tles in the courts and the legislature. For now, these are the priorities.

If we wish to preserve *collectively* our rank in the order of things, we perhaps have something to learn from the National Football League players. The day they returned to work after their 1987 strike failed, they announced that their union would bring suit against the clubs' owners for "conspiracy" to disrupt their trade's legitimate action. ■

Reference

- 1 Naisbitt J. Megatrends. New York: Warner Books, 1984, pp. xxv, 88.

Winchester®

"CAROLINAS' HOUSE OF SERVICE"

Winchester Surgical Supply Company

200 South Torrence St. Charlotte, N.C. 28204

Phone No. 704/372-2240

Winchester Home Healthcare

Medical supplies and equipment for your patients at home

Charlotte, N.C. Greensboro, N.C. Hickory, N.C.

704/332-1217 919/275-0319 704/324-0336

704/547-0708

**Serving the MEDICAL PROFESSION of NORTH CAROLINA
and SOUTH CAROLINA since 1919.**

We equip many physicians beginning practice each year and invite your inquiries.

Our salesmen are located in all parts of North Carolina.

We have *DISPLAYED* at every N.C. State Medical Society Meeting since 1921
and advertised *CONTINUOUSLY* in the N.C. Journal since January 1940 issue.

I Got Sick on July Twenty-Five, Two Thousand

Radford Butler, M.D., and Kenneth G. Tomberlin, M.D.

Having some knowledge of the current changes in Medicine, you should have little difficulty relating to this scenario of the not too distant future.

On July 25, 2000, I awakened with a throbbing pain in the right hemicranium. Flashes of silvery light filled my right visual field. An appointment with my physician was sought.

"Good morning, your call is being answered by a computer. You have reached the office of Vendors Christmas, Valentine and Easter, et al., P.A. The office is staffed to meet Federal guidelines and is incorporated under the auspices of the Internal Revenue Service and Health Control Financing Administration. You will see the first available physician or equivalent. Please follow instructions and answer the following questions:

1. Your name
2. Your recipient clinic I.D. number. If you do not have an I.D. number, please go in person with the necessary personal documentation to the regional HCFA office and obtain an ID prior to calling here again."

Computer: I see from this information that you are a member of Health Rationing HMO. I can now accept your call. Please state your complaint.

Patient: I have this headache in the right temporal area and right eye. It begins with irritability, euphoria, and partial loss of vision in the right eye.

Computer: Please hold until the information has been categorized. Pause.

Computer: The symptom of euphoria is not listed as a symptom of headache.

Patient: Go to Hell.

Computer: I have not been programmed to accept that statement.

Patient: All I want is an appointment with a doctor.

Computer: Entry time exceeded — please start over.

(After a repeat of above)

Computer: Please report at three p.m. on 7-31-2000 at 300 Healing Drive. This call has been accepted and stored for future reference. The appointment time has been assigned

to you per instructions of HCFA. Should you fail to show, a nurse reviewer will investigate. Also, you are required to bring your birth certificate, financial statement, medications, allergy history, family history, habits, hobbies, alcohol consumption, sexual preferences, occupation, social security number, and all insurance numbers. On arrival you will automatically be screened for drug abuse and contagious diseases. Please be aware that records are kept of patient consumption of medical resources and it is not advisable to make a frivolous appointment.

Patient: Please, what am I to do about my headache until the appointment?

Computer: How old are you?

Patient: Sixty-four years of age.

Computer: Answer in two words.

Patient: Sixty-four.

Computer: You are still alive. On a statistical basis, you will live until the appointment.

The appointment date finally arrived and I reported and was greeted by a young woman with a name tag labeled "Information — Miss Do Little."

I said "good afternoon" and the response was "Where are your papers?" The papers were presented resulting in a query as to whether they were in order. Reply — yes. "Follow me." At a door labeled "Deposits," I was instructed to give specimens of urine, feces, sputum, and semen, and to breathe into the machine, label the specimen cups and go out through the other door. Duties completed, I opened the door and was met by another young woman, who was dressed in blue jeans. She was describing the night before to another person in similar garb.

She placed a tourniquet around my arm and before I knew what was happening, I lost about one half pint of blood — without an interruption of the saga of the previous evening. She punched a button and between smacks of her bubble bum stated that the various specimens would be checked for alcohol, AIDS, herpes, syphilis, and all drug abuse products. Instructions were issued to wait outside the door until the results were available. Only afterwards would the computer decide if I would be treated or referred to a special contagious or drug abuse unit.

On leaving the room, I found a seat and was surprised by all the people suddenly shifting to the opposite side of the room. Checking the mirror reassured me that I did not have a rash, was neatly dressed and my pants were zipped. After an interminable few minutes, a door opened and in stepped a woman. She asked, "Are you the person with the headache?" She then announced to the entire room "You do not have AIDS, herpes, or syphilis, and the only drug found was aspirin." Suddenly, the room became more animated. One fellow came over, shook my hand, and said he was glad to have me on board since I was not contagious.

Miss Mouth said for me to follow her. In the computer room she sat me in front of a terminal labeled "Headaches," telling me to pay close attention as I would be instructed only once. "The computer is on. You punch this key and the protocol for headaches will come on and you answer every question with the truth."

After she left, I punched the key. The display read:

Your name

ID number

The following protocol for headaches was developed by Headaches Anonymous to diagnose and treat headaches.

After studying my answers to the protocol questions for about 15 seconds, the computer responded that I had tension headaches with vascular features and offered the following options:

- 1 Psychiatric interview and therapy
- 2 Acupuncture
- 3 Biofeedback
- 4 Transcendental meditation
- 5 Chemotherapeutic agents

Instructions were given to return in two weeks with my decision. No treatment was possible until then. It stated that it was 98% accurate and that the 2% error possibility was insignificant and not explorable. It also informed me of the cost:

- 1 Cost of time @ \$6/min: \$180
- 2 Instruction: \$15
- 3 Software storage: \$25
- 4 Use of facilities: \$25

Total \$245. The bill was to be submitted to the HMO. Also I was to become more prompt in answering and more proficient, because the HMO lost money on this visit. A recurrence could bring on an audit by HCFA or its PRO.

During the next two weeks I had more headaches. On returning I went through Miss Do Little's routine and then the computer.

Computer: What course of therapy have you chosen?

Patient: None; I want to see a doctor.

Computer: That is impossible now. Return in two weeks. This visit has wasted \$18 and will be reviewed by a nurse.

In two weeks Miss Do Little informed me that I was

being seen too often and would be interviewed by a nurse to determine if I was abusing the system.

After the nurse interview I was ushered into a room with a young man who was wearing jogging garb, was unshaven, and ungroomed. He introduced himself as Mr. Substitute, stating that he worked with all the physicians and had consulted with one prior to seeing me. "What treatment do you want?" "I want to see a doctor." "That is impossible today — Make an appointment to see Dr. Etal in two weeks. He has already advised counseling and that visit will be limited by the computer to five minutes. Is that clear?"

The visit with Dr. Etal came and I was asked three questions about my ability to walk a straight line, to stand on one foot, and if I had had an eye exam in the last year. As he left the room he said to get some more lab tests and if they were negative, the computer said that my chances of having a stress headache were 99%.

Two days later, I received a phone call from a Miss Inquisitor. "Under the rules established by HCFA in Washington, I'm calling to determine why you have had three appointments for a headache and are scheduled for a fourth. You are only allowed three. Otherwise the HMO will not remain solvent. Why do you want a fourth visit?" "I want to see a doctor." "But you did see Dr. Etal." "His visit was so hurried that it seemed useless." "He has a problem in that he is on probation because he is the only doctor not meeting his quota. He may be discharged soon."

I was rudely given an appointment with Dr. Etal in two weeks. Dr. Etal came in and stated that all my computer printouts and his previous evaluation were normal and that I would have to abide by the decision to receive counseling and would I please remember how expensive this evaluation and treatment are. I explained to him that I was not satisfied and he handed me a form to fill out requesting an appeal to the HCFA board. He informed me that the board was comprised of a lawyer from HCFA, a nurse reviewer, three citizens, a financial advisor to the HMO from HCFA, and a physician who would be present in an advisory role only. If I were to disagree with their finding I could appeal to the HCFA committee in Washington.

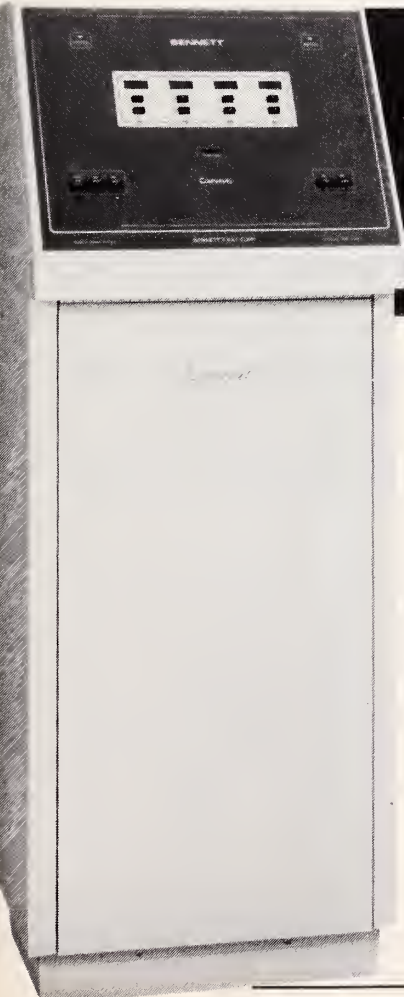
At the appeal the chairman informed me that the computer was 99.5% accurate and that I was causing the HMO unnecessary expense, but that after due consideration they were granting me a brief interview with an HMO neurologist. Two weeks later I visited the neurologist. He asked a few simple questions and had me walk a straight line, stand on one foot and open and close my eyes. He then announced that he had read my computer printout and that I had a 1/50,000 chance of having any real pathology, but since I was being obstinate he would order the appropriate expensive tests. Two weeks later he informed me that the MRI showed a 4 to 5 mm tumor in my brain that the computer said was causing no problems. He said that I was to follow the computer's initial recommendation and obtain counseling. Also he said there was no more computer time for this problem and "Good day."

On the way home I saw a sign — “Dr. Rules Breaker, Internal Medicine, P.A.” His name was familiar because he had been sanctioned and barred from Medicare because he put too many sick people in the hospital.

A visit to his office led to a 30-minute interview and a thorough neurologic evaluation. He advised that I was probably suffering from caffeine withdrawal and suggested cessation of all caffeine-containing products. Within one week my headaches left and I have had no further recurrences. This professional evaluation occurred seven and a half months after I had started with the HMO.

Two months later I was informed to be available on a certain date for an interview. On the appointed date, I an-

swered my doorbell to find a nurse by the name of Miss Ima Rulebook who was to do a survey. I was informed that I had used up 8,025.60 HMO/HCFA dollars. HCFA had reviewed my case and had charged the \$8025.60 against my lifetime allotment, and in the future I would have to be screened by a nurse practitioner's assistant prior to being considered for any medical complaint. The final question: “Was I satisfied with the service?” Reply: “No, because I did not receive an adequate physician evaluation, interview or examination, or any help with my problem.” It was made clear that I might be one of the scapegoats for the current insolvency of the HMO. She left abruptly and, amazingly, she had not given me a headache. ■



THE FUTURE IS NOW WITH THE ELIMINATOR

“Eliminator” is a fairly harsh word to describe an x-ray generator. However, the Compu-mAs system from Bennett X-Ray Corp. and B & B X-Ray does so many things for you, there's no other word to explain it. The generator automatically calculates the next available mAs from the 34 time stations and the 7 mA stations, therefore eliminating many of the steps that were once necessary in taking x-rays.

The Compu-mAs:

- Eliminates setting major and minor kVp tap switches
- Eliminates setting high and low range for kV selectors
- Eliminates calculating mA \times time to find mAs
- Eliminates checking and adjusting line compensation
- Eliminates the need to set both mA and time

By eliminating all of these steps, the Eliminator moves into the future without sacrificing dependability and accuracy. Dependability has been a benefit of owning a Bennett Radiographic System for over 30 years. And now, by automatically selecting the next available mAs combination of mA and time, Compu-mAs provides accuracy to almost infinite resolution. The Compu-mAs Eliminator—just another way B & B X-Ray is working for your end result, optimum quality radiographs.

B & B X R A Y

working for the end result—optimum quality radiographs

P.O. Box 802 Matthews, NC 28105

In NC Call 1-800-222-9262

In SC Call Collect 704-847-8521

\$

150 years of combined management skills

\$

\$

100,000,000.00

\$

We have one hundred million dollars in owner assets

LET US MAKE YOU SUCCESSFUL TOO!

ELITE MANAGEMENT SYSTEMS

A division of

COMPUTER CORP. INTERNATIONAL, INC.

a wholly owned subsidiary of

THE ENTREPRENEUR GROUP, INC.

has 3 options for you:

- 1) CASH for your accounts receivable NOW with total management of your office for $\frac{1}{2}$ **the cost** of other management billing firms.
- 2) Automate, train and supervise your office for $\frac{1}{3}$ **less** than most other consultant firms charge for this service.
- 3) Install and train to operate efficiently and independently for $\frac{1}{5}$ the **usual cost** of other methods.

National call 1-800-451-7167 In Richmond, Va. call 747-8480
In Virginia call 1-800-535-5347

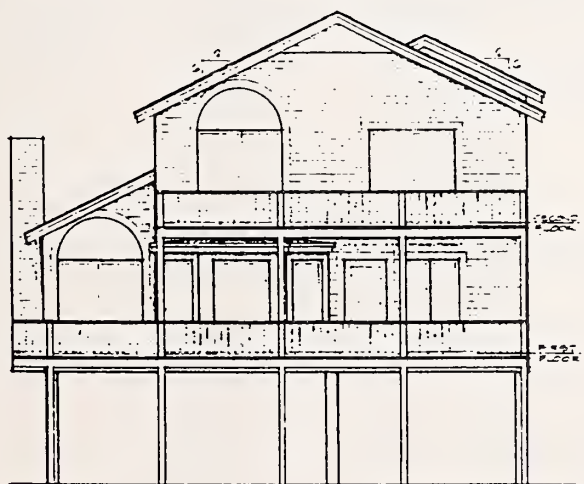
----- Clip this coupon and save \$2401.00 -----

*I would like one of your systems analysts to make a \$2,500.00
computerized on-site OFFICE MANAGEMENT EFFICIENCY ANALYSIS
for only \$99.00. Enclosed is my check. (Offer good till May 30, 1988).*

Signed _____

Nature's Prescription For Relaxation!

A new oceanfront home! This 4 brm, 3½ bath, luxury home has super amenities and location. Choose colors and carpet. Call for details.	A custom oceanfront home built with an eye for detail! Ceramic baths, marble hearth, full size bar, Jacuzzi and much, much more. \$295,000.	102 Sandbur. A duplex with a super ocean view. 3 brm, 2½ baths per side. Good rental: can be purchased furnished. \$133,000/side.	Awesome! Is the only way to describe the view from this 2nd row home. 4 brm, 2½ baths, decking. \$149,000.
111 Ocean Drive. A super value on an oceanfront home! Great rental history! Rehab'd in 87. 3 brm, 2½ baths in super location. Only \$169,000.	At last, an affordable waterfront bungalow! 3 brm, 1 bath with dock. Only \$110,000!	Large 2nd row duplex (½) 4 brm, 2 baths - easy access to ocean and sound. \$119,000.	1607 Emerald Drive - 4 brm, 2 baths - 3rd row beach cottage - Excellent rental property — \$112,000.
Superbly crafted oceanfront home with incredible gourmet kitchen. This one you must see! For an excellent oceanfront buy, call for details.	Duplex oceanfront lot just waiting to be built on by you. 77' x 259' \$185,000.	Excellent soundfront duplex lot in heavily wooded, private subdivision. 75' x 258' \$150,000.	Exclusive Beacon's Reach water-view lot - wooded & many amenities including marina. \$70,000.
Pebble Beach Condominium Unit A-307 - furnished, tastefully decorated oceanfront unit! Excellent rental history. \$160,000.	Pebble Beach Condominium Unit D-202, 2nd floor unit with 3 brm, 2 baths - Good ocean view. \$145,000.	Pebble Beach Condominium Unit D-102, close to beach and pool - furnished. Tennis courts & club house. \$140,000.	Point Emerald Villas, Unit 306-C. Good rental history on this ocean view condo - tennis, pools & beach. \$110,000.



Imagine Yourself in This Home!

Imagine waking every morning, looking through a large dome-top window, and seeing the ocean from your bed. Or perhaps you are relaxing, sitting in front of your fireplace watching the surf roll in. Or picture breakfast in the nook just off the kitchen, catching a **Crystal Coast** morning through the three sides of a huge bay window.

You'll find this and **much more** in this beautiful third row home. Three bedrooms, approximately 1756 square foot, 2 and a half baths, upstairs loft, vaulted ceilings, fireplace, and generous decking assures that your stay at Emerald Isle will be something special.

All this will be situated on a **choice, high**, third row lot. Superb views, easy beach access, and super neighbors are a combination that is ideal.

To claim this home as yours, call **Coast Realty**.

(919) 354-3700

Coast Realty and Construction Company has quality investments ranging from \$10,000 - \$10,000,000.

For further information about these and other fine properties,
please contact:

COAST REALTY AND CONSTRUCTION COMPANY
7703 Emerald Drive
Emerald Isle, NC 28594
(919) 354-3700

PHYSICIANS, SCHEDULE SOME TIME FOR YOUR COUNTRY.

Many physicians would like to devote some time to their country in a local Army Reserve unit. We know that making a weekend commitment can be difficult for most physicians. So it is practical for the Army Reserve units to be flexible about time. It's worth discussing.

Incidentally, in addition to satisfying your own desire to serve your country, there are exceptional opportunities to do something totally different from a day-to-day routine. Opportunities to study new areas of medicine, meet new people in your specialty, and be a part of one of the world's most advanced medical teams.

Discuss the opportunities with our Army Medical Personnel Counselor.

FOR SURGEONS LOOKING FOR A CHALLENGE.

Your challenge could be the Army Reserve unit near you. It's a unit that requires the services of surgeons.

You may wish to explore the challenge of teaching in a major medical center. You may wish to explore the special challenges of your specialty in triage. Certainly you'll be confronted by challenges very different from your daily routine.

You'll also have an opportunity to participate in a number of programs in which you'll be able to exchange views and information with other surgeons from all over the country.

The Army Reserve understands the time demands on a busy physician, so you can count on us to be totally flexible in making time for you to share your specialty with your country. We'll arrange your training program to work with your practice.

To find out about the benefits of serving with a nearby Army Reserve unit, we recommend you call our Army Medical Personnel Counselor.

PHYSICIANS, THERE ARE TWO KINDS OF FLEXIBILITY IN THE ARMY RESERVE WE THINK YOU'LL LIKE.

One, time. We know how tough it is for a busy physician to make weekend time commitments. So we offer flexible training programs that allow a physician to share some time with his or her country. We arrange a schedule to suit your requirements.

Two, the opportunity to explore other phases of medicine, to add a different kind of knowledge—the challenge of military health care. It's a flexibility which could prove to be both stimulating and rewarding, with the opportunity to participate in a variety of programs that can put you in contact with medical leaders from all over the country.

See how flexible we can be, call our Army Medical Personnel Counselor.

**ARMY RESERVE.
BE ALL YOU CAN BE.**



HERE'S ONE DOCTOR WHO WON'T PAY HIS MALPRACTICE PREMIUMS THIS YEAR.

The Army covers his premiums. Since he's an Army Physician, there are a lot of worries associated with private practice that he won't have to contend with. Like excessive paperwork, and the overhead costs incurred in running a private practice.

What he will get is a highly challenging, highly rewarding experience. The Army offers varied assignments, chances to specialize, or further your education, and to work with a team of dedicated health care professionals. Plus a generous benefits package.

If you're interested in practicing high quality health care with a minimum of administrative burdens, examine Army medicine. Talk to your local Army Medical Department Counselor for more information.

**ARMY MEDICINE.
BE ALL YOU CAN BE.**

MAJOR OPPORTUNITIES FOR HEALTH PROFESSIONALS.

**Army Health Care Team
Federal Office Bldg.**

P.O. Box 10167

Richmond, VA 23240

Call collect: (804) 771-2354

Army Reserve Health Care Team


2634 Chapel Hill Blvd.

Suite 205

Durham, NC 27707

Call collect: (919) 493-1364



A woman with dark hair, wearing a bright yellow button-down shirt and dark trousers, sits alone at a small white metal table in an outdoor cafe setting. She is looking down with a somber expression. The cafe has many similar empty tables and white metal chairs with heart-shaped backs. The background is a rustic wooden wall.

**"Living in the city
is lonely enough...
with herpes it's like
solitary confinement."**

ZOVIRAX[®]
(acyclovir)
CAPSULES

**Prevent genital herpes
recurrences
month after month with
daily therapy.**

*(In controlled studies, recurrences were
totally prevented for 4 to 6 months in up to
75% of patients.)*

*Please see last page of this advertisement for
brief summary of prescribing information.*

ZOVIRAX[®] (acyclovir) CAPSULES

**Help free your
patients from
recurrences.**

Daily therapy

Coping with genital herpes is rarely easy. For some, the worst part is the pain and discomfort of frequent attacks — month after month, year after year. For others, the emotional burden presents a more difficult problem, leading to social isolation, anxiety, and diminished self-esteem.

Prevent or reduce recurrences

Although your patients have to live with herpes, they shouldn't have to suffer. Daily therapy with ZOVIRAX CAPSULES can help free them from the cycle of recurrent genital herpes. For many, one capsule three times a day can suppress recurrences completely while on therapy.

Generally well tolerated

Daily therapy with ZOVIRAX CAPSULES is generally well tolerated. The most frequent adverse reactions reported during clinical trials were headache, diarrhea, nausea/vomiting, vertigo, and arthralgia.

The physical and emotional difficulties posed by genital herpes are unique for each patient. The frequency and severity of recurrent episodes, as well as the emotional impact of the disease, should be considered when selecting daily therapy with ZOVIRAX CAPSULES.

*Please see brief summary of
prescribing information on next page.*



Prevent recurrences month after month*

ZOVIRAX[®]

(acyclovir)

CAPSULES

Brief Summary

INDICATIONS AND USAGE: Zovirax Capsules are indicated for the treatment of initial episodes and the management of recurrent episodes of genital herpes in certain patients.

The severity of disease is variable depending upon the immune status of the patient, the frequency and duration of episodes, and the degree of cutaneous or systemic involvement. These factors should determine patient management, which may include symptomatic support and counseling only, or the institution of specific therapy. The physical, emotional and psycho-social difficulties posed by herpes infections as well as the degree of debilitation, particularly in immunocompromised patients, are unique for each patient, and the physician should determine therapeutic alternatives based on his or her understanding of the individual patient's needs. Thus Zovirax Capsules are not appropriate in treating all genital herpes infections. The following guidelines may be useful in weighing the benefit/risk considerations in specific disease categories:

First Episodes (primary and nonprimary infections — commonly known as initial genital herpes):

Double-blind, placebo-controlled studies have demonstrated that orally administered Zovirax significantly reduced the duration of acute infection (detection of virus in lesions by tissue culture) and lesion healing. The duration of pain and new lesion formation was decreased in some patient groups. The promptness of initiation of therapy and/or the patient's prior exposure to Herpes simplex virus may influence the degree of benefit from therapy. Patients with mild disease may derive less benefit than those with more severe episodes. In patients with extremely severe episodes, in which prostration, central nervous system involvement, urinary retention or inability to take oral medication require hospitalization and more aggressive management, therapy may be best initiated with intravenous Zovirax.

Recurrent Episodes:

Double-blind, placebo-controlled studies in patients with frequent recurrences (6 or more episodes per year) have shown that Zovirax Capsules given for 4 to 6 months prevented or reduced the frequency and/or severity of recurrences in greater than 95% of patients. Clinical recurrences were prevented in 40 to 75% of patients. Some patients experienced increased severity of the first episode following cessation of therapy; the severity of subsequent episodes and the effect on the natural history of the disease are still under study.

The safety and efficacy of orally administered acyclovir in the suppression of frequent episodes of genital herpes have been established only for up to 6 months. Chronic suppressive therapy is most appropriate when, in the judgement of the physician, the benefits of such a regimen outweigh known or potential adverse effects. In general, Zovirax Capsules should not be used for the suppression of recurrent disease in mildly affected patients. Unanswered questions concerning the human relevance of *in vitro* mutagenicity studies and reproductive toxicity studies in animals given very high doses of acyclovir for short periods (see Carcinogenesis, Mutagenesis, Impairment of Fertility) should be borne in mind when designing long-term management for individual patients. Discussion of these issues with patients will provide them the opportunity to weigh the potential for toxicity against the severity of their disease. Thus, this regimen should be considered only for appropriate patients and only for six months until the results of ongoing studies allow a more precise evaluation of the benefit/risk assessment of prolonged therapy.

Limited studies have shown that there are certain patients for whom intermittent short-term treatment of recurrent episodes is effective. This approach may be more appropriate than a suppressive regimen in patients with infrequent recurrences.

Immunocompromised patients with recurrent herpes infections can be treated with either intermittent or chronic suppressive therapy. Clinically significant resistance, although rare, is more likely to be seen with prolonged or repeated therapy in severely immunocompromised patients with active lesions.

CONTRAINDICATIONS: Zovirax Capsules are contraindicated for patients who develop hypersensitivity or intolerance to the components of the formulation.

WARNINGS: Zovirax Capsules are intended for oral ingestion only.

PRECAUTIONS: General: Zovirax has caused decreased spermatogenesis at high doses in some animals and mutagenesis in some acute studies at high concentrations of drug (see PRECAUTIONS—Carcinogenesis, Mutagenesis, Impairment of Fertility). The recommended dosage and length of treatment should not be exceeded (see DOSAGE AND ADMINISTRATION).

Exposure of Herpes simplex isolates to acyclovir *in vitro* can lead to the emergence of less sensitive viruses. The possibility of the appearance of less sensitive viruses in man must be borne in mind when treating patients. The relationship between the *in vitro* sensitivity of Herpes simplex virus to acyclovir and clinical response to therapy has yet to be established.

Because of the possibility that less sensitive virus may be selected in patients who are receiving acyclovir, all patients should be advised to take particular care to avoid potential transmission of virus if active lesions are present while they are on therapy. In severely immunocompromised patients, the physician should be aware that prolonged or repeated courses of acyclovir may result in selection of resistant viruses which may not fully respond to continued acyclovir therapy.

Drug Interactions: Co-administration of probenecid with intravenous acyclovir has been shown to increase the mean half-life and the area under the concentration-time curve. Urinary excretion and renal clearance were correspondingly reduced.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Acyclovir was tested in lifetime bioassays in rats and mice at single daily doses of 50, 150 and 450 mg/kg given by gavage. There was no statistically significant difference in the incidence of tumors between treated and control animals, nor did acyclovir shorten the latency of tumors. In 2 *in vitro* cell transformation assays, used to provide preliminary assessment of potential oncogenicity in advance of these more definitive life-time bioassays in rodents, conflicting results were obtained. Acyclovir was positive at the highest dose used in one system and the resulting morphologically transformed cells formed tumors when inoculated into immunosuppressed, syngeneic, weanling mice. Acyclovir was negative in another transformation system considered less sensitive.

In acute studies, there was an increase, not statistically significant, in the incidence of chromosomal damage at maximum tolerated parenteral doses of 100 mg/kg acyclovir in rats but not Chinese hamsters; higher doses of 500 and 1000 mg/kg were clastogenic in Chinese hamsters. In addition, no activity was found after 5 days dosing in a dominant lethal study in mice. In 6 of 11 microbial and mammalian cell assays, no evidence of mutagenicity was observed. At 3 loci in a Chinese hamster ovary cell line, the results were inconclusive. In 2 mammalian cell assays (human lymphocytes and L5178Y mouse lymphoma cells *in vitro*), positive responses for mutagenicity and chromosomal damage occurred, but only at concentrations at least 400 times the acyclovir plasma levels achieved in man.

Acyclovir has not been shown to impair fertility or reproduction in mice (450 mg/kg/day, p.o.) or in rats (25 mg/kg/day, s.c.). At 50 mg/kg/day s.c. in the rat, there was a statistically significant increase in post-implantation loss, but no concomitant decrease in litter size. In female rabbits treated subcutaneously with acyclovir subsequent to mating, there was a statistically significant decrease in implantation efficiency but no concomitant decrease in litter size at a dose of 50 mg/kg/day. No effect upon implantation efficiency was observed when the same dose was administered intravenously. In a rat peri- and postnatal study at 50 mg/kg/day s.c., there was a statistically significant decrease in the group mean numbers of corpora lutea, total implantation sites and live fetuses in the F₁ generation. Although not statistically significant, there was also a dose related decrease in group mean numbers of live fetuses and implantation sites at 12.5 mg/kg/day and 25 mg/kg/day, s.c. The intravenous administration of 100 mg/kg/day, a dose known to cause obstructive nephropathy in rabbits, caused a significant increase in fetal resorptions and a corresponding decrease in litter size. However, at a

maximum tolerated intravenous dose of 50 mg/kg/day in rabbits, there were no drug-related reproductive effects.

Intraperitoneal doses of 320 or 80 mg/kg/day acyclovir given to rats for 1 and 6 months, respectively, caused testicular atrophy. Testicular atrophy was persistent through the 4-week postdose recovery phase after 320 mg/kg/day; some evidence of recovery of sperm production was evident 30 days post-dose. Intravenous doses of 100 and 200 mg/kg/day acyclovir given to dogs for 31 days caused aspermato-genesis. Testicles were normal in dogs given 50 mg/kg/day, i.v. for one month.

Pregnancy: Teratogenic Effects: Pregnancy Category C. Acyclovir was not teratogenic in the mouse (450 mg/kg/day, p.o.), rat (50 mg/kg/day, s.c.) or rabbit (50 mg/kg/day, s.c. and i.v.). There are no adequate and well-controlled studies in pregnant women. Acyclovir should not be used during pregnancy unless the potential benefit justifies the potential risk to the fetus. Although acyclovir was not teratogenic in animal studies, the drug's potential for causing chromosome breaks at high concentration should be taken into consideration in making this determination.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Zovirax is administered to a nursing woman. In nursing mothers, consideration should be given to not using acyclovir treatment or discontinuing breastfeeding.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS—Short-Term Administration: The most frequent adverse reactions reported during clinical trials were nausea and/or vomiting in 8 of 298 patient treatments (2.7%) and headache in 2 of 298 (0.6%). Less frequent adverse reactions, each of which occurred in 1 of 298 patient treatments (0.3%), included diarrhea, dizziness, anorexia, fatigue, edema, skin rash, leg pain, inguinal adenopathy, medication taste and sore throat.

Long-Term Administration: The most frequent adverse reactions reported in studies of daily therapy for 3 to 6 months were headache in 33 of 251 patients (13.1%), diarrhea in 22 of 251 (8.8%), nausea and/or vomiting in 20 of 251 (8.0%), vertigo in 9 of 251 (3.6%), and arthralgia in 9 of 251 (3.6%). Less frequent adverse reactions, each of which occurred in less than 3% of the 251 patients (see number of patients in parentheses), included skin rash (7), insomnia (4), fatigue (7), fever (4), palpitations (1), sore throat (2), superficial thrombophlebitis (1), muscle cramps (2), pars planitis (1), menstrual abnormality (4), acne (3), lymphadenopathy (2), irritability (1), accelerated hair loss (1), and depression (1).

DOSAGE AND ADMINISTRATION: Treatment of initial genital herpes: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 10 days (total 50 capsules).

Chronic suppressive therapy for recurrent disease: One 200 mg capsule 3 times daily for up to 6 months. Some patients may require more drug, up to one 200 mg capsule 5 times daily for up to 6 months.

Intermittent Therapy: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 5 days (total 25 capsules). Therapy should be initiated at the earliest sign or symptom (prodrome) of recurrence.

Patients With Acute or Chronic Renal Impairment: One 200 mg capsule every 12 hours is recommended for patients with creatinine clearance ≤ 10 ml/min/1.73 m².

HOW SUPPLIED: Zovirax Capsules (blue, opaque) containing 200 mg acyclovir and printed with "Wellcome ZOVIRAX 200" - Bottles of 100 (NDC-0081-0991-55) and unit dose pack of 100 (NDC-0081-0991-56).

Store at 15°-30°C (59°-86°F) and protect from light.

*In controlled studies, recurrences were totally prevented for 4 to 6 months in up to 75% of patients.

Burroughs Wellcome Co., Research Triangle Park, North Carolina 27709



IMPROVING LIVES THROUGH
ANTIVIRAL RESEARCH
BURROUGHS WELLCOME CO.

Copyright © 1986 Burroughs Wellcome Co. All rights reserved. 86-ZOV-5

Bulletin Board

New Members

Buncombe

William Leighton Anixter (P), PO Box 1101, Highland Hospital, Asheville 28802

Bruce Irving Minikin (ORS), PO Box 1980, Asheville Hand Ctr., Asheville 28801

Cabarrus

Rex Gardner Warterbury (OBG), 1054 Burrage Rd., NE, Concord 28025

Columbus

John David Hodgson (IM), PO Box 1249, Whiteville 28472

Craven-Pamlico-Jones

Leslie Fairweather Brooks (FP), 810 Kennedy Ave., New Bern 28560

Michael R. Towarnicky (IM), PO Box 68, Pollocksville 28573

Durham-Orange

Murray Alexander Abramson (STUDENT), 3007 Glendale Ave., Durham 27704

Mary Theresa Amato (STUDENT), 822 Lancaster St., Apt. #2, Durham 27701

Michael Jason Battistone (STUDENT), 886 Louse Cir., Apt. 26F, Durham 27705

Mina Mui Choi (STUDENT), 805 Jackson St., Durham 27701

Samuel Clay Franklin, Jr. (STUDENT), 4026 Chapra Dr., Wilmington 28403

Francis Roosevelt Gilliam, III (IM), 603 Dunbar St., Durham 27701

Amit Girish Gupta (STUDENT), 1611 Duke University Rd., Apt. 1E, Durham 27701

Barbara Spector Hertzberg (R), Box 3808, DUMC, Durham 27710

Diana Miller Hull (RESIDENT), 200 Woodcroft Parkway #430, Durham 27713

Cheryl Johnson (STUDENT), 311 S. LaSalle St., #42Q, Durham 27705

Joseph Anthony Khawly (STUDENT), 311 LaSalle St., Apt. 44L, Durham 27705

Ronald Eric Lilly (STUDENT), PO Box 2761, DUMC, Durham 27710

James Joseph McCarthy (STUDENT), 118 Estes Dr., Ext., Carrboro 27510

Thomas Paul McDermott, Jr. (STUDENT), 28 Spring Garden Apts., Holland Dr., Chapel Hill 27514

Lawrence Ross Nycum (STUDENT), 43 Laurel Ridge Apts., Chapel Hill 27516

James Willig O'Brien (STUDENT), 311 S. LaSalle St., Apt. 22K, Durham 27705

Joseph R. Perno (STUDENT), Box 2809, DUMC, Durham 27710

William J. Richardson (ORS), Box 3077, DUMC, Durham 27710

Peter Kent Smith (CDS), Box 3442, DUMC, Durham 27710

Pablo Francisco Soto (STUDENT), 6D River Birch Rd., Durham 27705

Todd Fitzgerald Tanner (STUDENT), 105-A Isley St., Chapel Hill 27514

Robert Cheatham Vogler (STUDENT), 119-C Stinson St., Chapel Hill 27514

Keith Andrew Walter (STUDENT), 1911 Erwin Rd., Apt. E, Durham 27705

Eric Robert Weidman (STUDENT), 311 S. LaSalle St., Apt. 48-O, Durham 27705

Edward William Whitesides (RESIDENT), 1108 Willow Dr., Chapel Hill 27514

Forsyth-Stokes-Davie

David Allan Blaine (STUDENT), 715 S. Hawthorne Rd., Winston-Salem 27103

Claudette Elise Brooks (STUDENT), 1900 Queen St., Apt. C-4, Winston-Salem 27103

John Witherspoon Gilpin (RESIDENT), 1206 W. 4th St., #2, Winston-Salem 27101

Johanna Jorizzo (DR), 250 Charlois Blvd., Winston-Salem 27103

Michael Anthony Kutcher (CD), 300 S. Hawthorne Rd., Winston-Salem 27103

Patrick Lynn Lillard (PM), 333 Silas Creek Parkway, Winston-Salem 27103

Rick Louis Pesano (STUDENT), 1407-A Seneca St., Winston-Salem 27103

Donald Sanderson Prough, 1890 Runnymede Rd., Winston-Salem 27104

Scott Leming Tucker (RESIDENT), 225 Harper St., Winston-Salem 27104

Sandeep Pathe Vivevonanthan (STUDENT), 4608 Hiddenbrook Dr., Raleigh 27609

Robert Patrick Yeatts (PS), 300 S. Hawthorne Rd., Dept. of OPH, Winston-Salem 27103

Greensboro Society of Medicine

Thomas John Gresalfi, Jr. (P), 606 Walter Reed Dr., Greensboro 27403

Johnston

Kimberly K. Shaftner (EM), PO Box 2363, Smithfield 27577

Mecklenburg

Victor Robert Harouny (OBG), 150 Providence Rd., Charlotte 28207

Joseph Paul Hunstad (PS), 101 W. T. Harris Blvd., #A422, Charlotte 28213

Mark Leland Malton (OPH), 1900 Randolph Rd., Ste. 1016, Charlotte, 28207

Daniel John Motuz (AN), 4441-302 Hedley Way, Charlotte 28210

Moore

Steven Michael Bird (FP), 1990 Highway 15-501 South, Southern Pines 28387

Charles Rodney Lenahan (U), PO Box 2000, Pinehurst 28374

Daniel Kent Messner (OPH), 2170 Midland Rd., Southern Pines 28387

Nash

Michael Dillon Crawford (OTO), PO Box 7099, Rocky Mount 27801

Pitt

Paul Maclyn Dainer (HEM), ECU, 3E-106 Brody Bldg., Greenville 27858

Richard Anthony Hoppmann (RHU), ECU School of Medicine, Dept. of Internal Med., Greenville 27834

Paul Arthur James (FP), PO Box 549, Bethel 27812
 Frank Harvey Lawler (FP), PO Box 1846, ECU School of Medicine, Greenville 27834
 Lawrence Michael Lewkow, (HEM), ECU School of Medicine, Brody Hall 3E-102, Greenville 27834
 Barbara Anne Murphy (EM), ECU School of Medicine, Dept. of Emergency Med., Greenville 27834
 Douglas Sterling Price (GE), ECU School of Medicine, Greenville 27834

Rockingham

C. Sethu Krishnan (U), 515 Thompson St., Ste. C, Eden 27288
 Robert Bruce Robillard (OTO), 518 S. Van Buren Rd., Eden 27288

Wake

Randall Mark Best (EM), 3000 New Bern Ave., Raleigh 27610
 Stephen Marc Leb (GS), 3801 Computer Dr., #207, Raleigh 27609
 Georjean Stoodt (PH), PO Box 2091, NC Div. of Health Services, Raleigh 27602
 Stanley A. Wilkins, Jr. (OTO), 3100 Blue Ridge Rd., Raleigh 27607

Watauga

Glen Robert Liesegang (FP), PO Box 8, Blowing Rock 28605

Wayne

David Edward Tomaszek (NS), 238 Ridgewood Dr., Goldsboro 27530

Continuing Medical Education

Please note: The Continuing Medical Education Programs at Bowman Gray, Duke (DUMC), East Carolina (ECU) and UNC Schools of Medicine, and Dorothea Dix are accredited by the American Medical Association. Therefore CME programs sponsored or cosponsored by these schools automatically qualify for AMA Category I credit toward the AMA's Physician Recognition Award, and for North Carolina Medical Society Category A credit. Where AAFP credit has been obtained, this also is indicated.

April 9, 13, 18, 21

Malpractice Awareness: 1988
 Place: (on respective dates): Research Triangle Park, Greensboro, Greenville, Wilmington
 Credit: 2 hours Category I AMA (each)
 Info: Medical Mutual Insurance Co., P.O. Box 26088, Raleigh 27611. 919/828-9334

April 10-13

Administrative Skills II: Planning Change and Conflict Resolution
 Place: Rougemont
 Info: Cindi Easterling, CME, Box 3108 DUMC, Durham 27710. 919/684-6878

April 11-15

Diagnostic Ultrasound
 Place: Winston-Salem
 Info: Registrar, Ultrasound Center, Bowman Gray School of Medicine, 300 S. Hawthorne Rd., Winston-Salem 27103. 919/748-4505

April 18-22

Diagnostic Ultrasound
 (See April 11-15 for information)

April 20-21

1988 Public Health Nutrition Update Conference
 Place: Charlotte
 Info: Registrar, Office of CME, UNC School of Public Health, CB #8165, Miller Hall, Chapel Hill 27599-8165. 919/966-4032

April 22-23

Advanced Cardiac Life Support Provider Course
 Place: Asheville
 Credit: 16 hours Category I AMA, ACEP, AAFP
 Fee: \$200
 Info: Daniel L. Dolan, M.D., MAHEC, 501 Biltmore Ave., Asheville 28801-4686. 704/257-4419

April 22-23b

Frank R. Locke Symposium (OB-GYN)
 Place: Winston-Salem
 Credit: 9 hours Category I AMA
 Info: Sally Hudson Gulley, Div. of CME, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4450

April 25-29

Diagnostic Ultrasound
 (See April 11-15 for information)

April 25, 28, May 4

Malpractice Awareness: 1988
 Place: (on respective dates): Charlotte, Asheville, Pinehurst
 (See April 9 for information)

April 29-May 1

NC Ultrasound Society 7th Annual Symposium
 Place: Raleigh
 Credit: 16 hours Category I AMA
 Info: 919/748-4505

May 2-4

Diagnostic Ultrasound
 (See April 11-15 for information)

May 4-7

Clinical Skills Workshop
 Place: Winston-Salem
 Credit: 31 hours Category I AMA, AAFP
 (See April 22-23b for information)

May 5-6

Advanced Cardiac Life Support Providers
 (See April 22-23b for information)

May 5-6

Diagnostic Ultrasound
 (See April 11-15 for information)

May 9-13

Diagnostic Ultrasound
 (See April 11-15 for information)

May 13-14

Hemodynamic Monitoring
 (See April 22-23b for information)

May 20

Fifth Annual Eye Conference: Corneal and External Diseases
 (See April 22-23b for information)

May 20-21

17th Annual Pediatric Pulmonary/GI Program
 Place: Durham
 Fee: \$90
 Info: Dr. Alexander Spock, Duke University Medical Center, Box 2994, Durham 27710. 919/681-3364

June 4-5

Women Physicians Meeting
 Place: Asheboro
 Credit: 4.5 hours AAFP
 Info: Paula Baker, NCAFP, P.O. Box 18469, Raleigh 27619. 919/781-6467

June 13-17

Diagnostic Ultrasound (Obstetrics)
 (See April 11-15 for information)

June 20-24

Diagnostic Ultrasound(General)
 (See April 11-15 for information)



PHYSICIANS

You'll Get More From The Guard Than You Can Imagine.

A unique and rewarding role.

The moment you entered the field of medicine, you made a commitment to helping people. And they, in turn, looked to you with a trust and respect that's afforded few other professions. It was that special relationship that instilled in you a strong sense of community: an awareness of our dependence on one another and of how vital your position was. It was a proud feeling. You'll never lose it.

But you can build on it. You can experience an even greater sense of community as a member of the Army National Guard. Our whole

being is based on the idea of community. And we're unique among the services because of it.

Our members aren't full-time military people. They're citizen soldiers who serve their own hometowns, cities, and states. They help their neighbors in times of crisis and their country in its times of need. And through the Guard they develop a feeling of purpose of involvement that gives their lives extra importance.

Right now, the Army National Guard *needs you*. We need your

skills, your expertise, your insights. You're a valuable professional, so we recognize your need for more substantial benefits. And there are plenty of them.

But more than anything, we believe you're ready for something that'll give you an added pride and worth. Something that'll put you in touch with people as never before.

It's the chance to realize a greater sense of community. We don't believe you can find a more meaningful avocation.

Gaining a new respect among new people.

When you spend your time with us, you'll discover more than a job. You'll discover a fellowship. The Guard is a whole community of talented colleagues working together, exchanging ideas, and establishing friendships. It's a peer association you'll look forward to. One that goes beyond the usual medical organizations

and societies you might belong to because it's part of a highly charged, active military environment and has its own very distinct challenges and rewards.

Once you enter the Army National Guard, you'll be appointed a commissioned officer to a rank commensurate with your training and experience.

You'll also become eligible for one of the best retirement programs anywhere. And in this day and age, that's one nest egg that's becoming increasingly difficult to establish.

When you join the Army Guard, you give up just a small part of your time, but you get so much in return. And there's more.

The opportunity to further your education in the classroom and the field.

As a physician, the continuance of your education is vital to your personal and professional growth. You need to attend medical conferences and learn new procedures. In the Guard, you can do just that. And be paid for it.

For your annual training, you may be able to attend approved civilian medical conferences and seminars in order to meet your

continuing education requirements. It doesn't always have to be done in one block, either. The 15 days may be performed in separate increments, as planned and coordinated by the unit commander to fulfill the National Guard requirement and to accommodate your professional schedule.

There are other ways you can perform annual training. How

about establishing and manning a field hospital? This comes under Site Support, and it's the kind of training that requires your unit to travel to a camp and actively practice the skills needed to meet real Army Guard emergencies. It's a lot of work, but a lot of excitement, too.

CALL TOLL FREE:

1-800-662-1872

or (919) 733-3770 Ext. 213

Contact Capt. Keith R. White or SFC Gloria P. Denison

NORTH CAROLINA



Visit our booth at the NCMS Annual Session, May 5-7, Pinehurst

Letters to the Editor

The rigidity of Blue Cross-Blue Shield leads to a ridiculous situation

To the Editor:

A twenty-three-year-old female patient was brought to the emergency room at Presbyterian Hospital in Charlotte at approximately 1:00 A.M. on the morning of November 21, 1987. The patient was acutely ill and unconscious. The CT scan demonstrated hemorrhage within her brain, probably due to a ruptured aneurysm. I was the neurosurgeon on call, and responded promptly to the request to come to the hospital to care for the patient. She was admitted to the Intensive Care unit where appropriate supportive measures, including intracranial pressure monitoring, were instituted. Despite these efforts, the patient expired several hours later.

This patient lived alone in Charlotte. Her nearest relative was her mother who lived in the country and came to the hospital the night of her daughter's death.

The patient was an employee of Mecklenburg County as a school bus driver and therefore had health care insurance under the sponsorship of the county government. Under the distressing circumstances, it was decided in our office to file a claim for services rendered and to accept whatever payment her insurance might provide. We did not plan to bill the patient's mother for any balance. Subsequently, our claim for services was denied by the insurance carrier, Blue Cross-Blue Shield. The reason given for the denial of the claim was that the patient's admission was not pre-certified by her HMO gatekeeper physician. Several hours of telephone time have been spent by our office personnel to try to work out this bizarre situation, with calls to Blue Cross-Blue Shield, and to the offices of the county government. As a result of these calls, the admission was certified, but we were then advised that the reimbursement would be made by sending a check directly to the patient, who as noted above, is deceased. During these conversations, we were also advised that if we chose to become, retroactively, a participating physician in the Blue Cross-Blue Shield-HMO program, that reimbursement would be made directly to us.

As a result of the posture of Blue Cross-Blue Shield, it was necessary for us to address a letter to the patient's mother regarding the matter, an action which we had sought to avoid under such grievous circumstances.

Subsequently, direct discussion between the Presbyterian Hospital administration and the management of Blue Cross-Blue Shield had led to the assurance to us that, if we refile our claim, direct reimbursement will be forthcoming.

It is expected that physicians who live and practice in a community will respond promptly to calls from the emer-

gency room in times of need. By and large, this is the tradition and practice of the overwhelming majority of physicians in Charlotte. Nonetheless, it has been estimated that the reimbursement of charges for services rendered to this population of patients is approximately 28%. Furthermore, there is a perception nationwide that this population of patients generates a high incidence of malpractice litigation. It seems unreasonable that, under circumstances such as in this case, a physician should encounter undue inconvenience or harassment in the reimbursement process when resources are available through health care insurance coverage. In most instances, hospital claims are paid by insurance carriers directly to the hospital. Inasmuch as a physician on call in the emergency room in the hospital is an integral part of the service of that hospital to the community, it is appropriate that hospital administrators in their relations with the health care insurers, support policy that would expedite reimbursement to the physician. It is also appropriate that employers in negotiating for health care delivery packages for their employees take steps to insure that the response of physicians in emergency high risk situations will be reimbursed accordingly.

The various marketing techniques of the health care insurance companies, such as pre-certification, second opinion, gatekeeper mechanisms, and "carrot and stick" recruiting practices have no place in the emergency situation. This is the attitude of the physician who responds to the call to care for a critically ill patient, with no other consideration than to provide care that is needed when it is needed. After the delivery of service in the emergency high risk situation, the physician exercising his responsibility to the community should not be penalized or harassed in the reimbursement claims process.

This patient was insured by Blue Cross-Blue Shield of North Carolina under a group policy sponsored by the Charlotte Mecklenburg County Board of Education, her employer. Personal Care Plan of Blue Cross-Blue Shield of North Carolina is marketed throughout the state, and particularly to state, county, and municipal government employees. The purpose of this report is to attract attention to a problem which may affect many persons in North Carolina. We call attention to this problem, not to seek redress in an isolated incident, but to seek support for policy on the part of health care insurers that will prevent recurrence of similar incidents.

William L. Pritchard, M.D.
2711-204 Randolph Rd.
Charlotte 28207

A comment on "The Names and Faces of Medicine"

To Dr. Neelon:

I enjoy reading your new series on "The Names and Faces of Medicine." For amateur bibliography fanciers like myself, a significant contribution to your scholarship would be inclusion of references. I myself am particularly interested in the origins of physical signs and would wish that original reference citations, such as your quotation from Heberden, were included in your articles (Neelon FA, and Essom-Sherrier C. Heberden's Nodes. NCMJ 1987;12:667).

W. Stuart Tucker, Jr., M.D.
Nalle Clinic
Kings Drive at East Boulevard
Charlotte

Dr Neelon's reply to Dr. Tucker:

Thank you for your nice words about our new series "The Names and Faces of Medicine." I understand and sympathize with your wish to have references included with the articles. Unfortunately, we have set ourselves a strict length limit of precisely one printed page for each of these articles. As a result, we are almost always forced to make procrustean cuts in the articles as received. There just isn't room for references.

You asked about the quotation from Heberden. It appeared in his "Commentaries," a volume that is not particularly rare, having been reprinted many times, even an edition in paperback. I suspect that the medical library could dig up a copy.

Francis A. Neelon, M.D.
Duke University Medical Center
PO Box 3021
Durham 27710

On the danger of mandated generics

To the Editor:

Recent revisions of the rules and regulations governing the Medicaid Pharmacy Program by the Department of Health and Human Services essentially mandates the use of generic products for patients covered under this program.¹ Although the "MAC list" includes many drugs, anticonvulsants are in prominent class on this listing. It is my opinion that while the cost containment thrust is laudable, the wholesale inclusion of as many drug categories as possible is potentially dangerous.

Although all approved generic drugs are considered by the FDA to be bioequivalent, there is allowable variance in their bioavailability. This variance may be as wide as 40% to 60%.² For drugs which have a relatively narrow therapeutic range and require relatively tight titration in some patients for adequate effect, this allowed variation can result in significant alterations of the serum levels. This has been documented in the case of Digoxin, psychotropic drugs, and anticonvulsants.² Clinical symptoms of toxicity and breakthrough seizures are of great concern for patients on anticonvulsants, and may be a particular problem for those drugs

with short half lives such as Carbamazepine and Depakene. Already numerous reports are available in the neurologic literature citing a loss of control of seizures when a change is made from Dilatin to generic phenytoin and from Tegretol to generic carbamazepine.^{2,3} Recently a case report of a similar phenomenon appeared concerning a patient receiving Depakene who was placed on a generic compound.⁴ The literature supports my personal experience in a number of patients, both in my practice and residential care facilities, when change to generic carbamazepine was made.

Although levels might be maintained by simply increasing the dose of a generic brand, the multiple numbers of generic carbamazepine, all of which may have variance in bioavailability, make adequate titration of many seizure patients difficult with the use of generic drugs.

Therefore I would like to alert all physicians in North Carolina who prescribe anticonvulsants, and especially those using the newer and the more effective anticonvulsants such as Tegretol or Depakene, that specification of the brand name drug needs to be clearly and individually written on each prescription. This may be some increase in effort at the time of writing a prescription, but I feel that the benefits in the long term for patients with seizures will more than balance this minor increase in effort.

Additionally I would urge physicians to join with the state and local Epilepsy Associations and with others in continuing to work toward the removal of anticonvulsant drugs from the current MAC list and to support the benefits of known brand name products.

Theodore R. Sunder, M.D.
Associate Professor
Chief, Pediatric Neurology
East Carolina University School of Medicine
Greenville, 27858-4354

References

- 1 Medicaid Pharmacy Newsletter, E.D.S. Federal Corporation, Oct. 1987, p.1.
- 2 Colzizzi J, Lowenthal D. Critical therapeutic categories: a contraindication to generic substitution. Clin Therapeutics 1986;8:370-8.
- 3 Sachdeo R, Chokraverty S, Melendiuk G. Risk of switching from brand name to generic drugs in seizure disorder. Epilepsia 1987;28:581.
- 4 MacDonald JT. Breakthrough seizure following substitution of Depakene capsules with a generic product. Neurology 1987;37:1885-1987.

A reply to Dr. Gamble's letter

To the Editor:

When an old "sage and mentor," Dr. John Gamble, speaks, it behooves all of us to stop and listen. I listened very intently as I read Dr. Gamble's "Letter to the Editor" in January's NCMJ (49:58-9).

His comments are very much appreciated and I hope it is not taken as impertinent or disrespectful if one of his students takes an exception to his comments. The American Medical Association, the North Carolina Medical Society, and the leadership of our multi-medical professions have boldly and progressively provided dynamic leadership in meeting the Acquired Immune Deficiency crisis in our coun-

try. As this disease has unfolded in our country, organized medicine at the local, state, and national levels have promoted concepts and ideas that are workable and practical. They have addressed and responded to comments of quarantining and mass testing, that are well shown to be both counter-productive, ineffective, and down right dangerous, as both inadequate and unreasonable to control this new disease. When the national media suggested that physicians were not taking care of sick patients, our organized medical associations were on the front line reminding that the physicians have, and continue to do their very best to provide medical care to sick patients, whether they have AIDS or some other disease. Our professional associations have spoken strongly of our ethical and moral responsibilities at this particular time.

As a dues-paying member of many of our medical associations, I am very proud to say that these associations are there and have been there providing leadership and input. The past activities make them enormously valuable in 1988 to continue broad based programs directed towards the profession and to the general public. These organizations will continue to develop strategies and programs to guarantee the highest quality of care for sick patients and also providing our colleagues with strong professional support.

Don C. Chaplin, M.D.
Kernodle Clinic, Inc.

316 North Graham-Hopedale Road
Burlington 27215-2999

A comment on Dr. Halperin's article

To the Editor:

In the February 1988 issue of the *North Carolina Medical Journal*, Halperin et al. (49:75-9) noted that the National Institutes of Health Consensus Development Conference (NIHCDC) stated that there are no data to support the routine use of adjuvant therapy following definitive surgery for prostate cancer but that the issue deserves further study. However, since June 1987 when the NIHCDC took place, additional data have become available which address the issue of adjuvant radiotherapy for locally advanced prostate cancer.¹ These data suggest that patients found to have histologically positive surgical margins, seminal vesicle involvement and/or capsular penetration following radical prostatectomy should be offered post operative radiotherapy for the following reasons: (1) local control is clearly improved when adjuvant post operative irradiation is given under these circumstances. (2) The impact of adjuvant irradiation on survival is controversial, but there appears to be a trend towards improved survival with the addition of post operative irradiation. This implies that local failure may contribute to the death of a patient either directly, or by leading to distant metastases sooner than if local control were achieved. Thus, although post operative irradiation may not improve ultimate cure rates, by controlling local disease, early deaths due to cancer are reduced resulting in meaningful increase in survival for these patients. (3) Ad-

juvant irradiation does not appear to be associated with an increase in complications compared to either radical prostatectomy alone or primary radiotherapy alone, with the exception of leg and/or genital edema.

I would recommend that all patients with positive margins, seminal vesicle involvement and/or capsular penetration following radical prostatectomy be referred for adjuvant radiotherapy.

Reference

1 Anscher MS and Prosnitz LR. Post operative radiotherapy for patients with carcinoma of the prostate undergoing radical prostatectomy with positive surgical margins, seminal vesicle involvement and/or penetration through the capsule. *J Urology* 1987;138:1407-12.

Mitchell S. Anscher, M.D.

Assistant Professor

Division of Radiation Oncology

Box 3085, Duke University Medical Center
Durham 27710

Praise for Dr. Anderson's editorial

Editor's note: Dr. Anderson has received six letters of appreciation for his editorial "The 'Noisesome' Hospital Chart," published in our February issue (49:105). Space does not allow us to print all of them, but here is a representative selection.

To Dr. Anderson:

Congratulations on your superb article. "The 'Noisesome' Hospital Chart" summed up accurately and succinctly the sorry state to which our hospital charts have degenerated.

John M. Rhoads, M.D.

Department of Psychiatry

Duke University Medical Center
Durham 27710

To Dr. Anderson:

I certainly enjoyed your editorial in the February, 1988 issue of the *North Carolina Medical Journal*. I have been practicing for twenty-six years and understand exactly what you mean by the "noisy" hospital chart.

Every now and then I launch into a tirade at a nurses station because of the difficulty that so frequently ensues when one tries to find out what is happening to a patient by looking at his chart. The nurses do not seem to understand when I tell them how much simpler it was twenty years ago than it is now.

At a time when medicine seems to be improving at such a rapid rate in many areas, it certainly bothers me a great deal to see it regressing in others.

Thanks for your comments.

Henry L. Stephenson, Jr. M.D.

Pamlico Internal Medicine Associates

615 East 12th Street

Washington 27889

To Dr. Anderson:

Your editorial in the *North Carolina Medical Journal* in February was 100% true and on the mark! I agree that we must forcibly increase the signal-to-noise ratio of our records and more important, we also need to increase the signal-to-noise ratio of our dealings with all Third Parties.

David H. Jones, M.D., P.A.
Ophthalmology
3900 Browning Place
Raleigh 27609

PHYSICIANS Ambulatory Care Clinics

John Short & Associates, Inc., an internationally recognized health care management and consulting firm, is actively seeking **PHYSICIANS** with experience and credentials in **FAMILY MEDICINE/GENERAL PRACTICE** and **PRIMARY CARE SPECIALTIES**.

Full or part-time positions are available to staff a Primary Care Clinic in the **Coastal Region of North Carolina**. Qualifications, except for General Practitioners, include Board Certification or Board Eligibility.

John Short & Associates, Inc. offers competitive compensation including paid malpractice insurance, professional development funding and incentive programs. **For additional information please contact: Susan Bray, Recruiting Director, John Short & Associates, Inc., Box 1305, Columbia, MD 21044.**

E/O/E

Dx: recurrent herpes labialis

WILLIAM M. CAMERON, M.D.
738 EAST HIGH ST.

For _____

R

*Herpecin-L
Lip Balm
Sig: Q. H.
as needed*

HERPECIN-L®

"HERPECIN-L is my **treatment of choice** for perioral herpes." GP, NY

"HERPECIN-L appears to actually **prevent** the blisters . . . used **soon enough**." DDS, MN

"HERPECIN-L® . . . a **conservative approach** with **low risk/high benefits**." MD, FL

"Used at **prodromal symptoms** . . . blisters **never formed** . . . remarkable." DH, MA

"(In clinical trials) . . . **response was dramatic**. **HERPECIN-L** . . . proven far superior." DDS, PA

"All patients claimed **shorter duration** . . . at **prodromal symptoms** . . . **HERPECIN-L averted** the attacks." MD, AK

OTC. See P.D.R. for information. For samples to make your own clinical evaluation, write: CAMPBELL LABORATORIES, INC., P.O. BOX 812-MD, FDR STATION, NEW YORK, N.Y. 10150

In North Carolina HERPECIN-L is available at all *Crown, Eckerd, Kerr, Mutual Drug, Revco and RiteAid* and other select pharmacies.

OFFICIAL CALL HOUSE OF DELEGATES

HOUSE OF DELEGATES Meetings Scheduled

Notice to: Delegates, Alternate Delegates, Officials of the North Carolina Medical Society, and Presidents and Secretaries of component medical societies.

Sessions of the HOUSE OF DELEGATES will convene in the Cardinal Ballroom, Pinehurst Hotel, Pinehurst, North Carolina, at the following times:

Thursday, May 5, 1988 — 9:30 a.m. — Opening Session

Saturday, May 7, 1988 — 2:00 p.m. — Second Session

A member of the CREDENTIALS COMMITTEE will be present at the Meeting Registration Desk in the West Lobby, Wednesday, May 4, 1988, 3:00 p.m. to 5:00 p.m., and Thursday, May 5, 1988, 8:30 a.m. to 10:00 a.m. to certify Delegates. Delegates are urged to bring their Credential Cards for presentation at the Registration Desk. Delegate Badges must be worn to be seated in the HOUSE OF DELEGATES.

REFERENCE COMMITTEE HEARINGS

Reference Committee hearings are scheduled to begin Thursday, May 5, 1988, at 2:00 p.m.

HENRY J. CARR, JR., M.D., President
ERNEST B. SPANGLER, M.D., President-Elect
T. REGINALD HARRIS, M.D., Speaker
JOHN A. FAGG, M.D., Vice-Speaker
JOHN T. DEES, M.D., Secretary
GEORGE E. MOORE, Executive Vice-President

In Memoriam

Dr. Charles Daniel Jordan (1914 NC-1987 NC)

Dr. Jordan was born in Pitt County in 1914. His early education was in Pitt County schools and East Carolina University. Later he obtained a Master's Degree from George Peabody College in Nashville, Tennessee.

He taught in public schools in North Carolina. Later while serving as a teaching fellow at Duke University, he completed most of the requirements for a Ph.D. Degree. This study was interrupted by service in the army.

His next endeavor was enrollment in medical school at the Medical College of Virginia in Richmond. He received his M.D. in 1944 and interned at Johnston Willis Hospital in Richmond. He then began practice in Bethel, North Carolina and practiced there from 1950 to 1969.

In 1969 he became associated with East Carolina University and later was appointed Associate Professor in the Medical School.

Dr. Jordan's death, December 5, 1987, leaves a host of friends, loved ones and grateful patients. The Pitt County Medical Society is saddened at the loss of this fine physician. He will remain in the lives of those he touched. We extend our sympathy to his family.

While Dr. Jordan worked at ECU Infirmary, I was directly associated with him. I have never known a more dedicated physician. He had expert medical knowledge, and he understood us humans in a most perceptive manner.

C.F. Irons, M.D.

Pitt County Medical Society

P.O. Box 2216

Greenville, 27836

David P. Thomas, M.D. (1907-1987)

It is with sorrow that New Hanover-Pender County Medical Society acknowledges the demise of its faithful and respected member, David Pryse Thomas, M.D. on May 20, 1987 at Cornelia Nixon Davis Health Care Center after a long, disabling and debilitating illness. Dr. Thomas was an active and loyal member of this Society from 1956 until his retirement. He is survived by his wife, Mrs. Virginia Sheaffer Thomas, and one son, David Pryse Thomas, Jr., and two grandsons.

Dr. Thomas was born in Scranton, Pennsylvania on July 16, 1907. He graduated from Lehigh University in 1934 and the University of Pennsylvania School of Medicine in 1938. He served an Internship at Moses Taylor Hospital in Scranton, Pennsylvania and served in the U.S. Army Medical Corps from 1940 to 1946. During his Service career, he was a surgeon in the European-African/Middle Eastern Campaigns, receiving two battle stars, and the Asiatic-Pacific-Philippine Liberation, receiving a meritorious service

unit award. Following World War II, he attended the university of Pennsylvania Graduate School of Medicine to continue his training in the specialty of Orthopedics. He was a recipient of the Gibney Fellowship Award for additional studies at the Hospital for Special Surgery, Cornell University in New York City.

In 1956, Dr. Thomas moved to Wilmington, North Carolina where he practiced orthopedic surgery until his retirement. In 1963 he was Chairman of the Staff, Cape Fear Memorial Hospital and in 1973, Chairman of the Department of Surgery, New Hanover Memorial Hospital. He was president of the North Carolina Arthritis Foundation in 1970 and, for a period, co-director of the Crippled Children's Program. He was a fellow of the American College of Surgeons and the American Academy of Orthopedic Surgeons.

Dr. Thomas will be remembered by his peers as a sound, wise, orthopedic surgeon with excellent judgement and conservative practices. He was a good diagnostician and observer and frequently recognized disease complexes unrelated to his own specialty of orthopedics. He was slow to speak and calm in his delivery. The New Hanover-Pender County Medical Society members that served along with Dr. Thomas will miss his pleasant association and wise counsel.

R. Bertram Williams, Jr., M.D.

Louis A. Walker, M.D. (1918-1987)

It was with sadness and disbelief our medical community learned of the sudden and unexpected death of Dr. Louis A. Walker on October 1, 1987. Although Dr. Walker was not entirely well, he still was very active since his retirement in the fall of 1985.

Dr. Walker originally settled in our area in 1967. He was a Hoosier by birth; he was born in Daviess County, Indiana on February 8, 1918. His studies in pharmacy school were interrupted by WWII. He served as a bombardier in the U.S. Army Air Force from 1942 until 1946 and achieved the rank of Captain. During the latter part of his service career, he was an instructor for bombardiers assigned to the B-17 bomber program. In 1949, he completed his undergraduate studies at Indiana University and earned the M.D. in 1952 at that same institution. He completed a rotating internship at Indianapolis General Hospital in 1953, and took a residency in Emergency Medicine from 1953 to 1954 at the same hospital.

In 1954, Dr. Walker entered General Practice in Greensburg, Indiana. The area in which he practiced was primarily a farming community, and an area chronically suffering from low physician census. Dr. Walker practiced a profession some of us will remember as a real General Practice.

During the 13 years in practice, he delivered approximately 1600 babies, made county-wide house calls, and more than once, would ride in the ambulance transporting a sick baby to Indianapolis during a raging snow storm. The heavy workload and lack of family life prompted him to take a new direction. Because of his previous interest in Emergency Medicine, he moved his family South and joined the Emergency Room staff at James Walker Memorial Hospital in Wilmington in June of 1967. From there he practiced Emergency Medicine at the then new New Hanover Memorial Hospital until 1970. From 1970 to 1974, he continued with Emergency Medicine at Holston Valley General Hospital in Kingsport, Tennessee. He returned to Wilmington in August, 1974 and practiced Emergency Medicine at Cape Fear Memorial Hospital until his retirement.

Dr. Walker is survived by his wife of 44 years, Mrs. Olene McGuire Walker, three sons and one granddaughter. Joseph is a practicing dentist in Cannelton, Tennessee; Jeffrey, a graduate of Vanderbilt University is now living in Seattle; and, James, a graduate of MIT is living in Boston.

Dr. Walker had an intense and lifelong love for sports. His memory for professional players and teams was phenomenal. He was a devoted family man. Dr. Walker was an avid golfer, and, in fact, played golf the day before the onset of his fatal illness.

During his many years in General Practice and Emergency Medicine, Dr. Walker practiced excellent medicine. His experience coupled with his intuitive abilities were evident in his day-to-day care of patients. Dr. Walker will be remembered as a down-to-earth, compassionate, and warm-hearted physician. He was well liked and appreciated by his colleagues and patients. He was a member of the American Board of Emergency Medicine, and prior to his retirement, was an active member in the New Hanover-Pender County Medical Society.

Robert R. Smalley, M.D.



**Most
patients
need
only one.**

NCMJ Classified Ads . . .

Send your ad to:

**Managing Editor
Box 3910
Duke University Medical Center
Durham 27710**

Please specify the number of issues in which you'd like it to appear. Include your name, address, and phone number.

Closing date is the 25th of the second prior month. For cost and billing information, call 919/684-5728.

K-DUR™ 20 Microburst
Release
System™
(potassium chloride) 20mEq Sustained Release
Tablets
**A daily prophylactic dose
in a single tablet.**

Please see next page for brief summary of prescribing information.

KEY Key Pharmaceuticals, Inc.
Kenilworth, NJ 07033
World leader in drug delivery systems.

Copyright © 1987, Key Pharmaceuticals, Inc., Kenilworth, NJ 07033.
All rights reserved. KD-2055/14238603H 8/87

K-DURTM Microburst Release SystemTM (potassium chloride) Sustained Release Tablets

INDICATIONS AND USAGE: BECAUSE OF REPORTS OF INTESTINAL AND GASTRIC ULCERATION AND BLEEDING WITH SLOW-RELEASE POTASSIUM CHLORIDE PREPARATIONS, THESE DRUGS SHOULD BE RESERVED FOR THOSE PATIENTS WHO CANNOT TOLERATE OR REFUSE TO TAKE LIQUID OR EFFERESCENT POTASSIUM PREPARATIONS OR FOR PATIENTS IN WHOM THERE IS A PROBLEM OF COMPLIANCE WITH THESE PREPARATIONS.

1. For therapeutic use in patients with hypokalemia with or without metabolic alkalosis, in digitalis intoxication and in patients with hypokalemic familial periodic paralysis.

2. For the prevention of potassium depletion when the dietary intake is inadequate in the following conditions: Patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis with ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, and with certain diarrheal states.

3. The use of potassium salts in patients receiving diuretics for uncomplicated essential hypertension is often unnecessary when such patients have a normal dietary pattern. Serum potassium should be checked periodically, however, and if hypokalemia occurs, dietary supplementation with potassium-containing foods may be adequate to control milder cases. In more severe cases supplementation with potassium salts may be indicated.

CONTRAINDICATIONS: Potassium supplements are contraindicated in patients with hyperkalemia since a further increase in serum potassium concentration in such patients can produce cardiac arrest. Hyperkalemia may complicate any of the following conditions: Chronic renal failure, systemic acidosis such as diabetic acidosis, acute dehydration, extensive tissue breakdown as in severe burns, adrenal insufficiency, or the administration of a potassium-sparing diuretic (e.g., spironolactone, triamterene).

Wax-matrix potassium chloride preparations have produced esophageal ulceration in certain cardiac patients with esophageal compression due to enlarged left atrium.

All solid dosage forms of potassium chloride supplements are contraindicated in any patient in whom there is cause for arrest or delay in tablet passage through the gastrointestinal tract. In these instances, potassium supplementation should be with a liquid preparation.

WARNINGS: Hyperkalemia—In patients with impaired mechanisms for excreting potassium, the administration of potassium salts can produce hyperkalemia and cardiac arrest. This occurs most commonly in patients given potassium by the intravenous route but may also occur in patients given potassium orally. Potentially fatal hyperkalemia can develop rapidly and be asymptomatic. The use of potassium salts in patients with chronic renal disease, or any other condition which impairs potassium excretion, requires particularly careful monitoring of the serum potassium concentration and appropriate dosage adjustment.

Interaction with Potassium Sparing Diuretics—Hypokalemia should not be treated by the concomitant administration of potassium salts and a potassium-sparing diuretic (e.g., spironolactone or triamterene) since the simultaneous administration of these agents can produce severe hyperkalemia.

Gastrointestinal Lesions—Potassium chloride tablets have produced stenotic and/or ulcerative lesions of the small bowel and deaths. These lesions are caused by a high localized concentration of potassium ion in the region of a rapidly dissolving tablet, which injures the bowel wall and thereby produces obstruction, hemorrhage or perforation.

K-DUR tablets contain micro-crystalloids which disperse upon disintegration of the tablet. These micro-crystalloids are formulated to provide a controlled release of potassium chloride. The dispersibility of the micro-crystalloids and the controlled release of ions from them are intended to minimize the possibility of a high local concentration near the gastrointestinal mucosa and the ability of the KCl to cause stenosis or ulceration. Other means of accomplishing this (e.g., incorporation of potassium chloride into a wax matrix) have reduced the frequency of such lesions to less than one per 100,000 patient years (compared to 40–50 per 100,000 patient years with enteric-coated potassium chloride) but have not eliminated them. The frequency of GI lesions with K-DUR tablets is, at present, unknown. K-DUR tablets should be discontinued immediately and the possibility of bowel obstruction or perforation considered if severe vomiting, abdominal pain, distention, or gastrointestinal bleeding occurs.

Metabolic Acidosis—Hypokalemia in patients with metabolic acidosis should be treated with an alkalinizing potassium salt such as potassium bicarbonate, potassium citrate, potassium acetate, or potassium gluconate.

PRECAUTIONS: The diagnosis of potassium depletion is ordinarily made by demonstrating hypokalemia in a patient with a clinical history suggesting some cause for potassium depletion. In interpreting the serum potassium level, the physician should bear in mind that acute alkalosis per se can produce hypokalemia in the absence of a deficit in total body potassium while acute acidosis per se can increase the serum potassium concentration into the normal range even in the presence of a reduced total body potassium. The treatment of potassium depletion, particularly in the presence of cardiac disease, renal disease, or acidosis requires careful attention to acid-base balance and appropriate monitoring of serum electrolytes, the electrocardiogram, and the clinical status of the patient.

Laboratory Tests: Regular serum potassium determinations are recommended. In addition, during the treatment of potassium depletion, careful attention should be paid to acid-base balance, other serum electrolyte levels, the electrocardiogram, and the clinical status of the patient, particularly in the presence of cardiac disease, renal disease, or acidosis.

Drug Interactions: Potassium-sparing diuretics; see **WARNINGS**.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term carcinogenicity studies in animals have not been performed.

Pregnancy Category C: Animal reproduction studies have not been conducted with K-DUR. It is also not known whether K-DUR can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. K-DUR should be given to a pregnant woman only if clearly needed.

Nursing Mothers: The normal potassium ion content of human milk is about 13 mEq per liter. Since oral potassium becomes part of the body potassium pool, so long as body potassium is not excessive, the contribution of potassium chloride supplementation should have little or no effect on the level in human milk.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: One of the most severe adverse effects is hyperkalemia (see **CONTRAINDICATIONS, WARNINGS, and OVERDOSAGE**). There have also been reports of upper and lower gastrointestinal conditions including obstruction, bleeding, ulceration, and perforation (see **CONTRAINDICATIONS and WARNINGS**); other factors known to be associated with such conditions were present in many of these patients.

The most common adverse reactions to oral potassium salts are nausea, vomiting, abdominal discomfort, and diarrhea. These symptoms are due to irritation of the gastrointestinal tract and are best managed by taking the dose with meals or reducing the dose.

Skin rash has been reported rarely.

OVERDOSAGE: The administration of oral potassium salts to persons with normal excretory mechanisms for potassium rarely causes serious hyperkalemia. However, if excretory mechanisms are impaired or if potassium is administered too rapidly intravenously, potentially fatal hyperkalemia can result (see **CONTRAINDICATIONS and WARNINGS**). It is important to recognize that hyperkalemia is usually asymptomatic and may be manifested only by an increased serum potassium concentration and characteristic electrocardiographic changes (peaking of T-waves, loss of P-waves, depression of S-T segment, and prolongation of the QT-interval). Late manifestations include muscle-paralysis and cardiovascular collapse from cardiac arrest.

Treatment measures for hyperkalemia include the following:

1. Elimination of foods and medications containing potassium and of potassium-sparing diuretics.
2. Intravenous administration of 300 to 500 ml/hr of 10% dextrose solution containing 10–20 units of insulin per 1,000 ml.
3. Correction of acidosis, if present, with intravenous sodium bicarbonate.
4. Use of exchange resins, hemodialysis, or peritoneal dialysis.

In treating hyperkalemia, it should be recalled that in patients who have been stabilized on digitalis, too rapid a lowering of the serum potassium concentration can produce digitalis toxicity.

1002004

KEY Key Pharmaceuticals, Inc.
Kenilworth, NJ 07033 (USA)
World leader in drug delivery systems.

13944326
Rev. 4/87

YOCON[®] YOHIMBINE HCl

Description: Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalamic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon[®] is indicated as a sympatholytic and mydriatic. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.^{1,2} Also dizziness, headache, skin flushing reported when used orally.^{1,3}

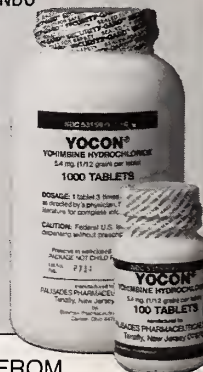
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.^{1,3,4} 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to 1/2 tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.³

How Supplied: Oral tablets of Yocon[®] 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:

1. A. Morales et al., New England Journal of Medicine: 1221, November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

Rev. 1/85



AVAILABLE EXCLUSIVELY FROM
**PALISADES
PHARMACEUTICALS, INC.**
219 County Road
Tenafly, New Jersey 07670
(201) 569-8502
Outside NJ 1-800-237-9083

Classified Ads

KEEPING LONG HOURS? Too many patients and not enough time? Have you considered employing a physician assistant to help you extend your practice without extending yourself? The North Carolina Academy of Physician Assistants can supply you with helpful information about the training and capabilities of physician assistants. For more information contact Dean Minton, PA-C, NCAPA Public Affairs Chairman, 209 Shenendoah Dr., Winston-Salem 27103. 919/748-2247 (work); 919/768-4934 (home).

FAMILY PRACTITIONER to join four man Family Practice group in Southern Piedmont area, 20 miles south of Charlotte, NC. 160 bed community hospital. New office with full lab and x-ray facilities. Please contact William Deskins, M.D. or Paul Kitchin, M.D. at Monroe Family Medical Center, P.A., 1420 E. Franklin St., Monroe, NC 28110. 704/289-8427.

PRACTICE SALES, mergers, equity associateships, or appraisals from the nation's oldest practice transition firm. Aftco Associates, Charlotte. P.O. Box 4126, Rock Hill SC 29731. 803/329-9655.

FAMILY PHYSICIAN BC/BE needed to replace retiring member of four physician F.P. group. OB optional. Available 7-88 or after. Pine Ridge Family Practice, PA. 147 Columbine Drive, Winston-Salem 27106.

DISCOUNT HOLTER SCANNING: starting at \$40. Spacelab Holvers available at \$1275. Turn-over time is 24-48 hours. Hook-up kits available at \$4.95. Stress test electrodes available at .29¢. Scanning paper available at \$18.95. One free test is offered at no obligation on trial basis. Cardio Care, Inc. For more information call us today at: 1-800/248-0153.

RADIOLOGIST: Nice, small, well located North Carolina town. Join active hospital based, service oriented practice. General DX, NM, US, CT — future arteriography. Reply with C.V. to: code 60, NCMJ, Box 3910, DUMC, Durham 27710.

OB/GYN: Solo practitioner seeking partner for small community in the scenic mountains of Virginia. Competitive compensation package with liberal benefits. Supported by full service, 150+ bed community hospital. Area offers an abundance of recreational activities. Contact Jim Davis, Tyler & Company, 9040 Roswell Rd., Atlanta, GA 30350. Call 404/641-6411.

INTERNIST to join established multi-specialty group. Cardiology experience preferred. Practice is based in scenic, waterfront community; hospital with three nursing homes. Near Norfolk, VA. Competitive salary/benefits. Send CV to: Box 429, Edenton, NC 27932.

KENANSVILLE: Emergency Department Director and staff positions available at 107-bed hospital. Excellent emergency medicine opportunity for primary care physicians. Low volume/low trauma. Rich in history, Kenansville is located 55 miles north of Wilmington and 85 miles southeast of Raleigh. Easy access to East Carolina University School of Medicine for CME. Flexible scheduling. No overhead. No on-call duties. Competitive compensation plus professional liability insurance program. Complete benefit package for director. Please call or submit your CV to: Coastal Emergency Services of Durham, Inc., 3200 Croasdaile Dr., Dept. SA, Ste. 403, Durham 27705; 919/383-0367, 800/672-1665 in NC; 800/334-3306 in US.

WANTED TO BUY: Good used complete standard edition of Freud's Works. 919/787-7307 anytime.

NORTH CAROLINA: Attending faculty position available July 1, 1988 at the assistant professor level or more, in tenure track, depending upon candidate's qualifications. Emergency medicine residency training or board preparation preferred. Emergency department has fully autonomous academic departmental status. Emergency medicine residency began July 1983. Hospital designated as Level I regional trauma center. Helicopter service began April 1985. Compensation competitive, plus excellent fringe benefits. Please contact E. Jackson Allison, Jr., MD/MPH, FACEP, Professor and Chairman, Department of Emergency Medicine, East Carolina University School of Medicine, Pitt County Memorial Hospital, Greenville, NC 27858-4354; or call 919/551-4757. Federal law requires proper documentation of identity and employability prior to final consideration for this position. East Carolina University is an Equal Opportunity/Affirmative Action Employer.

NORTH CAROLINA - Emergency Medicine opportunities with local Emergency Medical group in central N.C. in two medium volume E.D.'s. Board certified/prepared in E.M., F.P./I.M. preferred. Competitive salary, CME, ACEP dues, malpractice paid. Replies and C.V.'s to James Strickland, M.D.; P.O. Box 464; Burlington, NC 27215. 919/228-0768.

URGENT CARE PHYSICIANS needed to staff several free-standing acute care facilities to open soon in Central and Western NC. Attractive salary, benefit, and incentive package with flexible scheduling. BC/BE in IM, FP, EM, or previous urgent care experience required. Send CV in confidence to: Attention R. Reavis, M.D., Physician Recruitment, Southeastern Health Services, P.O. Box 2952, Burlington, NC 27215.

FOR SALE: Ames Seralyzer, 1987. Modules for seven tests; can do 15 tests if desired. Best offer. Call 703/638-3941.

FAMILY PRACTITIONER needed for full-time solo practice in a progressive community in Troutman, NC, near beautiful Lake Norman. Guaranteed income plus benefits. Please send CV to Richard Blackburn, Executive Director, Lake Norman Regional Medical Center, PO Box 360, Mooresville, NC, 28115, 704/663-1113.

FAMILY PRACTICE -Family practitioner needed for full-time solo practice in a progressive community in Sherrills' Ford, NC, near beautiful Lake Norman. Guaranteed income plus benefits. Please send CV to Richard Blackburn, Executive Director, Lake Norman Regional Medical Center, PO Box 360, Mooresville, NC, 28115, 704/663-1113.

FAMILY PHYSICIAN (BC/BE preferred) to join two doctor team. Spacious office, X-ray and lab facilities. Fifty bed hospital seven miles away. Near Benson, Campbell University, and junctions of I-95 and I-40. Thirty miles from Raleigh and Fayetteville. Excellent growth potential. Contact Donald Moore, 919/897-6423.

GENERAL INTERNIST with general or subspecialty interest wanted to join group of three in Winston-Salem, North Carolina. Practice largely fee for service oriented. Please send qualifications to Code 55, NCMJ, Box 3910 DUMC, Durham 27710.

HICKORY — Board cert./elig. child and adolescent psychiatrist. Position available immediately and/or July 1989, to join one child/general psychiatrist in a rapidly expanding multidisciplinary (psychologists, social worker, physician's assistants, educators, and nurses) private practice. Excellent inpatient and outpatient potential. Send vitae to Philip J. Schmitt, M.D., Piedmont Treatment Center, PO Box 9149, Hickory, NC 28603.

OBSTETRICIAN/GYNECOLOGIST B/E, B/C - for 15

physician multispecialty group located in beautiful Piedmont area of North Carolina. Present B/C doctors have busy practice and desire to share work load with a congenial, supportive and professional associate who desires time for a personal life. Group practice is in close proximity of two hospitals. In-house Lab, X-ray, Stress lab and Echo. Association leads to equal shareholdership in one to two years. Full benefit package, guaranteed salary and professional management. Send CV to: Administrator, Statesville Medical Group, P.O. Box 1460, Statesville, NC 28677, or call 704/878-2011.

GENERAL INTERNIST desired to replace retiring member of four physician F.P. group. Busy general adult medicine practice. Pine Ridge Family Practice, P.A. 147 Columbine Dr., Winston Salem, NC 919/722-9535.

LINCOLNTON — Family Physician of 42 years in the one practice is now stepping down for physical reasons. Practice has been a great pleasure and enjoys a wonderful reputation. Contact Dr. Boyce P. Griggs, Lincolnton: 704/735-2352. Will accept discussions with reliable and desirable physicians.

FOR SALE — Established Practice of Urology in the Piedmont area of North Carolina. Easy access to metropolitan areas via Interstate highway. Solid opportunity in a growing area. For details, send inquiry with address and telephone number to Mr. C. David Carpenter, Professional Consulting Services, Inc. 125 E. Pennsylvania Avenue, Southern Pines, NC 28387.

OWNER MUST SELL — will take loss — magnificent newly built tri-level four-bedroom, four-bathroom, garage, gazebo dining area, fireplace. Completely furnished with linens, drapes, wood floors, dining and cooking utensils. Located on 1½ acres at Fairfield Mountain, Lakelure, NC. Two 18-hole golf courses, clubhouse, 26-mile lake, boating, fishing, health club, tennis courts, three pools, gourmet restaurants on premises and area. Call collect, Helen Kittay, 1-800/327-4287.

Index to Advertisers

Baron Advisory Services, Inc.	181
B & B X-Ray, Inc.	215
Blue Cross and Blue Shield of N.C.	196
Burroughs Wellcome Co.	218a-b, 219
Campbell Laboratories, Inc.	226
Coast Realty and Construction Co.	217
Crompton Company	Cover 2
Eli Lilly	190b
Elite Management	216
Hinrichs Financial Group	194
Key Pharmaceuticals	229, 230
Med-Care	184

Medical Mutual Insurance Company of N.C.	210
Medical Protective Company	191
North Carolina Army National Guard	222
Palisades Pharmaceuticals	230
Republic Health	226
Roche Laboratories	Cover 3-4
Saint Albans Psychiatric Hospital	202
Smith Kline and French Laboratories	190a
Southern Medical Association	182
U.S. Army	218
Winchester Surgical Supply Co.	212
Wyeth-Ayerst Laboratories	194a-d

Journal

North Carolina
Medical Society
May 1988
Volume 49
Number 5

North Carolina Medical Journal

For Doctors and their Patients

Of Medicine and the Breast

Donald Serafin, M.D.

Carolina Physician's Bookshelf

Edited by
Edward C. Halperin, M.D.

Round up the Usual Suspects: Potassium Bromate Poisoning

Ronald B. Mack, M.D.

Contents page 235

Sports Medicine
Symposium
July 1-3
Wrightsville Beach

North Carolina Medical
Journal
UCSF LIBRARY
Received on: 05-18-88



THERE IS
SOMETHING
IN OUR NAME
THAT BRINGS YOU
A FEELING OF
SECURITY.

CRUMPTON COMPANY.

Why do so many NC physicians participate in the Crumpton Plan of Disability Income Protection?

THE ANSWER is the 47 years of successful relationship and personal service at claim time!

Yes, the feeling of security as well as economic advantage in knowing the program is a plan of carefully designed benefits.

The plan is not filled with a lot of "purple duck feathers," but provides income when you are unable to produce — not promises, but performance.

Why not call us today to obtain the latest details for your group practice? We are delighted to offer our broadened portfolio of professional insurance.



Commercial Insurance Company

Crumpton Company
Box 8500 Academy Center, Durham 27707
800/672-1674 919/493-2441

NORTH CAROLINA MEDICAL JOURNAL

For Doctors and their Patients

May 1988, Volume 49, Number 5

Published Monthly as the Official Organ of the North Carolina Medical Society

(ISSN-0029-2559)

STAFF

Eugene A. Stead, Jr., M.D.
Rt. 1, Box 194, Bullock
EDITOR
919/693-4531
Francis A. Neelon, M.D.
Durham
ASSOCIATE EDITOR
F. Maxton Mauney, Jr., M.D.
Asheville
ASSOCIATE EDITOR
Eben Alexander, Jr., M.D.
Winston-Salem
ASSOCIATE EDITOR
William B. Blythe, M.D.
Chapel Hill
ASSOCIATE EDITOR
William W. Fore, M.D.
Greenville
ASSOCIATE EDITOR
Edward C. Halperin, M.D.
Durham
ASSOCIATE EDITOR
Laurel Ferejohn
Durham
MANAGING EDITOR
919/684-5728

Jane Whalen
Durham
EDITORIAL ASSISTANT
George E. Moore
Raleigh
BUSINESS MANAGER

EDITORIAL BOARD

Charles W. Styron, M.D.
Raleigh
CHAIRMAN
Edwin W. Monroe, M.D.
Greenville
Robert W. Prichard, M.D.
Winston-Salem
Louis deS. Shaffner, M.D.
Winston-Salem
Jay Arena, M.D.
Durham
Jack Hughes, M.D.
Durham
William B. Blythe, M.D.
Chapel Hill
Margaret C. Swanton, M.D.
Clinton

The appearance of an advertisement in this publication does not constitute any endorsement of the subject or claims of the advertisement.

The Society is not to be considered as endorsing the views and opinions advanced by authors of papers delivered at the Annual Meeting or published in the official publication of the Society. — *Constitution and Bylaws of the North Carolina Medical Society*, Chapter IV, Section 3, page 4.

NORTH CAROLINA MEDICAL JOURNAL

Box 3910, Duke University Medical Center, Durham, NC 27710 (919/684-5728), is owned and published by The North Carolina Medical Society under the direction of its Editorial Board. Copyright © The North Carolina Medical Society 1988. Address manuscripts and communications regarding editorial matters, advertising, subscription rates, etc., to the Managing Editor at the Durham address. All advertisements are accepted subject to the approval of a screening committee of the State Medical Journal Advertising Bureau, 711 South Blvd., Oak Park, Illinois 60302 and/or by a Committee of the Editorial Board of the North Carolina Medical Journal in respect to strictly local advertising. Instructions to authors appear in each issue (see table of contents). Annual Subscription, \$12.00 (+ tax in NC). Single copies, \$2.00. Publication office: The Ovid Bell Press, Inc., 1201-05 Bluff St., Fulton, MO 65251. *Second-class postage paid at Raleigh, North Carolina 27611 and additional mailing offices.* Postmaster: Send address changes to North Carolina Medical Society, 222 N. Person St., Raleigh, NC 27611.

BARON CREATES TAX LEVERAGE.

Fund Your Retirement Plans At Up To 25% Of Payroll
For Key Employees At A Cost For Staff Of Only 11%—

THAT'S LEVERAGE!

For More Information Call:

Baron Benefits Management, Inc.

A BARON FINANCIAL COMPANY

Executive Compensation and Employee Benefit Specialists

4110 Wake Forest Road, Suite 211
Raleigh, N.C. 27609
(919) 790-9904/(800) 222-8783

300 Wendover Avenue East, Suite 202
Greensboro, N.C. 27401
(919) 379-8207/(800) 822-1086

THE SECRET IS OUT



“I am very impressed with the SMA’s Annual Meetings. I had not anticipated the diversity of the meetings and the specialties available as well as the postgraduate programs. I’ve participated in two courses and have been extremely impressed with the organization and content of the programs.”

**Nancy E. Pace, M.D.
Internal Medicine
Honolulu, Hawaii**

Since 1906, the Southern Medical Association has been the best kept secret in the South. No longer! The word is out and everybody’s talking.

They’re talking about the educational benefits of belonging to the largest regional multi-specialty association in the U.S. and the diversity of the Annual Scientific Assembly.

They’re talking about a non-political association whose only mission is to provide the best educational and financial benefits available anywhere.

They’re also talking about unrivaled member benefits including the SMA Insurance Program, the Physicians’ Purchasing Program, the SMA Retirement Program, SMA Travel Services, Dial Access, the *Southern Medical Journal* and many, many more.

But most of all, they’re talking about how SMA can offer so much at such a low cost.

Call the SMA for more information and a membership application. Find out why more and more physicians are joining the SMA every day.

Join the SMA today . . . You’ll be talking about us too!

Post Office Box 190088
Birmingham, Alabama 35219



1-800-423-4992
(205) 945-1840

North Carolina Medical Journal

FOR DOCTORS AND THEIR PATIENTS

Contents / May 1988, Volume 49, Number 5

SCIENTIFIC ARTICLE

- 237 Bilateral Proximal Tibial Osteonecrosis: A Case of the "Deep Knee Bends" *Jonathan C. Fox*

TOXIC ENCOUNTERS

- 243 Round up the Usual Suspects: Potassium Bromate Poisoning *Ronald B. Mack*

EDITORIAL

- 251 Reflections on the Care of Patients with Chronic Crippling Illness *Marvin Rozear*

MEMOIR OF A PATIENT

- 252 How It Is To Be on the Bed *Richard R. Rankin, Jr.*

FOR PATIENTS

- 255 Of Medicine and the Breast *Donald Serafin*
265 Biopsy *Peggy Hansen*

THE NAMES AND FACES OF MEDICINE

- 267 Gull's Disease *Edward S. Schroering, Jr. and Francis A. Neelon*

CAROLINA PHYSICIAN'S BOOKSHELF

- 272 Book Reviews *Coordinated by Edward C. Halperin*

277 **LETTERS TO THE EDITOR**

BULLETIN BOARD

- 283 Continuing Medical Education
283 New Members
284 Instructions to Authors
285 Classified Advertisements
288 Index to Advertisers

Are You Only Smiling For The Camera?



Or do you know someone who is?

Saint Albans Psychiatric Hospital in Radford, Virginia has been helping people deal with life since 1916. We offer comprehensive programs for adults and adolescents in chemical dependency, eating disorders, depression, out-of-control behavior and other life problems — all supervised by a skillful and compassionate staff.

When you know someone in need of psychiatric help, call Saint Albans.

We build real smiles.

*In Virginia: 1-800-572-3120
Outside Virginia: 1-800-368-3468
P.O. Box 3608 Radford, Va., 24143*

 **Saint Albans
Psychiatric Hospital**
Radford, Virginia

Bilateral Proximal Tibial Osteonecrosis

A Case of "Deep Knee Bends"

Jonathan C. Fox, M.D., Ph.D.

We are all familiar with the routine of ordering a variety of x-rays for patients with common musculoskeletal complaints, only to have the films read as "negative." Occasionally there comes a striking and wholly unanticipated finding that raises more questions than it provides answers.

Like many clinic physicians, I suppose I occasionally obtain x-rays for unsatisfying reasons. Low clinical suspicion often cannot prevail over the slightest doubt, physician fear of "missing something," medicolegal indications for a negative x-ray, or patient insistence that "something must be broken."

My patient was a 51-year-old man who worked as a cement finisher. He came to my clinic complaining of left knee pain. He gave a history of repeated minor trauma to both knees, related to his long hours of standing and kneeling at work, and to a series of injuries he had sustained while intoxicated with alcohol. He had been having more trouble with the left knee off and on following a fall down a flight of stairs eighteen months earlier. The continuous, aching pain he experienced in his left knee made it difficult to walk or bear weight, and he had missed six days of work as a result. Both knees had been operated on some years before, but he could provide no details. During a two-week course of nonsteroidal anti-inflammatory medication, his symptom had improved, but his supply of medication ran out and his condition then worsened.

As I listened to the patient's story I felt myself slipping into the all too familiar (false?) sense of security: a straightforward, uncomplicated case; examine, treat and release; return to clinic in two or three weeks. There seemed to be no other serious medical problem or other preexisting condition. There was the long history of alcohol abuse and a 45-pack-year history of cigarette smoking.

On examination he appeared well except for mild hypertension. The knees showed bilateral bony enlargement with crepitus, and there was a small effusion on the left. Range of motion was full. There was no evidence of joint instability, swelling, erythema, warmth or tenderness. McMurray's test was positive indicating a tear of the lateral meniscus of the left knee.

"But wait," I thought, "could I be missing something more serious; something requiring more than merely sending this man out with ibuprofen?" The Voice of Reason argued for thoroughness. Translated into English, this meant x-rays. After all, this man could conceivably have an avulsed tibial condyle, an aggressively eroded joint surface, a bone tumor. Not likely, but possible. As it turned out, well, yes and no.

X-rays of both knees obtained under weight-bearing conditions (figure 1; next page) showed a prominent irregular, osteosclerotic process affecting the metadiaphyseal portion of the heads of both tibias. The bilateral intramedullary lesions were large and irregularly shaped, with well defined peripheral margins. The mottled appearance was due to an irregular pattern of increased bone density alternating with cyst-like areas of radiolucency. There was no medullary expansion, nor was there endosteal scalloping. There was no involvement of the cortices, epiphyses or articular surfaces, no significant joint-space narrowing, and slight chondrocalcinosis affecting the right lateral meniscus. There were no pathologic findings in the left lateral joint space, suggesting that these remarkable x-ray findings had nothing to do with the patient's symptoms.

I concluded that the patient's history and physical exam

From the Department of Medicine, Duke University Medical Center, Durham 27710.

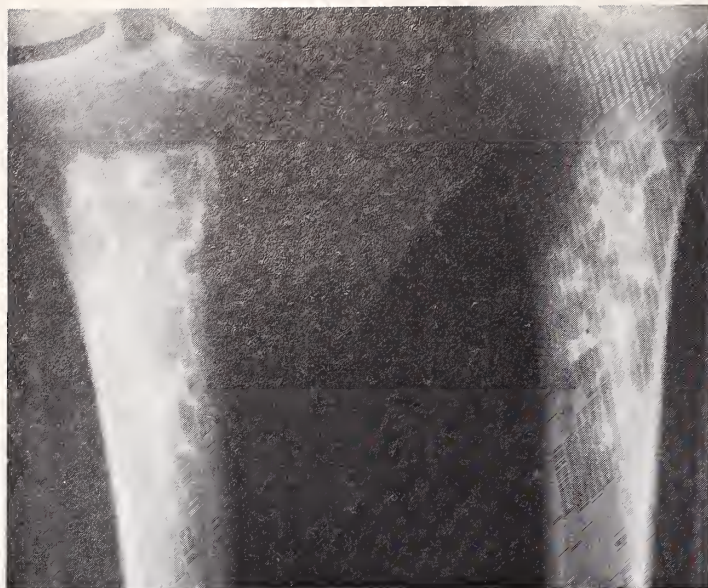


Figure 1. Roentgenograms of patient's knees. Obtained under weight-bearing conditions. Top: View showing full extent of lesions. Bottom: View showing details of joint spaces.

had given the correct answer: (mild) degenerative joint disease and a cartilage tear aggravated by trauma. But what about these impressively abnormal bones of his? How could he have developed these tibial lesions and not known about them? I concluded that, impressive as they were, the bone lesions represented an incidental finding, but I felt that I needed at least a name for this condition so that I could start to think about it and what might have caused it.

As I phoned the radiologist, I turned over in my mind the possible etiologies: vascular insufficiency; infection; trauma; metabolic disease; rheumatologic disease; neoplasm; endocrinopathy; immunopathy; hematopathy. I was running out of -opathies. Most of the entities I could think of were good possibilities for one-sided lesions; the bilaterality was vexing. The radiologist answered.

R: "Oh, yes. Very interesting films. Is the patient on steroids?"

Me: "Uh, no. Why? What is this?"

R: "Oh, this is classic osteonecrosis. What some people call aseptic or avascular necrosis. Sort of an atypical location. What disease does he have?"

Me: "None that I know about, at least just yet. I thought he had osteoarthritis, nothing more."

R: "Well, he's got a little chondrocalcinosis in the right lateral meniscus. Is that where he's got symptoms?"

Me: "Unfortunately, no. Pain is localized to the left lateral knee. Anything there?"

R: "Uh, no. Looks great as a matter of fact. No joint space narrowing, no nothing. Could he have sickle cell or something?"

Me: "Not likely. He's 51 years old, no prior history."

R: "Hmm. Hey, well, great case. Let me know what you find out. Good luck."

I pondered my next move. It was time for a Second Opinion.

I consulted a series of well seasoned and knowledgeable clinicians in the fields of general internal medicine, endocrinology, bone mineral metabolism and orthopedic surgery. All were impressed with the appearance of the patient's lesions. All considered most of the likely diagnoses that had already been ruled out. I grew weary of the now familiar "interesting case; let me know what you find out." The senior radiologist reviewed the films with me.

SR (very matter-of-factly): "This is osteonecrosis."

Me (trying to share his perspicacity): "Why, yes, but is it common for it to occur bilaterally, especially in this location?"

SR: "Not uncommon."

Me (trying to lay a trap): "What do you think is the etiology of this lesion?"

SR (eyeing me with the subtlest hint of suspicion): "You say that the patient has not been on steroids, does not have Cushing's, has a normal hemoglobin, normal alkaline phosphatase . . ."

Me: "That's right, and he . . ."

SR (interrupting): "Is he an alcoholic?"

Me: "Why, yes, he does drink. Why do you ask?"

SR (smiling): "Well, we see this often in alcoholics."

Me: "You do? Then this is a lesion caused by some metabolic consequence of ethanol abuse?"

SR (retreating): "I didn't say that. This lesion could be caused by a variety of disorders. Steroid arthropathy, sickle cell disease . . ."

Me (disappointed): "Well, if the lesion is so nonspecific, what is the basic pathophysiology?"

SR (back on safe ground): "This basically represents an old infarction of medullary bone. The hypermineralization and haphazard pattern of remodelling represent a healing response, a form of scar."

Now it was time to do some Real Work (read: go to the library).



Figure 2. Roentgenographic appearance of osteonecrosis associated with chronic alcoholism (reproduced with permission¹).

I found the specialized atlases of bone radiology,^{1,2} and, there it was, osteonecrosis. Also called aseptic necrosis, avascular necrosis, osteochondritis, and osteochondrosis. There it was! My patient's lesion, reproduced and printed on glossy paper (see figure 2).¹ The same mottled, osteosclerotic appearance, the same areas of increased density alternating with cystic-appearing areas of reduced density. I learned that osteonecrosis usually involves long, tubular bones, especially those of the legs, but that virtually any part of the skeleton can be affected. As the senior radiologist had told me, the lesion arises from ischemic necrosis, or infarction, of medullary bone, or sometimes from metastatic intramedullary fat necrosis in the setting of acute pancreatitis.

How could my patient have acquired these lesions without symptoms, and up until now been totally unaware of them? Experimental studies suggest that mature osteocytes survive for 12 to 48 hours when deprived of oxygen.³ Even after bone contains no viable osteocytes, the mineralized bone matrix remains intact (unless disrupted directly by trauma). When healing occurs, the dead bone is progressively remodelled and replaced by new bone. In most cases, however, the ischemic insult is not completely reversed, so that

the healing bone is remodelled haphazardly, resulting in irregular ossification and enhanced mineralization (hence the radiologic appearance). This irregularly healed bone is structurally weaker than normal bone and therefore prone to fracture. When the process involves the epiphyses and articular surfaces, severe degenerative joint disease supervenes, often requiring joint replacement surgery, especially in the hip.

The most common cause of osteonecrosis is trauma which interrupts the blood supply to a segment of bone but does not involve a discrete fracture or avulsion injury. Other etiologies of osteonecrosis include any process capable of obstructing, occluding, or compressing the nutrient arteries supplying the bone; for example, hemoglobinopathies such as sickle cell anemia which cause microvascular sludging or occlusion.

Osteonecrosis is listed as a rare complication of a variety of metabolic disorders including hyperuricemia, hepatic dysfunction, various lipodystrophies and some hyperlipidemias. Osteonecrosis can occur in the setting of rheumatologic disease, notable systemic lupus erythematosus and rheumatoid arthritis, even in the absence of glucocorticoid therapy for these disorders. The association of high dose glucocorticoid therapy (or Cushing's syndrome of any etiology) and osteonecrosis of the femoral head is well recognized, although the mechanism is unclear.

Some authors suggest that steroid-induced pain desensitization leads to unrecognized trauma-related ischemia or frank interruption of the blood supply to the femoral head. Such a mechanism may also be responsible for so-called analgesic arthropathy. Could my patient represent a case of "ethanolic arthropathy" by a similar mechanism? Although he did not have obvious neuropathy, he did have bilateral bony enlargement and a history of recurrent minor trauma. This possibility seemed attractive except that the lesion did not involve the epiphyses.

A relatively rare form of osteonecrosis, known as caisson disease ("the bends"), occurs in divers, caisson workers, and others exposed to hyperbaric conditions followed by too-rapid decompression^{1,2,4-6} (figure 3; next page). The radiographic appearance of this lesion is indistinguishable from that of my patient. In contrast to osteonecrosis caused by systemic diseases, dysbaric osteonecrosis is usually asymptomatic and discovered incidentally. It occurs most often in the distal portion of the femur, proximal tibia or proximal humerus, and usually involves the metadiaphyseal portion of the bone rather than the midshaft or the epiphyses. Although the process is usually painless, avascular portions may later separate from the rest of the bone and cause pain. As with other causes of osteonecrosis, involvement of the articular surfaces may lead to severe degenerative joint disease. I felt close to making the diagnosis, but could not make the connection between an alcohol-abusing construction worker and a victim of barotrauma.

At least two processes, in addition to repeated trauma, may result in osteonecrosis in chronic alcoholism. Meta-

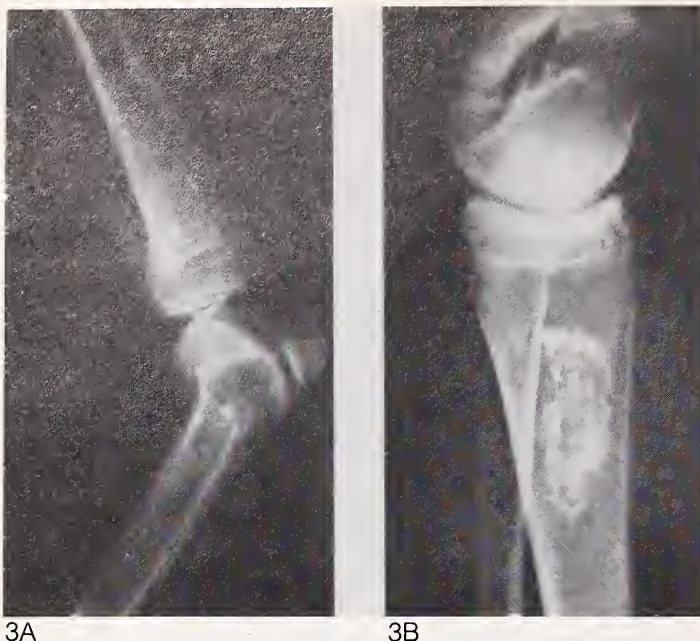


Figure 3. Roentgenographic appearance of dysbaric osteonecrosis, "caisson disease" (reproduced with permission²). A: Involving the head of the tibia. B: Involving the distal femur.

static fat necrosis secondary to acute or chronic pancreatitis⁷ (figure 4) can cause massive necrosis of fatty tissue including fatty marrow spaces in the skeleton. After healing, the bone lesions may closely resemble those of caisson disease, although the underlying pathophysiologic process differs. My patient had no history to suggest that he fit into this pathophysiologic category.

Another form of osteonecrosis in alcoholics is insidious, asymptomatic, and produces lesions indistinguishable from caisson disease.¹ The mechanism by which asymptomatic osteonecrosis occurs in the setting of alcoholism has not been satisfactorily established. A recent study suggests that bone infarction results from increased intramedullary sinusoidal venous pressures secondary to fat embolization or to local increases in size of marrow fat cells and inflammation.⁸ This mechanism is attractive because of the linkage of idiopathic osteonecrosis with fatty liver. It is postulated that fatty microemboli, or hyperlipoproteinemia alone, may have direct embolic, infiltrative or toxic effects on the medullary microcirculation.

My patient probably fits best into this last category of osteonecrosis. Although he also had a history of repeated minor trauma, the bilateral, almost symmetrical, character of the lesions argues in favor of a systemic process. Since this form of osteonecrosis is usually asymptomatic, it is probably not the source of my patient's pain, which is better explained by traumatic tear of the meniscus cartilage.

This fascinating case illustrates the point that some rather impressive laboratory findings may be truly incidental to the patient's complaints. Unless they represent an undiagnosed process that is likely to cause the patient problems they need only be noted and filed away. My patient's case serves to remind us how little we know at times about the mechanisms of disease, and how often in the clinic we must try to assemble a puzzle whose pieces don't fit together,

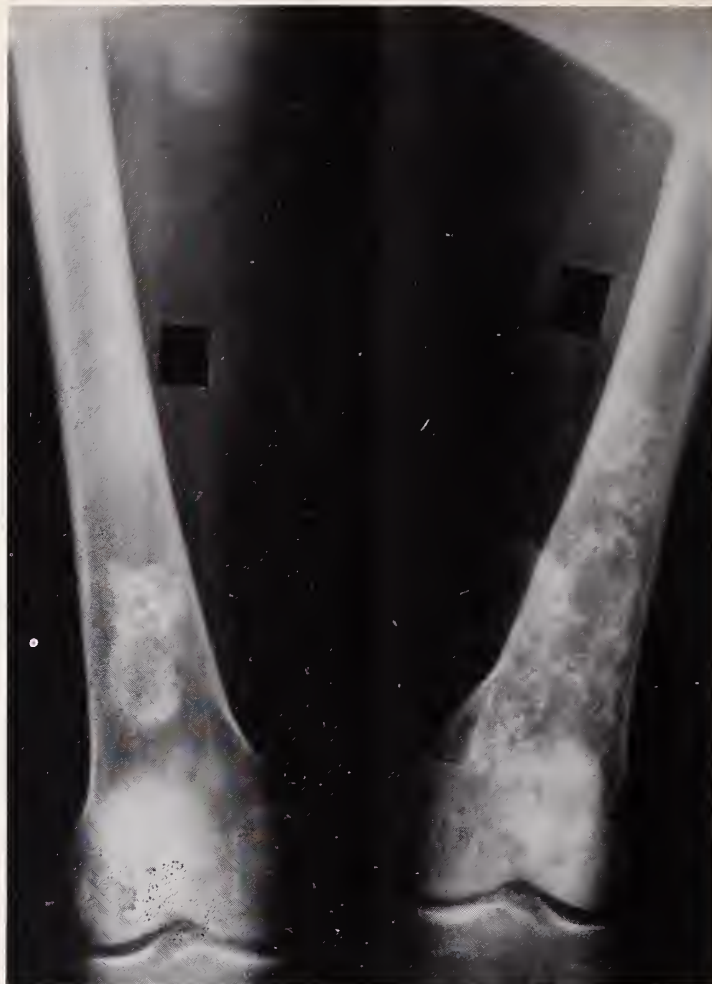


Figure 4. Roentgenographic appearance of osteonecrosis associated with pancreatitis and metastatic fat necrosis.

accepting the discarded data for what they are — a collection of incidental findings. ■

References

- 1 Murray RO, Jacobson HG. The radiology of skeletal disorders. Exercises in diagnosis. 2nd Ed., Vols. 1 and 3. Edinburgh, London and New York: Churchill Livingstone, 1977;pp.343-7, 1661-2.
- 2 Edeiken J, Hodes PJ. Roentgen diagnosis of diseases of bone. Baltimore: Williams and Wilkins, 1967,pp.6.660-6.
- 3 Solomon L. Mechanisms of idiopathic osteonecrosis. In symposium on idiopathic osteonecrosis, Kenzora JE (ed.). Ortho Clin N Amer 1985;16:655-68.
- 4 Ohta Y, Matsunaga H. Bone lesions in divers. J Bone Joint Surg 1974;56B:3-16.
- 5 Kahlstrom SC, Burton CC, Phemister DB. Aseptic necrosis of bone. Infarction of bones in Caisson disease resulting in encapsulated and calcified areas in diaphyses and in arthritis deformans. Surg Gynecol Obstet 1939;68:129-46.
- 6 Taylor HK. Aseptic necrosis in adults: caisson workers and others. Radiol 1944;42:550-69.
- 7 Immelman EJ, Bank S, Krige H, Marks IN. Roentgenologic and clinical features of intramedullary fat necrosis on bones in acute and chronic pancreatitis. Am J Med 1964;36:96-105.
- 8 Cruess RL. Osteonecrosis of bone. Current concepts as to etiology and pathogenesis. Clin Ortho Rel Res 1986;208:30-9.

ZOVIRAX[®] (acyclovir) CAPSULES

**Help free your
patients from
recurrences.**

Daily therapy

Coping with genital herpes is rarely easy. For some, the worst part is the pain and discomfort of frequent attacks — month after month, year after year. For others, the emotional burden presents a more difficult problem, leading to social isolation, anxiety, and diminished self-esteem.

Prevent or reduce recurrences

Although your patients have to live with herpes, they shouldn't have to suffer. Daily therapy with ZOVIRAX CAPSULES can help free them from the cycle of recurrent genital herpes. For many, one capsule three times a day can suppress recurrences completely while on therapy.


Generally well tolerated

Daily therapy with ZOVIRAX CAPSULES is generally well tolerated. The most frequent adverse reactions reported during clinical trials were headache, diarrhea, nausea/vomiting, vertigo, and arthralgia.

The physical and emotional difficulties posed by genital herpes are unique for each patient. The frequency and severity of recurrent episodes, as well as the emotional impact of the disease, should be considered when selecting daily therapy with ZOVIRAX CAPSULES.

*Please see brief summary of
prescribing information on next page.*



A woman with dark hair, wearing a mustard yellow button-down shirt and dark trousers, sits alone at a small white round table in an outdoor cafe setting. She is looking down with a somber expression. The cafe has many identical white metal chairs with heart-shaped backs and small round tables. The background is a dark, textured wall.

**"Living in the city
is lonely enough...
with herpes it's like
solitary confinement."**

ZOVIRAX[®]
(acyclovir)
CAPSULES

**Prevent genital herpes
recurrences
month after month with
daily therapy.**

(In controlled studies, recurrences were totally prevented for 4 to 6 months in up to 75% of patients.)

*Please see last page of this advertisement for
brief summary of prescribing information.*

Prevent recurrences
month after month*

ZOVIRAX® (acyclovir) CAPSULES

Brief Summary

INDICATIONS AND USAGE: Zovirax Capsules are indicated for the treatment of initial episodes and the management of recurrent episodes of genital herpes in certain patients.

The severity of disease is variable depending upon the immune status of the patient, the frequency and duration of episodes, and the degree of cutaneous or systemic involvement. These factors should determine patient management, which may include symptomatic support and counseling only, or the institution of specific therapy. The physical, emotional and psycho-social difficulties posed by herpes infections as well as the degree of debilitation, particularly in immunocompromised patients, are unique for each patient, and the physician should determine therapeutic alternatives based on his or her understanding of the individual patient's needs. Thus Zovirax Capsules are not appropriate in treating all genital herpes infections. The following guidelines may be useful in weighing the benefit/risk considerations in specific disease categories:

First Episodes (primary and nonprimary infections — commonly known as initial genital herpes):

Double-blind, placebo-controlled studies have demonstrated that orally administered Zovirax significantly reduced the duration of acute infection (detection of virus in lesions by tissue culture) and lesion healing. The duration of pain and new lesion formation was decreased in some patient groups. The promptness of initiation of therapy and/or the patient's prior exposure to Herpes simplex virus may influence the degree of benefit from therapy. Patients with mild disease may derive less benefit than those with more severe episodes. In patients with extremely severe episodes, in which prostration, central nervous system involvement, urinary retention or inability to take oral medication require hospitalization and more aggressive management, therapy may be best initiated with intravenous Zovirax.

Recurrent Episodes:

Double-blind, placebo-controlled studies in patients with frequent recurrences (6 or more episodes per year) have shown that Zovirax Capsules given for 4 to 6 months prevented or reduced the frequency and/or severity of recurrences in greater than 95% of patients. Clinical recurrences were prevented in 40 to 75% of patients. Some patients experienced increased severity of the first episode following cessation of therapy; the severity of subsequent episodes and the effect on the natural history of the disease are still under study.

The safety and efficacy of orally administered acyclovir in the suppression of frequent episodes of genital herpes have been established only for up to 6 months. Chronic suppressive therapy is most appropriate when, in the judgement of the physician, the benefits of such a regimen outweigh known or potential adverse effects. In general, Zovirax Capsules should not be used for the suppression of recurrent disease in mildly affected patients. Unanswered questions concerning the human relevance of *in vitro* mutagenicity studies and reproductive toxicity studies in animals given very high doses of acyclovir for short periods (see Carcinogenesis, Mutagenesis, Impairment of Fertility) should be borne in mind when designing long-term management for individual patients. Discussion of these issues with patients will provide them the opportunity to weigh the potential for toxicity against the severity of their disease. Thus, this regimen should be considered only for appropriate patients and only for six months until the results of ongoing studies allow a more precise evaluation of the benefit/risk assessment of prolonged therapy.

Limited studies have shown that there are certain patients for whom intermittent short-term treatment of recurrent episodes is effective. This approach may be more appropriate than a suppressive regimen in patients with infrequent recurrences.

Immunocompromised patients with recurrent herpes infections can be treated with either intermittent or chronic suppressive therapy. Clinically significant resistance, although rare, is more likely to be seen with prolonged or repeated therapy in severely immunocompromised patients with active lesions.

CONTRAINDICATIONS: Zovirax Capsules are contraindicated for patients who develop hypersensitivity or intolerance to the components of the formulation.

WARNINGS: Zovirax Capsules are intended for oral ingestion only.

PRECAUTIONS: General: Zovirax has caused decreased spermatogenesis at high doses in some animals and mutagenesis in some acute studies at high concentrations of drug (see PRECAUTIONS — Carcinogenesis, Mutagenesis, Impairment of Fertility). The recommended dosage and length of treatment should not be exceeded (see DOSAGE AND ADMINISTRATION).

Exposure of Herpes simplex isolates to acyclovir *in vitro* can lead to the emergence of less sensitive viruses. The possibility of the appearance of less sensitive viruses in man must be borne in mind when treating patients. The relationship between the *in vitro* sensitivity of Herpes simplex virus to acyclovir and clinical response to therapy has yet to be established.

Because of the possibility that less sensitive virus may be selected in patients who are receiving acyclovir, all patients should be advised to take particular care to avoid potential transmission of virus if active lesions are present while they are on therapy. In severely immunocompromised patients, the physician should be aware that prolonged or repeated courses of acyclovir may result in selection of resistant viruses which may not fully respond to continued acyclovir therapy.

Drug Interactions: Co-administration of probenecid with intravenous acyclovir has been shown to increase the mean half-life and the area under the concentration-time curve. Urinary excretion and renal clearance were correspondingly reduced.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Acyclovir was tested in lifetime bioassays in rats and mice at single daily doses of 50, 150 and 450 mg/kg given by gavage. There was no statistically significant difference in the incidence of tumors between treated and control animals, nor did acyclovir shorten the latency of tumors. In 2 *in vitro* cell transformation assays, used to provide preliminary assessment of potential oncogenicity in advance of these more definitive life-time bioassays in rodents, conflicting results were obtained. Acyclovir was positive at the highest dose used in one system and the resulting morphologically transformed cells formed tumors when inoculated into immunosuppressed, syngeneic, weanling mice. Acyclovir was negative in another transformation system considered less sensitive.

In acute studies, there was an increase, not statistically significant, in the incidence of chromosomal damage at maximum tolerated parenteral doses of 100 mg/kg acyclovir in rats but not Chinese hamsters; higher doses of 500 and 1000 mg/kg were clastogenic in Chinese hamsters. In addition, no activity was found after 5 days dosing in a dominant lethal study in mice. In 6 of 11 microbial and mammalian cell assays, no evidence of mutagenicity was observed. At 3 loci in a Chinese hamster ovary cell line, the results were inconclusive. In 2 mammalian cell assays (human lymphocytes and L5178Y mouse lymphoma cells *in vitro*), positive responses for mutagenicity and chromosomal damage occurred, but only at concentrations at least 400 times the acyclovir plasma levels achieved in man.

Acyclovir has not been shown to impair fertility or reproduction in mice (450 mg/kg/day, p.o.) or in rats (25 mg/kg/day, s.c.). At 50 mg/kg/day s.c. in the rat, there was a statistically significant increase in post-implantation loss, but no concomitant decrease in litter size. In female rabbits treated subcutaneously with acyclovir subsequent to mating, there was a statistically significant decrease in implantation efficiency but no concomitant decrease in litter size at a dose of 50 mg/kg/day. No effect upon implantation efficiency was observed when the same dose was administered intravenously. In a rat peri- and postnatal study at 50 mg/kg/day s.c., there was a statistically significant decrease in the group mean numbers of corpora lutea, total implantation sites and live fetuses in the F₁ generation. Although not statistically significant, there was also a dose related decrease in group mean numbers of live fetuses and implantation sites at 12.5 mg/kg/day and 25 mg/kg/day, s.c. The intravenous administration of 100 mg/kg/day, a dose known to cause obstructive nephropathy in rabbits, caused a significant increase in fetal resorptions and a corresponding decrease in litter size. However, at a

maximum tolerated intravenous dose of 50 mg/kg/day in rabbits, there were no drug-related reproductive effects.

Intraperitoneal doses of 320 or 80 mg/kg/day acyclovir given to rats for 1 and 6 months, respectively, caused testicular atrophy. Testicular atrophy was persistent through the 4-week postdose recovery phase after 320 mg/kg/day; some evidence of recovery of sperm production was evident 30 days post-dose. Intravenous doses of 100 and 200 mg/kg/day acyclovir given to dogs for 31 days caused aspermatogenesis. Testicles were normal in dogs given 50 mg/kg/day, i.v. for one month.

Pregnancy: Teratogenic Effects: Pregnancy Category C. Acyclovir was not teratogenic in the mouse (450 mg/kg/day, p.o.), rat (50 mg/kg/day, s.c.) or rabbit (50 mg/kg/day, s.c. and i.v.). There are no adequate and well-controlled studies in pregnant women. Acyclovir should not be used during pregnancy unless the potential benefit justifies the potential risk to the fetus. Although acyclovir was not teratogenic in animal studies, the drug's potential for causing chromosome breaks at high concentration should be taken into consideration in making this determination.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Zovirax is administered to a nursing woman. In nursing mothers, consideration should be given to not using acyclovir treatment or discontinuing breastfeeding.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS — Short-Term Administration: The most frequent adverse reactions reported during clinical trials were nausea and/or vomiting in 8 of 298 patient treatments (2.7%) and headache in 2 of 298 (0.6%). Less frequent adverse reactions, each of which occurred in 1 of 298 patient treatments (0.3%), included diarrhea, dizziness, anorexia, fatigue, edema, skin rash, leg pain, inguinal adenopathy, medication taste and sore throat.

Long-Term Administration: The most frequent adverse reactions reported in studies of daily therapy for 3 to 6 months were headache in 33 of 251 patients (13.1%), diarrhea in 22 of 251 (8.8%), nausea and/or vomiting in 20 of 251 (8.0%), vertigo in 9 of 251 (3.6%), and arthralgia in 9 of 251 (3.6%). Less frequent adverse reactions, each of which occurred in less than 3% of the 251 patients (see number of patients in parentheses), included skin rash (7), insomnia (4), fatigue (7), fever (4), palpitations (1), sore throat (2), superficial thrombophlebitis (1), muscle cramps (2), pars planitis (1), menstrual abnormality (4), acne (3), lymphadenopathy (2), irritability (1), accelerated hair loss (1), and depression (1).

DOSAGE AND ADMINISTRATION: Treatment of initial genital herpes: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 10 days (total 50 capsules).

Chronic suppressive therapy for recurrent disease: One 200 mg capsule 3 times daily for up to 6 months. Some patients may require more drug, up to one 200 mg capsule 5 times daily for up to 6 months.

Intermittent Therapy: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 5 days (total 25 capsules). Therapy should be initiated at the earliest sign or symptom (prodrome) of recurrence.

Patients With Acute or Chronic Renal Impairment: One 200 mg capsule every 12 hours is recommended for patients with creatinine clearance ≤ 10 ml/min/1.73 m².

HOW SUPPLIED: Zovirax Capsules (blue, opaque) containing 200 mg acyclovir and printed with "Wellcome ZOVIRAX 200" - Bottles of 100 (NDC-0081-0991-55) and unit dose pack of 100 (NDC-0081-0991-56).

Store at 15°-30°C (59°-86°F) and protect from light.

*In controlled studies, recurrences were totally prevented for 4 to 6 months in up to 75% of patients.

Burroughs Wellcome Co., Research Triangle Park, North Carolina 27709



*Financial services that will get
you in shape for the future.
That's Blue Chip.*

We have a variety of insurance and investment options to make sure your future is financially strong. For example:

- Tax shelters, to keep more of your money working for you;
- Annuities, to make money available at retirement or whenever you need it;
- Insurance, to protect your family, your business and your income.

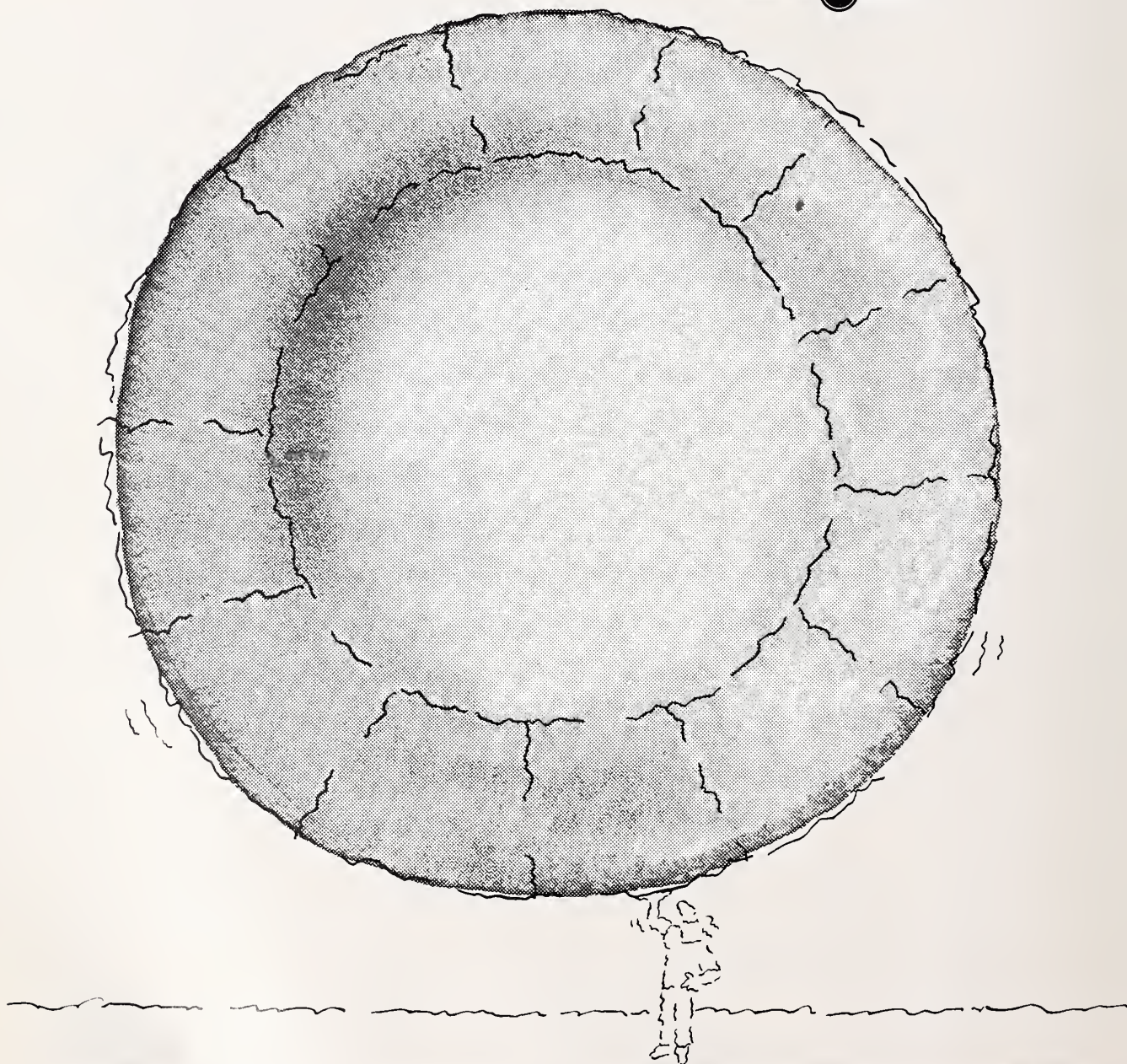
Our specialists will help you identify your needs and develop a program that's right for you.

Start shaping your future today.
Call or write us for details.

The Hinrichs Financial Group

1600 Charlotte Plaza Charlotte, NC 28244
(704) 371-8600

An affiliate of the  **CV Alliance**



Connecticut Mutual Life Insurance Co. (Hartford CT) • Connecticut Mutual Financial Services, Inc. • CM Life Insurance Company • Diversified Insurance Services of America, Inc. and its affiliates.

Round up the Usual Suspects

Potassium Bromate Poisoning

Ronald B. Mack, M.D.

When I was a young boy, going to the movies was a much grander event than it is today. There were no competing flickering images on the small screen, only radio was available at home and you needed a lively imagination to appreciate "Jack Armstrong," "Lights Out," and the like. For ten cents, a pre-adolescent could spend an entire Saturday afternoon at the movies, stage show included. The problem in those days was getting enough dimes for my cousins and me to go to the theater in the first place. We solved this easily; early in the morning we would scamper up and down the open back stairways of the apartment buildings and "liberate" empty bottles which we returned for cash; we even had enough for Milk-Duds.

The kinds of movies that we saw were what today's young people see at video stores as classics, and the best, in my opinion, was "Casablanca"; Even today it is my all-time favorite. The movie had everything — intrigue, tragedy, comedy, romance, charm, and the most memorable, quotable lines I have ever experienced — they are instantly recognizable as being from this movie: "You played it for her, you can play it for me"; "We'll always have Paris"; "The problems of three little people don't amount to a hill of beans in this crazy world"; and my all-time favorite, spoken by Claude Rains, as Prefect of Police Louis Renault, "Round up the usual suspects."

When you have a patient whose acute renal failure is possibly due to a poisonous substance and you are not sure which one is the culprit, you should "round up the usual suspects," and this list should include carbon tetrachloride, chlorates, copper, ethylene glycol, methylene glycol, mercury, paraquat, phosphorus and others even less common.¹ But do not forget potassium bromate. Why, you ask, would you find this compound in an American home?

Many women, and apparently some men, fix their hair in a "permanent" wave, supposedly to give the hair more body and curl, thereby making it easier to style and enhancing the beauty of the hair, I guess (I'm an elbow man, to tell the truth. Seeing a woman's bare elbows sends me into ecstasy). Hair waving is interesting, biochemically. The

hair that is to be waved is initially bent around a form of the appropriate shape, a "curler." A reducing agent is then applied, usually with heat. This reducing agent is typically a compound containing a thiol or sulphhydryl group (-SH) such as thioglycolic acids and ammonia sulfides. This process softens the hair to temporarily alter the molecular structure; the reducing agent cleaves the disulfide cross-linkages by reducing cystine to cysteine residues. The heat breaks hydrogen bonds and causes the α -helical structure of the polypeptide chains in the hair to uncoil and stretch. The reducing solution is then rinsed away and an oxidizing agent is added to establish new disulfide bonds between pairs of cysteine residues of adjacent polypeptide chains, but not the same pairs that existed before treatment. On washing and cooling, the polypeptide chains revert to their α -helical configuration, and the hair fibers now curl in the desired fashion because new disulfide cross-linkages were formed where they would exert some torsion on the bundles of α -helical coils in the hair fibers. The oxidizing agent, AKA "neutralizer," is washed away. Neutralizers are usually hydrogen peroxide or sodium bromate solutions in mildly acidic formulations.² (You say you don't care about this! You will when someone asks you to the prom!!)

Sodium bromate is the topic for this article, and if ingested it can be very wicked indeed, leading to deafness and acute renal failure. Cold wave neutralizers for home usage may contain 10% sodium bromate or 2% potassium bromate.³ Serious poisoning in children has been reported subsequent to ingestion of two to four ounces of a 2% potassium bromate solution (equal to 1.2 to 2.4 grams of potassium bromate).⁴ Death has occurred with ingestion of less than five grams. Bromate salts are classified as extremely toxic with an estimated oral lethal dose of potassium bromate of 200 to 500 mg/kg. Potassium bromate is more toxic than sodium bromate.⁴

The acute toxic effects of ingestion of bromate salts usually present within one hour, with gastrointestinal symptoms predominating early on, including nausea, vomiting, abdominal pain and diarrhea. Gastrointestinal clinical adversities could be the result of degradation to hydrobromic acid in the stomach.⁵ The good news is that long-term gastrointestinal sequelae are not considered likely. The next un-

From Wake Forest University, Bowman Gray School of Medicine, 300 S. Hawthorne Rd., Winston-Salem 27103.

toward event is central nervous system depression varying from lethargy to coma. Seizures are a real possibility in this poisoning. Hypotension is fairly common, and you might also look for tachypnea, respiratory depression, and pulmonary edema.

Most of the above complications resulting from bromate overdose are reversible; two dreaded sequelae that may not be reversible are renal failure and deafness.⁶ In a typical case, renal failure ensues, usually two to three days post-ingestion.³ Renal damage probably is a result of the oxidizing effect of bromate in the renal tubule. Studies have demonstrated that tubular necrosis occurs during the acute stage, and progressive interstitial fibrosis and mononuclear infiltrates occur in chronic cases.^{5,7} It should be emphasized that renal damage is very common in this poisoning, and looking for evidence of it is a major part of the management. The renal failure is manifested as oliguria or anuria which may be present as early as the first or second day and may be transient.⁸

Irreversible deafness is a real possibility in potassium bromate poisoning. It is a sensorineural loss accompanied by tinnitus. If you look in the toxicology literature the list of drugs that can cause deafness is relatively small and includes ethacrynic acid (Edecrin) aminoglycoside antibiotics, quinidine, quinine and dihydrostreptomycin.¹ The hearing loss can begin as early as four to sixteen hours post-ingestion and is not usually accompanied by a vestibular loss.⁸ The only good reference I could find for an explanation of the hearing damage related to experiments in guinea pigs⁴ (real ones, not medical students). These studies showed that histologic examination of the cochlea after high-dose borate injection revealed degenerative changes in the outer hair cells and decrease in enzyme activity. It has also been noted that because marked hemolysis can occur in bromate poisoning as well as hypotension, the oxygen supply to the cochlea may be so compromised as to reach a critically low level for cochlear function maintenance. The list of suspects that can cause deafness is, as I mentioned, very small, about as small as the list of Italian restaurants in the Triad of North Carolina where you can get authentic Linguine Alla Vongole Bianco (where the pieces of garlic cloves and the pieces of clam are the same size, that is; the test for authenticity is to blow on the table after a few bites of this gustatory delight — if the polish comes off of the table then it is the real stuff). Both deafness and renal failure can occur in overdose ingestions of 240 to 500 mg/kg.⁹

The treatment for potassium borate solution poisoning is a bit more complicated than for poisoning by many of the more common household chemicals that we are called upon to treat, and involves the use of drugs that we do not use very often in clinical toxicology. For example, the closest thing to a specific antagonist in this poisoning is the administration of *sodium thiosulfate*^{3,10} intravenously, to inactivate the bromate ion. One authority recommends removing gastric material by lavage with 1% sodium thiosulfate solution, removing this solution after the lavage. It has been suggested

that instead of putting thiosulfate in the stomach, immediate gastric neutralization with a 2% sodium biocarbonate solution (dissolved in water) may prevent the formation of hydrobromic acid, which appears to be the cause of the gastrointestinal irritation. The clinical efficacy of oral sodium thiosulfate has not been fully evaluated, and until further studies come forth it is difficult to recommend its oral use. Giving it intravenously seems to be an OK thing to do — in adults: 100 to 500 ml of a 1% sodium thiosulfate solution or 10 to 50 ml of a 10% solution.

The physician who treats a patient with a potassium bromate ingestion must monitor renal function and be diligent in the search for oliguria, here defined as a urine volume of less than 500 ml/24 hours¹¹ in an adult, in the absence of maximum urinary concentration, and in a child, less than 0.5 ml/kg/hour. One of the aims of therapy is to maintain a urine output of 3 to 6 ml/kg/hour. To promote diuresis you could administer IV 0.45% NaCl in D5W plus furosemide, 1 mg/kilogram, maximum 40 mg per dose.³ Unfortunately, hemodialysis has not been helpful in eliminating potassium bromate, but it may be necessary if renal failure occurs. Hemodialysis could be initiated for a patient with established renal failure that does not begin to remit within 48 hours of onset.⁵ There are no good data proving that prophylactic hemodialysis prevents oto- or nephrotoxicity in patients known to have consumed large quantities of potassium bromate. Also, lest you are wondering, blood levels of bromide do not correlate with clinical severity but could be useful qualitatively. Audiometric evaluation is a must in this toxicological disaster.

Apparently, potassium bromate has been replaced by relatively nontoxic chemicals in many permanent wave solutions, but plenty of the bromate variety is still available.

If you are ever challenged to manage a patient with potassium bromate ingestion, you might exclaim, as Rick (Humphrey Bogart) did in "Casablanca" when he saw the lovely Ilsa (Ingrid Bergman): "Of all the emergency rooms, in all the towns, in all of the world, she walks into mine." Here's looking at you, kid!! ■

References

- 1 Done AK. Emergency medicine, Jan. 1982, pp. 42-77.
- 2 Lehninger AL. Principles of biochemistry, Chapter 7. New York: Worth Publishers, 1982, pp. 156-7.
- 3 Poisindex, Micromedex Inc., Vol 55, Bromates.
- 4 Matsumoto I, Morizono T, et al. Hearing loss following potassium bromate. Otolaryngol Head neck Surg 1980;88:625.
- 5 Warshaw BL, Carter MC, et al. Bromate poisoning from hair permanent preparations. Pediatrics 1985;76:975.
- 6 Quick CA, Chole RA, et al. Deafness and renal failure due to potassium bromate poisoning. Arch Otolaryngol 1975;101:494.
- 7 Gradus D, Rhoads M, et al. Acute bromate poisoning associated with renal failure presenting as hemolytic uremic syn-

drome. Am J Nephrol 1984;4:188.

8 Goldfrank LR, Kirshtein RH, et al. In Goldfrank LR (ed), Toxicological emergencies, 3rd edition, Norwalk, CN: Appleton-Century-Crofts, 1986, pp. 402-3.

9 Ellenhorn MJ, Barceloux DG. Medical toxicology. New York: Elsevier, 1988, p. 906.

10 Arena JM. Poisoning, 5th edition, Springfield, IL: 1986, pp. 237-8.

11 Beisel CE, Burnett CM. Cosmetics and toilet articles. In Hadad LM, Winchester JF, (ed), Clinical management of poisoning and overdose. Philadelphia: WB Saunders, 1983, pp. 942-4.

There's Somewhere To Turn When Someone Turns To You

*When someone turns to you
for advice on drug or alcohol dependency,
turn to the professionals at
Carolina Manor Treatment Center.*

Carolina Manor
TREATMENT CENTER

1100 Pine Run Drive, Lumberton, NC 28358
1-800-445-7595 In NC (919) 738-1191

Operated By Southeastern General Hospital

**If your practice is
giving you a
headache,
don't just take
two aspirin.
Call us in the
morning.**

If the headaches of the business and marketing side of your practice are getting you down, call us for fast relief. You will be amazed at how our specialized expertise in business development, marketing, staff training, accountability, patient relations and bottom-line good sense management for women's medical services will improve your efficiency and increase your patient load.

You need to focus on the medical aspects of your practice, and let us focus on the business side. A small investment in our services could reap big rewards and leave you more time for a healthy private life. Call today for an informational brochure. And don't just take aspirin for your little ills. Take action.

Hill, Rose & Farmer

▲▲▲▲▲▲▲▲▲▲

New York▲Atlanta▲Jacksonville▲ResearchTriangle

Women's Health Consultants

(919) 834-3584

FAMILY PRACTICE. A REWARDING EXPERIENCE IN ARMY MEDICINE.

The Army has more soldiers with families than ever before. So when you join the Army Medical Team as a Family Practitioner, expect to spend most of your time serving not only soldiers, but their spouses and children, too. What's more, you won't have to worry about the paperwork, malpractice insurance premiums, or the costs incurred in running a private practice.

Expect to work in a highly challenging and varied environment. Working with a team of highly trained professionals, you can receive assignments almost anywhere in the United States; the Army offers the largest system of comprehensive health care in the nation. Family Practice positions are also available overseas, in Germany and Korea.

The benefits package available to Army Family Practitioners is quite attractive. You'll receive 30 days paid vacation, opportunities to continue education and conduct research, a chance to travel, and reasonable work hours.

All in all, your Army Family Practice will be a rewarding experience. Not only for you, but for Army families, too. Talk to your Army Medical Department Counselor for more information.

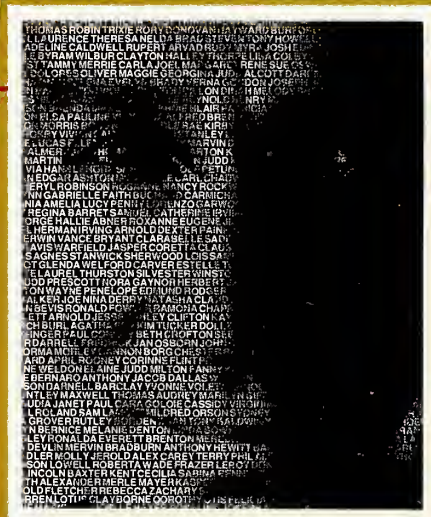


**Army Health Care Team
Federal Office Bld.
400 North 8th St.
P.O. Box 10167
Richmond, VA 23240-0167
(804) 771-2354**

ARMY MEDICINE. BE ALL YOU CAN BE.

EXPECT YOUR NEXT PATIENT ON INDERAL® LA TO...

(PROPRANOLOL HCl)
LONG ACTING CAPSULES 60, 80, 120, 160 mg



Feel Like a MILLIONAIRE

JOHN NIGEL ARNOLD
ARCY GRIFFITH AL
AISY TRINA NADIA
NGELA WILSON HIL
ILLIE ORLANDO BAI
ENE SUE OSWALD C
ELENA EVELYN BRA
ERRY TURNER PAGE
EFFREY BREWSTER
OBLE RAE KIRBY IRE
ROOKE LUCAS ELLEN
ECIL SUZANNA THOM
AMERON HASKEL DON
ANCY ROCKWELL FREL
ANIA AMELIA LUCY PEN
PENCER BURGESS NATH
ARAH LIONEL TYSON SET
ARFIELD JASPER CORET
AUL ROBERT ED CHARLIE
ILVESTER WINSTON BUCK
RISTEN BURTON WAYNE PE
ART YOLANDA HARDEN MUI
AY GERALD WHITNEY REDFO
INGER PAUL CONROY BETH C
RADWELL GENE HOBART CH
IRGIL SELMA MASON ROSAM
NTHONY TOM JACOB DALLAS
ARWIN GWENDOLEN BERKEL
EROME HUBERT MABEL MILES
GANTONY BALDWIN YVETTE R
ESLEY RONALDA EVERETT BF
EATH NOLAN ARVIN CHARLOTT
HASE STUART DEWEY DREW CA
IERLE MAYER KASPER COLETT
OYD AMY DARREN LOTUS CLAY
OLLY JOHN MARC RYLAN COLL
ERA FREIDA LUIS TOM DAVIS
ARISSA LEAH MURIEL LOGAN
EIGHT NED TOM AMANDA THOM
BBOT WENDY ELVIS HAGEN PE
ENJAMIN KLAUS FAYE JODY VA
IALCOLM ANDREW NYDIA RAY
ARVEY ROBERT KRISTEN JIM
ASEY ORLANDO PIA WARREN
HERESA JOE ANTHONY WEBB
IERLIN GARNER ALLAN ALICE
AYNOR TRINA LLOYD ARNOLD
AYWARD WARD REED JASON
ISA HILLEN ATWOOD JOY BUR
ICTORIA JOHN TONIA FIONA R
ADFORD DORA BROOKE PAYNE
ORRIS ELVIRA ELROY WARTON
ALKER BRAD MERVIN SYDNEY
OYLE CHERIE SUE JOEL TILLIER
ARGARET MAGGIE MARVIN GER
HRISTOPHER BRENDA WALTER G
ERNICE CURTIS VERONICA BILL M
AY OLIVER BLANCHE DARCEL LES
AULINE MILLARD RODNEY GRACE
OBERT KRISTEN BURTON CAMPBELL
REND CARLOS MARIANNE SANDER
ATHANIA JUDD GARFIELD HENRY KENDALL
RYAN RANDOLPH VIVIAN LEWIS LEANNE ADRIE
LINT BOWIE ALEXANDRA CURT HASKEL LUTHER
OSEMARY ROLAND AUBIN MARGA SCOTT MARIBEL
RADSHAW RILEY JOE BERNIE PHIL NANCY CONROY BENTLEY
UNTLEY DAVID ALISON THELMA GERTRUDE DUNCAN BUCK CYN
NINETTE PRESCOTT LENORE JACK ADDISON GAIL GAYLETT STUAR
LEXIS LINDA ORSON THADDEUS COLTON SELMA BURGESS BASH
UIS CARY FRED LEE LAUREL GWENDOLEN ARLENE MURLEY CHARL
INSTON JOLIE SIGMUND WILTON BAILEY PAINE LOWELL AMELIA SHINLEY
ACHEL JEROLD JUDITH HOGAN FRAZER TERENCE DAVIS BEVIS BERTHA
TEWART MERLE BARLOW LAWSON EARL EUGENE GILDA ELIZABETH CLAU
YRONE CLIFTON NORMAN BURNIE CARVER CYRUS ARVISHILARYETH
IM KIM NINA BENNETT SEBASTIAN DERRY TAYLOR BERT PENEL
ULLIVAN BUCKLEY BRANDON MARSHA JEROME SAM JOSEPH WELLEY
ONI ARTHUR LINCOLN MASON ALTMAN DALLAS LEAH JAY ISAAC BRENT
ICK ALEXANDER GANNON DREW OSBORN ADRIAN ARBOT CANDACE NOEL
OLIE SHARON MILTON MARC BORG LOREN MIRIAM BENJAMIN SHELLEY
GIL GUNTHER FELIX RALPH NATHANIEL SEAN WALLACE BEATRICE SIBYL
OYLY LAYERNE LEIGHSAL DOMINIC BERNARD KATE HUGH ARDEN SIE
RYAN GAILAND VAL DIANE BRUCE MIKE JOCELYN CLYDE JEFFERSON
NNE LUIS JUDD FLETCHER FELICIA MACKENZIE DENISE ALYSSA FRANCES
ONE HIGGINS LOGAN BEAMAN TONY STELLA BOB PAULA DEBORAH DAVIN
BONNIE BERNARD JOHN JOSEPH JUDD THOMAS SUSAN MARIA LISA JAYNE
JOHN NIGEL ARNOLD DOWICHT AARON

ON

...like the more than one million patients who have received **INDERAL® LA**.

In a recent survey, 4,120 participating physicians gave us their views¹ on **INDERAL LA** in the treatment of hypertension, angina and migraine.

INDERAL LA is their preferred beta blocker

...of the nearly three out of four physicians responding to the questionnaire, an impressive 97% rated **INDERAL LA** good to excellent for overall performance. Virtually all cited efficacy, tolerability, long-term cardiovascular protection and once-daily convenience as important factors in their choosing to prescribe **INDERAL LA**.

INDERAL LA promotes patient compliance

...Virtually every responding physician rated patient satisfaction with **INDERAL LA** to be as good as, or better than, other beta blockers.

Like conventional **INDERAL** Tablets, **INDERAL LA** should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree and bronchial asthma.

ONCE-DAILY
INDERAL® LA
 (PROPRANOLOL HCl) **LONG ACTING CAPSULES**
 60, 80, 120, 160 mg

The one you know best keeps looking better

Please see next page for brief summary of prescribing information.

ROBERT KRISTEN ARNOLD
 ARCUS RHODA JEREMY
 LIAN FLOYD ELLIOTT HAR
 Y MYRA JOSH EDWARD A
 AMMY MERRIE CARLA JO
 LEY IRIS STEPHANIE CHA
 A JESSICA BERNARD MA
 E BLAIR PATRICIA MIL
 ANNON MORRIS BOND N
 AHAM ELEANORE GIN
 MORE CLAY PEARCE G
 NICOLE PETUNIA HA
 LEE CHERYL ROBINS
 ERVIN HUNTER NEVIN
 ATLAND COLEMAN C
 ER PAINE JANE SH
 AWLEY KATHERINE
 EIRMA MYLES JULI
 INETTE LAUREL TH
 RANDALL PHYLLIS F
 RION JULIUS GLENN
 JESSE ASHLEY CLIF
 ANCHE ROBIN JACO
 RK NOAH STEWART
 ORINNE FLINT PRESL
 RON NORTON JULIE
 SHIRLEY HARPER PE
 OLDIE CASSIDY VIRGI
 LYDIA GROVER RUTL
 SIBYL NOEL HUMPHR
 L BILL LILLIAN MARLE
 ADE FRAZER LEROY DO
 SMEREDITH ALEXAND
 ESMOND TONY HILARY
 ERTA LEONORA BART
 ENNIS CULLEN TABIT
 RENDAN GUNTHER E
 MARIO JAYNE MELIS
 SPER VITO NICHOLA
 Y JONATHAN SALLY
 ON SEAN WALDEN RO
 RT DIANE JENNIFER LE
 LLEEN DWIGHT MITCH
 INGRID CHANNING LIN
 ANSON ANDREW GALL
 ER ROXANNE ASHBY HAR
 ATRIXIE RORY BAYARD CH
 JOSEPH PAGE JULIEREX RE
 LEONA RUDY MARCUS SLOAN E
 RADONNA CRAIG ANNE ELMER F
 RAM ADELINE HALLEY MILFORD DE
 ON PRISCILLA WILSON RUPERT HARR
 ATH STEVEN BRONSON JEAN PETER DIA
 NE LORNA ROBERTA NOBLE TOM SABINA
 TMIA BARTLETT BEAUDINAH JIM FRITZ DI
 NE CECILIA TAMARA BEN ROSABELLE JU
 LE SIMPSON BERNARD ERROL CORETTA
 VERETT MARGO LENA LORENZO CLIFF RI
 N MARTIN THOMAS TONY COLEMAN LUCIE
 DEN REBECCA COURTNEY NICOLE BREWS
 ER RHONDA TURNER MADELINE ELLEN MO
 WLER JANET TONY THOMAS ROBERTSO
 T ROBIN HARDEN BRETT NEIL BORDEN OT
 WATSON GEORGIA BARCLAY ODESSA
 ADWICK APRIL TODD ARDEN LAUR
 A MABEL SHERWIN PATIDA GINA
 ARD ARNOLD HILLIARD SILVES
 ORA DONAHUE EGAN MURRA
 AMDEN EDNA MILES ALBER
 RUSSEL AUDREY ELI DEWE
 ROLD TONY WILFRED CL
 DAM TYSON LARISSA A
 ER LIBBY OSCAR PH
 OYD PHOEBE ARCH
 IS FRANKLIN LOT
 M RENEE CHA
 ANZELDA
 AS MEGA
 Y CRY
 SHEE

feel like a MILLION



ONCE-DAILY
INDERAL[®] LA
(PROPRANOLOL HCl)
LONG ACTING CAPSULES
60, 80, 120, 160 mg

The one you know best
keeps looking better



BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)

INDERAL[®] LA brand of propranolol hydrochloride (Long Acting Capsules)

DESCRIPTION. Inderal LA is formulated to provide a sustained release of propranolol hydrochloride. Inderal LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. Inderal is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by Inderal, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

Inderal LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with Inderal LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of Inderal Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

Inderal LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to Inderal LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, Inderal LA has been therapeutically equivalent to the same mg dose of conventional Inderal as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure, and rate pressure product. Inderal LA can provide effective beta blockade for a 24-hour period.

INDICATIONS AND USAGE. Hypertension: Inderal LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. Inderal LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: Inderal LA is indicated for the long-term management of patients with angina pectoris.

Migraine: Inderal LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: Inderal LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. Inderal LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. Inderal is contraindicated in 1) cardiogenic shock; 2) sinus bradycardia and greater than first-degree block; 3) bronchial asthma; 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with Inderal.

WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or Inderal should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of Inderal therapy. Therefore, when discontinuance of Inderal is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If Inderal therapy is interrupted and exacerbation of angina occurs, it is usually advisable to reinstitute Inderal therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. Inderal should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

Inderal (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T_4 and reverse T_3 , and decreasing T_3 .

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL: Propranolol should be used with caution in patients with impaired hepatic or renal function. Inderal (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that Inderal may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if Inderal (propranolol HCl) is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure, or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenytoin, phenobarbital, and rifampin accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels of both drugs.

Antipyrine and lidocaine have reduced clearance when used concomitantly with propranolol.

Thyroxine may result in a lower than expected T_3 concentration when used concomitantly with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY: Pregnancy Category C. Inderal has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. Inderal should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: Inderal is excreted in human milk. Caution should be exercised when Inderal is administered to a nursing woman.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: Bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System: Light-headedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to cataplexy; visual disturbances; hallucinations; vivid dreams; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy, and vivid dreams appear dose related.

Gastrointestinal: Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: Bronchospasm.

Hematologic: Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: Alopecia, LE-like reactions, psoriasisform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. Inderal LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from Inderal Tablets to Inderal LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. Inderal LA should not be considered a simple mg-for-mg substitute for Inderal. Inderal LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—Dosage must be individualized. The usual initial dosage is 80 mg Inderal LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—Dosage must be individualized. Starting with 80 mg Inderal LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—Dosage must be individualized. The initial oral dose is 80 mg Inderal LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximal dose, Inderal LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg Inderal LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

Reference:

1. Data on file, Ayerst Laboratories.

D7295/188

**WYETH
AYERST**
PHILADELPHIA, PA 19101

© 1988, Wyeth-Ayerst Laboratories.

Now America's oldest professional liability insurer has come to North Carolina.

The newest professional liability insurer in North Carolina is the oldest in the nation. The Medical Protective Company pioneered the concept of professional protection before the turn of the century and has been serving doctors exclusively ever since. Through good times and bad.

With the current liability crisis escalating, you need to take a close look at your coverage and the company that stands behind it. Then take a close look at us. You'll see we carry the highest

rating from A.M. Best, the firm that tracks the financial stability of insurance companies nationwide. Beyond that, you'll find complete protection at premium rates that are likely lower than you're currently paying. Plus the personal attention and claims prevention assistance you deserve.

Contact Stu Mitchelson today at 704/541-8020. He's the oldest company's representative in its newest state. And he's here to serve you.

INICE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

Stuart Mitchelson, P.O. Box 13489
Charlotte, North Carolina 28211, (704) 541-8020



If you want to
practice medicine,
not paperwork...
Talk To Me

I'm Lieutenant Ron Boatright. I've worked in the Navy medical profession for over ten years. In Navy Medicine the emphasis is on patients, not paperwork. Highly trained Physicians' Assistants, Hospital Corpsmen, Nurses, and Health Care Administrators not only provide medical support, but they attend to all the paperwork. As a result you are free to make medical decisions based solely on the needs of your patients.

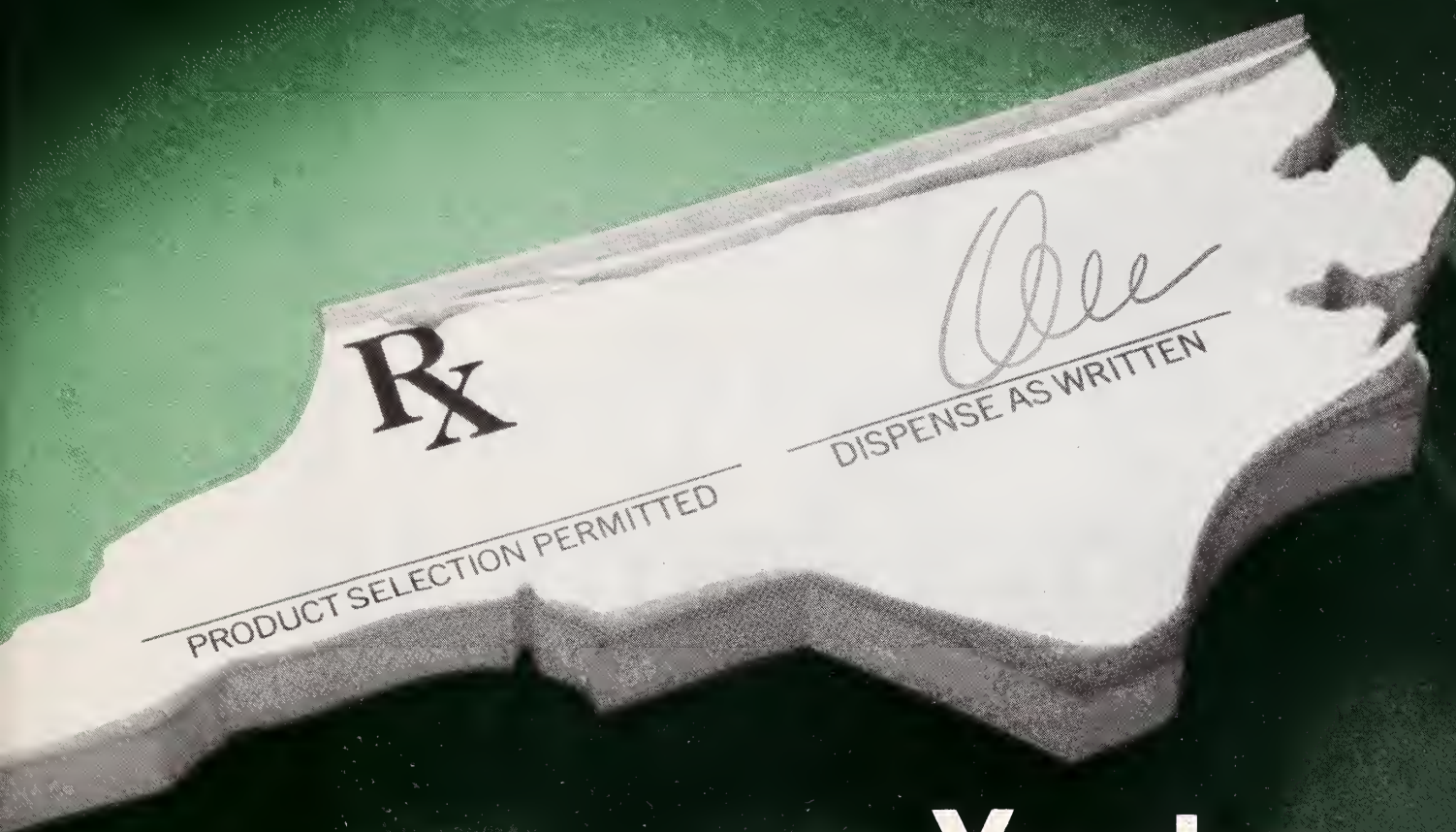
The U.S. Navy is currently seeking qualified physicians in specialty areas to provide medical care for its servicemembers. As a Navy doctor you will work with state of the art equipment in the best facilities available. Along with your professional development, you will enjoy the lifestyle and fringe benefits of being a Navy officer, including:

- 30 days paid vacation annually
- Recreation facilities
- Veteran's benefits
- Annual salary starts between \$40,000-\$60,000 depending on experience
- Navy guarantees the location of your choice and pays relocation costs.

If you are interested in more information, call me at 1-800-662-7568.

In North Carolina, when you decide to prescribe Librium,

To protect your prescription...



**You sign
on the right.**

Librium[®] 5-mg, 10-mg, 25-mg capsules
brand of
chlordiazepoxide HCl/Roche [®]

ROCHE

Copyright © 1987 by Roche Products Inc., Manatí, Puerto Rico 00701. All rights reserved.

You're The Experts In Medicine.

We're The Experts At Preventing Problems In Your Practice.

Medical Mutual is the physician-owned and physician-directed company committed to preventing problems in your practice *before* they occur. Through formal programs and day-to-day assistance, we help you identify areas of risk, reduce potential problems, and enhance your practice.

For example, our Medical Practice Survey brings specially trained staff to your office to audit the peripheral areas we've learned can create problems. The survey—which includes everything from documentation of patient drug

allergies to length of waiting time—offers practical suggestions for reducing your exposure.

Just as important, Medical Mutual provides ongoing assistance to respond promptly to your calls and questions. With 12 years of experience in professional liability coverage, we are the source of information for North Carolina. And if we don't have the answer, we'll find it for you.



Medical Mutual
Medical Insurance Agency, Inc.

Medical Mutual. We'll be there when you need us.

Medical Mutual Insurance Company of North Carolina and its subsidiary, Medical Insurance Agency, Inc., are located at 222 North Person Street, Raleigh, NC 27611 919/828-9334 800/662-7917

Reflections on the Care of Patients with Chronic Crippling Illness

Marvin Rozear, M.D.

Patients have widely differing reactions to the catastrophe of chronic crippling illness. We recognize certain patterns: those who give up early, quietly and passively accepting their lot; they may not fuss much. Some doctors prefer this type of patient. Then there are those who feel cheated by life; they may be truculent, angry, aggressive. Most physicians find these difficult. Other stereotypes have been described.¹

The article on page 252 of this issue contains an account by a more unusual type: the patient who decides to overcome by sheer energy. He devotes every waking minute to the study of his disease, travels widely for examinations and discussions with the experts of the day, may even write articles about himself and the disease. I know of a lady with Charcot-Marie-Tooth disease who has founded a very effective CMT society which functions as a support group, involves patients and caregivers, and serves as an information clearinghouse through a voluminous newsletter. The present account by Jesse Rankin, born into a prominent Carolina medical family, well educated, and crippled from early adulthood, is classic "patient-expert" genre.

Some physicians are threatened by behavior of this sort. Certainly I was turned off by the first of these patients I encountered as a medical student and house officer. On reviewing Jesse's Duke medical record, it appears that many physicians reacted similarly. However, we must realize that if the patient is reasonably bright and has access to medical literature he can always become better educated about his disease than his doctors. He is totally focused and driven, he has personal experience of the problem, and his time and attention are not fractured by the other problems that bombard and distract his physician. Such focusing of attention is undoubtedly operative in "idiot savant" behavior seen in some retarded persons.

Over the years I have learned that this phenomenon can be useful. First, I have to recognize it, then let my negative emotional response abate. Then I have to remind myself that however offensive or peculiar the patient seems, I am in the presence of one who has devoted his entire life to the study of a very restricted subject, who must be a wellspring

of information and wisdom about it. I might as well relax and profit from the encounter. Frequently it is useful to encourage this activity, to put all that energy to work for the betterment of both me and the patient. In fact, my co-workers and I recently investigated an enormous North Carolina Family with X-linked neuropathy dating back almost two centuries.² Without the enthusiastic efforts of dozens of family members, many of them "patient-experts," this work would not have been possible.

Many times, because of the patient's lack of formal training, his or her emphasis and interpretation of signs and symptoms take on an odd, occasionally bizarre coloration (Jesse Rankin's account is no exception). It is up to the physician to assist the patient to a more rational and balanced approach, and to channel his efforts in more useful directions. Furthermore, these odd or novel approaches may provide useful insights, possibly leading to significant discoveries not otherwise obvious to the physician, whose outlook may be restricted to "mainstream" methods and facts. Among other things, these folks bring me articles from sources I had never dreamed of, some amusing, some containing interesting observations and data that could never be found in the usual establishment literature. Doctor Stead's editorship of this Journal reflects a sensitivity and acceptance for this broader view of the world.

I don't know whether Jesse Rankin really had Friedreich's Ataxia or not; there are a lot of conflicting reports of findings and opinions here and in the Duke medical record. If he didn't have it, he had something a lot like it. It doesn't matter: the value of this piece is not in the precise neurologic diagnosis. This is not a medical report. It is a plea from a man who knew what it was like to be "on the bed" (as Jesse's cousin and my good friend, Dick Rankin, so adroitly put it), doing his best to understand himself and, in a sometimes awkward way, to help his physicians do the same. ■

References

- 1 Groves JE. Taking care of the hateful patient. *New Engl J Med* 1978;298:883-7.
- 2 Rozear MP, Pericak-Vance MA, Fischbeck K, et al. Hereditary motor and sensory neuropathy, X-linked: a half-century follow-up. *Neurology* 1987;37:1460-5.

From the Department of Medicine, Duke University Medical Center, Durham 27710.

How It Is To Be on the Bed

Richard R. Rankin, Jr., M.D.

Jesse was my first cousin and recently died (June 1987). Note as you read his self-appraisal, he wrote this summary in 1961. He expected to die soon. He lived 26 more years, dying at the age of 76. The last few years of his life he had lost the use of his arms and legs and he was bedfast. He lived only because of a wonderful wife who cared for him as we do a baby.

We learn from our patients and it seems to me that this man, in all his wisdom, was trying to tell us truly how it is to be on the bed. He was so very smart and tried all his life to "over live" his disease. We who knew him learned a great deal from his life.

Jesse, before he died, gave his approval for this to be made public.

History of Jesse D. Rankin as recorded by him

When a frail, delicate, baby boy was born to Dr. and Mrs. W. S. Rankin of Raleigh, North Carolina on January 21, 1911, certain people remarked: "They will never raise him." When I failed to walk at the expected age, my father began to check with various members of his profession in an effort to determine the nature of my troubles. However, little was then known by the average physician about Friedreich's ataxia or the spino-cerebellar degenerations. In fact, I was forty-odd years old when the first positive diagnosis was made. Today, I am just as interested in this disease and its progressive course as any doctor, but for personal reasons.

I was always underweight, susceptible to all childhood illnesses and my movements were awkward and slow. From my father's knowledge, these were indications of *Rickets*, and, on this assumption, he 'stoked me with Cod Liver Oil, yeast, milk and green vegetables.

After reading *The Spino-Cerebellar Degerations* by J.G. Greenfield, M.D., R.F.C.P., I have come to realize some of the early signs that, at that time, went unrecognized: my insteps were unusually high — causing my feet to be short and difficult to fit with shoes — even now, I purchase shoes one and one half sizes too long and with a *Blucher Cut*. Since I have become an adult, my toes have retracted which necessitates a shoe with a *mocassin style toe*. My early gait was both uncertain and unsteady and I was never able to walk heel-to-toe in a straight line. Not until years later was I to learn that much of this was due to my right knee buckling inward at irregular intervals, causing my right foot to follow an erratic course. (Thus *pes cavus*, *ataxic gait*, and later *hammer toes* went unrecognized.) *I was never able to stand with feet together and eyes closed or to stand thus and watch a moving object overhead, unless I leaned against or held to a stationary object, I was, and still am, dependent upon sight for almost every action*, which caused some theorizing in favor of a Charcot hereditary atrophy. I can now see a close connection. I could never stand or sit with my spine in a straight position which was a "bone of contention" as far as my father was concerned; he assumed that I did not half try to avoid my posture. However, neither of us was aware that a natural scoliosis was to blame. In later years, my breathing and speech were to be affected by this scoliosis. Today, kyphosis is also evident. Two of my childhood nicknames were "Twitchy" and "Wobbler" for, I suppose, obvious reasons.

It has always been my custom, upon discovering any inability to function as others, to attempt to locate the reason and correct it by harnessing an opposite group of muscles in such ways as to cause the resistance of one group to assist the other. I suppose that this might be termed *Diadochokinesia*. My *tendon jerks*, to the best of my knowledge, *have always been absent*. As a child, I was awakened often with cramps in my feet and lower leg muscles — I have not been so-troubled for years. Unless I am ill, my urine and feces control is normal, but gas quite often escapes without my knowledge.

Quoting from Greenfield's Monograph: "Friedreich considered that the ataxia of gait could not be related to loss

Cabarrus Ophthalmological Clinic, Inc., 500 Lake Concord Road, N.E., Concord 28025. For a physician's perspective, see Rozear, "Reflections on the Care of Patients with Chronic Crippling Illness," in this issue.

of sense of position which he found intact, in most cases. Modern writers, however, consider that position sense is almost always considerably reduced. Saunders (1913) examined the sensibility of various stimuli in 20 typical cases of Friedreich's ataxia. He found that sensory loss might be slight or absent in the early stages of the disease, but appeared later in characteristic guise in almost every case." (This is true in my own instance.) "In a typical patient, there was 'slight tactile loss' over the distal parts of the upper and lower extremities with preservation of the cutaneous sensibility to pain, temperature and pressure touch; gross loss of the sense of position and of the recognition of passive movement in the distal joints especially, in all the limbs, and severe disturbances of the appreciation of vibration and of the power of recognizing simultaneous contacts on the distal parts of the upper and lower extremities; with some defect or even marked loss in the recognition of form, shape, size and weight in both hands." (The foregoing signs are largely true in my case.) "Vibration sense and sense of position were almost common and occur later in the disease." (With the exception of muscle cramps, my case seems to be typical.) "Friedreich described the speech, in his patients, as lalling and difficult, often stopping before a difficult word. He considered it to be due to incoordination of the various movements comprising speech. Other authors have emphasized the staccato and explosive character of the speech. Holmes (1910) emphasized the ataxia of respiration which accompanies speech. All elements of ataxia seem to involve this speech. Hiller (1929) noted as factors in the disturbance of speech: (1) ataxia or lack of coordination of facial and buccal musculature; (2) disturbances of alternating movements resulting in a difficulty in moving the lips quickly; (3) an unusual degree of tremor on simple phonation; (4) a lack of coordination of respiration with phonation. In some cases, kyphoscoliosis makes respirations almost entirely diaphragmatic, so that in speaking, the patients have to breathe more often." (At the Institute of Rehabilitation and Physical Medicine at New York City in 1948 I was advised to breathe with my diaphragm. On certain days, I have little or no speech difficulties, while on other days, it is extremely difficult.)

Nystagmus is with me when I attempt to write in longhand and when my range of vision ranges from my typewriter key board to a page from which I am copying. It is only of very brief duration. I have a fleeting sensation, which I refer to as vertigo, at times, but I think that it may be due to insufficient oxygen to some part of my brain; there seems to be no pattern to its occurrence. Any deafness, that is mine, apparently would belong to another of my age. However, coordination between my ears and eyes is impaired if I am outside beside a group of trees, or a building and attempt to locate the source of a distant motor — if I am not near a large object, this ear-eye coordination is near perfection. My EYE-SIGHT, from ten feet to infinity, is excellent, but, from my eyes to eighteen inches, I need glasses and from eighteen inches to ten feet, I need different

lenses — therefore I wear trifocals. I have diplopia. Direct light, wind or my own tears (even from laughter) irritate my right eye in particular — I wear dark shields on my glasses outside day or night, and a small leather patch on my temple-shafts at all times. I have a dermatitis that is confined to my head and face.

Direct sunlight and perspiration, as well as continued pressure, be it ever so slight, aggravate it. For this reason, I wear an elastic cord between my glasses' ear-pieces across the top of my head — this also prevents my glasses from slipping. I wear my hair short, in order to treat this skin condition: I seem to be able to control but not cure this trouble. The first time my CARDIOGRAM was made, my physician thought that the operator had made an error, and ordered a second graph. However, it, and every cardiogram since, have been just as irregular. At times, I can feel it (my HEART) pounding away at run-away speed. My ABDOMEN has been getting more and more enlarged, for the past ten or fifteen years. The doctors, from whom I have sought a reason for this enlargement, either did not know or were afraid that my knowledge of the truth might frighten me and shorten my future life — i.e., what do you think? At any rate, this enlargement (ascites?) has forced me to wear trousers with an elastic band instead of a belt. In October of 1960 I began to have what I think may be pyelonephritis, with a chronic urethritis and a thrombosis-and-infarction of some of the smaller blood veins under my glans, and a scrotal formication. (Here, again, my searching questions are avoided.) I am, and likely always have been, sterile and am severely atrophied in my genital region. Were it not for this atrophy, I could and would wear a urinal at times.

When I was a child, I was never able to go without shoes: contact of my instep with any sharp or rough object set up an extensor plantar reaction causing my biceps to contract and me to fall — I have tumbled into water while wading, many times — for this reason. A prickling sensation, in either leg, is not infrequent and will start that leg into spastic motion. Since 1955, I am quite often aware of a feeling of being too hot, yet not sweating or feverish. (My wife can also feel this body heat by touching me, but we have taken my temperature, several times, and it is always normal.) At times, I will utter a loud gasping sigh, but, am not aware of any breathing difficulty, at the time. I sleep poorly, even with Nembutal and am frequently troubled by a backache. At irregular intervals, either or both pairs of my biceps muscles will also go into a Myoclonic Action of contraction and retraction of spasm, that is most uncomfortable. Sleep is my best method of halting these attacks. If I inadvertently touch something very hot or very cold, all of my reflexes will go into violent spastic motion. Were it not for my wife's constant care and company, I should long ago have been bedfast. As it is, my being in a wheel chair amounts to almost the same thing. Several years ago, I contracted diabetes mellitus, because of the resultant care of which, I may be in better health today. ■

Keep Your Patients Loyal to You

Giving your patients the peace of mind that will keep them loyal to you is critical to the survival of your practice. By having the best equipment, you give your patients that peace of mind. Since today's health conscious women are aware of the value of mammographic examinations, now is the time to evaluate the benefits of mammography for your practice and your patients.

Last year alone there were 41,000 breast cancer deaths and over 130,000 reported new cases of breast cancer in the United States. Call B & B X-Ray today at 1-800-447-XRAY to find out how the Bennett Micro-Fine Mammography System can help keep your patients loyal to you.



B & B X R A Y

working for the end result — optimum quality radiographs
P.O. Box 802 Matthews, NC 28105 1-800-447-XRAY
704/847-8521



Unique Boutique
Pamper Your Femininity

*After Breast
Surgery
Consultants*

We would like to acquaint you with the shop that specializes in servicing all of the needs of the mastectomee. We carry a variety of breast forms and bras that enable us to provide a custom fit specifically for each individual. We also have accessory items helpful during stages of reconstruction or after lumpectomy surgery. In a cozy intimate shop with a relaxed environment, our customers will receive service and understanding from women who have shared their experience.

FOR BETTER SERVICE AND FIT VISIT

UNIQUE BOUTIQUE

1819 E. SEVENTH STREET
CHARLOTTE, NC 28204
(704) 377-4356

(Appointments welcome)

HOURS:

MON-THURS 10 AM-4 PM
FRIDAY 10 AM-2 PM
2nd & 4th SAT 10 AM-2 PM

NORTH CAROLINA MEDICAL JOURNAL

For Patients

VOLUME 49 / NUMBER 5 / MAY 1988

Of Medicine and the Breast

DONALD SERAFIN, M.D.

There are several breast conditions treatable by a variety of medical means. This article examines women's options and describes current techniques for surgery and disease management in breast reduction, fibrocystic disease, breast cancer, and breast reconstruction.

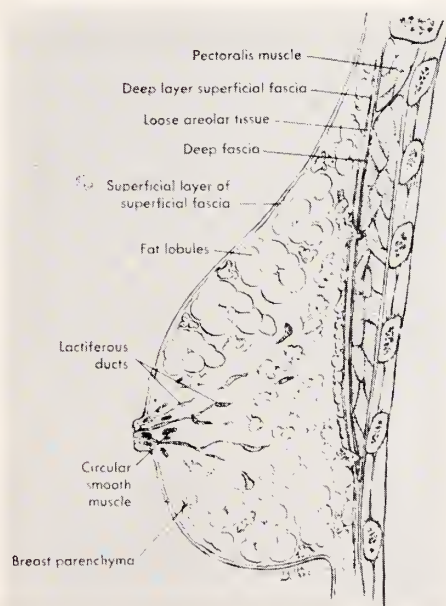


Diagram of the breast.

From the Division of Plastic & Reconstructive and Maxillofacial Surgery, Duke University Medical Center, P.O. Box 3974, Durham 27710.

Much has been written and said about problems related to the size and shape of the female breast. We will explore here some of the options available to women who would like to reduce the size of their breasts, and some of the issues of concern for women who are considering breast reduction surgery. We'll describe what patients go through before and after a breast reduction operation.

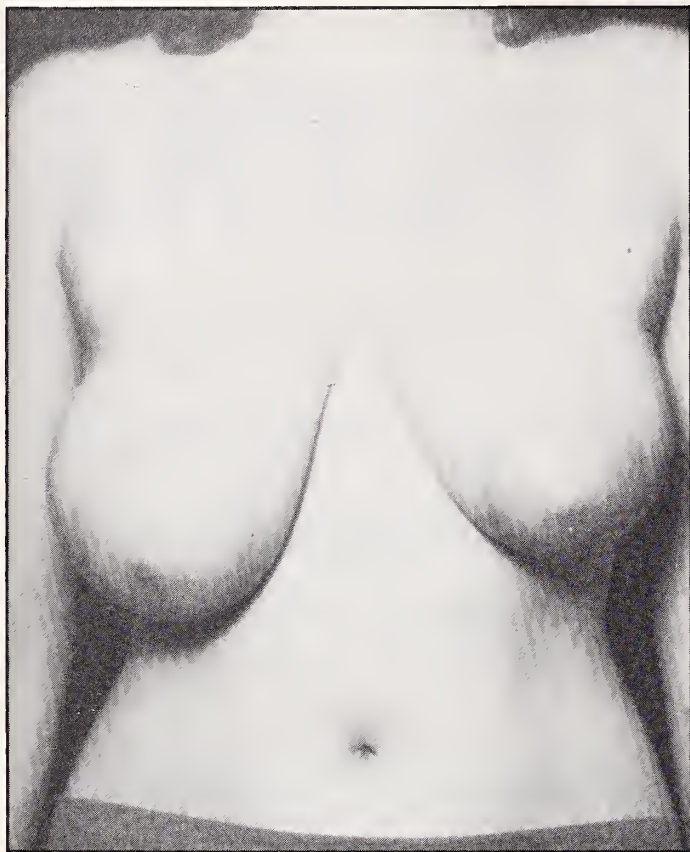
Breast Reduction Surgery: The State of the Art

First, let's take a look at the composition of the breast. What, exactly, are breasts made of?

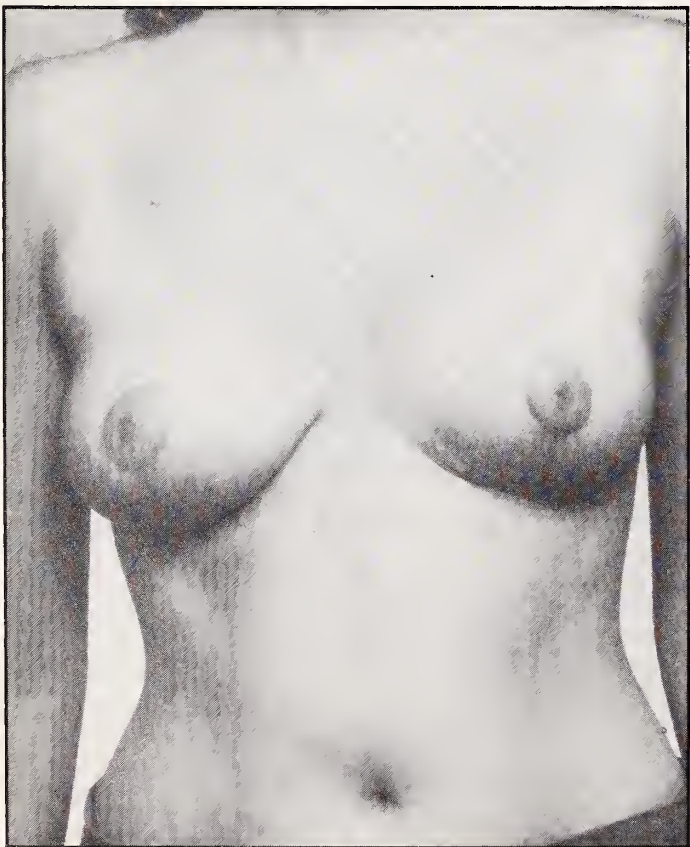
For the most part, beneath the skin, breasts are composed of two things: fatty tissue and the glands that secrete milk in nursing mothers. In women who have not reached menopause the relative percentage of fatty tissue to glandular tissue in the breast varies considerably. This variation is determined by family history, genetic traits, and age.

Many women suffer from excessively large breasts. This often causes women to feel physically uncomfortable

Patient: *My back hurt so bad and my chest felt so heavy . . . and it was hard to buy clothes to fit.*



Contemplating breast reduction surgery.



The same patient as above, after breast reduction surgery.

as well as self-conscious in social settings.

Complaints include an inability to wear proper clothing, shoulder and neck pain, and persistent sweating and skin irritation related to the constant moisture beneath the massive breasts.

The surgical procedure known as the reduction mammoplasty, or breast reduction surgery, is the only treatment available to correct overly large breasts. Its objectives are to reduce the volume of breast tissue and to elevate the nipple area, leaving a normal-looking breast in place.

Patients having breast reduction can expect relief from the discomforts and an improvement in their appearance. But there may also be changes in sensitivity in the nipple area, and the ability to nurse a baby will be lost. One should also expect the presence of scars, although well positioned and concealed in part. Partial or complete loss of the nipple is possible, but unlikely.

One other consideration facing patients deciding whether or not to have surgery is social pressure. Some families and friends are more supportive than others when it comes to breast reduction.

Patient: *My husband had mixed feelings at first. He had always joked with me about being a 'breast man.' But when he realized how important this was to me . . . he became very supportive.*

Once the decision to have this operation has been made, it helps to know what to expect.

Before surgery, blood may be taken from the patient and stored. This is because a blood transfusion is sometimes required during breast reduction surgery, and nothing could be better than the patient's own blood for this purpose.

Usually, patients having breast reduction surgery spend three to four hours in the operating room and three to four days in the hospital after surgery; but the length of the hospital stay may be shorter or longer, depending on doctor's orders.

Patient: *I was so sore. It really hurt more than I thought it would. But I didn't mind. I knew the discomfort would only last for about a week, and then I would enjoy the benefits of the surgery for the rest of my life.*

Exercise and other activity are limited in the first days after surgery; but after a week, stitches can be removed, and after three weeks, the patient can resume normal activity and exercise.

Recovery is almost complete by six weeks after the operation. With rare exception, patients are pleased with the results of breast reduction surgery.

Patient: *I wish I had gotten this done years ago. I can buy clothes that fit. I feel so light and look so good . . . I just feel more comfortable!*

Patient: *With all of the lumps, I'm afraid I might be getting cancer . . . and there are so many of them, it's hard to tell when I have a new one. My breasts just ache.*

Patient: *Once I knew that fibrocystic disease was not the same as cancer, I wanted to find out how it would affect my chances of getting cancer.*

Patient: *Do I really have to give up coffee?*

The decisions to be made about breast reduction surgery are yours and yours alone.

Fibrocystic Disease: Causes and Treatment

Fibrocystic disease affects a significant portion of women who have not reached menopause. The disease involves the recurrent appearance of lumps or cysts in the breast. These nodules may be discovered by a physician, or they may be found by the patient during self-examination.

Fibrocystic disease is not breast cancer. There was a time when we believed that patients with fibrocystic disease ran the same risk for breast cancer as other women. We now know that some patients with the disease do run an *increased* risk of developing future breast cancer.

One thing that sets this higher-risk subgroup apart from other patients is the type of lesions they have. The doctor may recommend that biopsies or samples of these lesions be taken surgically for examination under a microscope. Patients are placed under either a local or a general anesthetic when biopsies are taken. Only by careful microscopic examination of biopsy material like this can we determine whether a patient has an increased risk of cancer. Nearly 75% of the women who have biopsies find that they have benign disease — that there is no evidence of cancer.

If biopsy reveals that a woman has non-cancerous but atypical fibrocystic lumps, then her chances of developing breast cancer jump to 50%. The odds are still higher for the patient who has a mother, sister, or grandmother who has had breast cancer prior to menopause.

If you look at the whole population, one out of eleven women today, or approximately 9%, will develop breast cancer (see also the section on breast cancer and breast reconstruction, below).

When a patient with fibrocystic disease is seen at Duke, the physician considers family history, any previous biopsy material, and current biopsy material before suggesting the best option for treatment. For patients whose biopsies, past and present, show no high-risk lesions, we use non-surgical treatment, which mainly means taking pills and exercising will power.

Specifically, this non-surgical treatment consists of 200 mg vitamin E capsules taken orally twice a day, abstention from caffeine, and most importantly, complete abstention from smoking.

In addition, the patient is advised to avoid certain medications, specifically antihistamines and beta blockers, and an attempt is made to regulate the menstrual cycle.

A significant portion of the patient population will benefit from this conservative medical management.

Women who can't quit smoking, or who are getting caffeine from an unknown source, and patients with hyperthyroid conditions, often are among those patients who do not respond sufficiently to the conservative man-

Patient: *What happens, then, if the drugs don't work for me?*

Patient: *Can anything be done to restore or maintain my appearance after the surgery?*

agement. If the patient's symptoms and disease do not respond, the next step in medical management is an attempt to suppress estrogen effects with either Donazol or Tomoxifen.

Donazol treatment is carried out over a three- to six-month period. Donazol is a mild adrenergic hormone, and many women who take it gain weight. Other possible side effects are growth of unwanted body hair and voice changes, but these are rare.

Unfortunately, 15% to 20% of patients with fibrocystic disease will not respond to the suppression of estrogen. Of this subgroup, 54% have been found to have significant biopsy abnormalities, and this includes 18% with high-risk lesions.

Patients who do not respond to medical management or those patients who cannot tolerate medical management should be considered as candidates for surgery, along with patients with previous biopsies revealing high-risk lesions. Both groups are at high risk.

The surgical treatment consists of either a subcutaneous mastectomy or a simple mastectomy, performed on both breasts.

A subcutaneous or "beneath the skin" mastectomy removes 85% to 90% of the breast tissue, leaving just a little tissue beneath the nipple to augment the supply of blood to the region. If necessary, this remaining tissue can be removed at a later date.

The tissue taken provides the pathologist with a giant biopsy from each breast for evaluation.

The subcutaneous mastectomy reduces, but does not eliminate, the cancer risk in a high-risk population.

The main advantage of the subcutaneous mastectomy is that it is less deforming. It is most indicated for smaller-breasted surgical candidates whose breasts do not droop or sag significantly.

For other surgical candidates, those with large or sagging breasts, a simple mastectomy is recommended. In terms of preventing cancer, this procedure has the advantage of removing all of the breast tissue.

The disadvantages of simple mastectomy include loss of a portion of the skin envelope, and loss of the nipple area.

Breast reconstruction is possible for virtually all patients, whether they have had a simple or a subcutaneous mastectomy. (See the next section.)

Surgery is a last resort in the treatment of fibrocystic disease, but the important thing is to make sure that the disease, once diagnosed, is treated quickly and appropriately.

Consult your doctor for more information on fibrocystic disease, breast surgery, or state-of-the-art treatment of diseases affecting the breast.



Alternatively, the rectus abdominis muscle can be used to augment the available tissue for breast reconstruction.

Patient: *Is there any way to avoid getting the scar on my back?*

For women who are worried about the scar left on the back, the rectus abdominis musculocutaneous flap can be used instead. Since this flap is taken from the abdomen, the scar it leaves (just above the pubic hairline) can be easily hidden with clothing.

This procedure is also preferred by women who have a protruding lower abdomen, since this surgery has the effect of giving them a "tummy tuck" at the same time that the breast mound is reconstructed. The principle is similar to that of the procedure using the latissimus dorsi flap. A muscle and skin island is transferred to the breast region. The skin and fatty tissue which are transferred and reshaped as a breast usually eliminates the need for a silicone prosthesis.

The nipple area is reconstructed at a later stage.

Finally, let's direct our attention to the contralateral breast. That is to say, the breast without malignancy.

As indicated earlier, it is sometimes necessary to operate on the contralateral breast just so that it will resemble the reconstructed one. Also, for some patients who are at high risk for developing cancer in the unaffected breast, surgery may be recommended as a preventive measure.

Depending on the indications, subcutaneous mastectomy can be performed (see the section on fibrocystic disease, above), or the breast can be simply lifted or reduced in size.

A subcutaneous mastectomy is performed on the non-cancerous breast if the patient has a previous breast cancer with a high incidence of bilaterality, or if the patient has an extremely favorable prognosis following the original mastectomy.

In this short essay, we have examined some of the options available to patients who are being treated for diseases affecting the breast. Your doctor and medical staff will be happy to explain further, or answer any other questions that you may have. ■

What better gift for a student, intern or resident?

North Carolina Medical Journal

Subscribe for yourself or a friend



Please enclose a check or money order for:

- ☐ \$12.60 (NC Residents; this includes 5% sales tax)
☐ \$12.00 (out of state subscribers)
☐ New ☐ Renewal

Send to NCMJ, Box 3910 DUMC
Durham 27710. (919/684-5728)

Please start my 1-year subscription:

My Name _____

Address _____

City/State/Zip _____

Please send a 1-year gift subscription to:

Name _____

Address _____

City/State/Zip _____

Biopsy

PEGGY HANSEN, M.D.

a sharp jab —
local anesthetic —
a deft movement,
and it is over:
bx, we call it,
two short letters to describe
this brief event, unremarkable
and heavy with dark power.
this time it is I
awaiting that quick stab,
fluid motion of the knife,
slow flowering in the gut
of an icy dread, fearing
the raw judgment, crouched
silent and brooding,
impatient for the worst —
am I different today
without that patch of skin
and its sullen harvest
of dark-eyed menace?
what are these rogue cells
that they ignite my nerves,
and make me doubt the far-off voice
that calls to tell me “negative?”

Nature's Prescription For Relaxation!

A new oceanfront home! This 5 brm, 3½ bath, luxury home has super amenities and location. Choose colors and carpet. Call for details.	A custom oceanfront home built with an eye for detail! Ceramic baths, Jacuzzi tub, marble hearth, full-size bar, wrap around decking and much, much more. \$295,000.	An oceanfront home at a price you won't believe! This 3 brm, 2 bath cottage has a super rental history. New roof, paint, carpet, flooring, and heat pump last year. A super view of the Atlantic and lots of decking. \$169,000.	Watch the sun rise for \$20,000 less than to see it set! A steal at \$137,500 for this 4 brm, 2 bath oceanfront duplex half. Furnished and ready for occupancy!
Oceanfront Amenities! This duplex half was created for comfort. The 4 brm, 2½ floor plan is very functional, the amenities are excellent. Custom stained glass windows, cedar ceilings, covered cabana, sprinkler system, landscaped, Anderson windows and doors.	What a location for a vacation! This oceanfront duplex sports 3 brms and 2 baths per side. Strong rental unit. Being sold with designer furnishings. From "soup to nuts". \$360,000.	Superbly crafted oceanfront home with incredible gourmet kitchen. This is one you must see! For quite possibly the best-built home on the island, call for details.	1607 Emerald Drive. This 4 brm, 2 bath Hattaras plan sits on a high 3rd row lot. Enclosed garage and storage below. Only 2 years old! REDUCED FOR QUICK SALE: \$112,000.
At last, an affordable waterfront bungalow! This 3 brm, 1 bath packs plenty including an incredible view of the ICW, a large deck, and dock. Only \$110,000.	Catch a wave to see this incredible deal at the Point! Large 5 brm, 4 bath home with a view of the ocean. Price includes appliances and furnishings. \$110,000.	Spacious County living at it's finest! This 3 brm, 2 bath custom beauty has formal dining and living rooms ceramic baths, and screened porch. Located in a sound front community with marina!	Contemporary home with 150' of sandy beach on Core Sound! Plenty of room inside and a guest house for Mom and Dad. Price reduced! Call office for more details.
A quiet contemporary beauty. This custom 3 brm, 2 bath home is located in a beautiful soundfront community. Deeded boat access and recreation facilities. \$99,500.	Did you say you can't afford a place at the beach! Here's your answer! This 12 x 60' mobile home has 3 brm, and 2 baths. Comes with it's own lot for only \$60,000.	Pebble Beach Condominium Unit A-307 - furnished, tastefully decorated oceanfront unit! Excellent rental history. \$160,000.	Pebble Beach Condominium Unit D-202, 2nd floor unit with 3 brm, 2 baths - Good ocean view. \$145,000.
Pebble Beach Condominium Unit D-102, close to beach and pool - furnished. Tennis courts & club house. \$140,000.	Pebble Beach Condominium Unit D-105. Oceanside unit with balcony overlooking pool and clubhouse. Furnished with good rental history. \$140,000.	Point Emerald Villas, Unit 306-C. Good rental history on this ocean view condo - tennis, pools & beach. \$110,000.	We have several good commercial properties available. Please call and let us know what you are looking for.

● CHOICE BUILDING SITES ●

WATERFRONT

- Try to find an oceanfront lot for less. Duplex lot, ready to build on. \$148,500.
- A gorgeous, **large** soundfront lot with great privacy. \$150,000.
- Soundfront lot with good ocean access. Quite, private neighborhood. \$100,000.
- The least expensive soundfront lot on the beach! Private subdivision. \$81,990.

INTERIOR

- Beacon's Reach subdivision, Pine Knoll Shores. Lot 10. A super lot overlooking the lagoon. Amenities include pools, tennis courts, private beach, marinas. A beautiful development. \$65,000.
- a super high 3rd row with great views of ocean. Plenty of trees. \$65,000.
- Good 4th row lot on Pinewood Drive. Good beach access. \$45,000.

- We have over 30 lots from \$12,000 - \$212,000. Please call for a complete list.

Coast Realty and Construction Company has quality investments ranging from \$10,000 - \$10,000,000.

For further information about these and other fine properties,
please contact:

COAST REALTY AND CONSTRUCTION COMPANY
7703 Emerald Drive
Emerald Isle, NC 28594
(919) 354-3700

Gull's Disease:



Myxedema, adult hypothyroidism. Condition resulting from the lack of thyroid hormone. Characteristic changes, reversible with thyroid hormone replacement, include typical facies (left), cold sensitivity, coarse edematous skin, mental slowness, and weight gain.

Photographs illustrate reversal of facial changes after four months of replacement therapy (right).



Sir William Withey Gull gave us the first clear description of hypothyroidism in adults. His 1874 article, "On a cretinoid state intervening in adult life in women," detailed the appearance of one of his patients: "Miss B., after the cessation of the catamenial period, became insensibly more and more languid, with general increase in bulk. This change went on from year to year, her face altering from oval to round, much like the full moon at rising. With a complexion soft and fair, the skin presenting a peculiarly smooth and fine texture was almost porcelainous in aspect, the cheeks tinted of a delicate rosepurple, the cellular tissue under the eyes being loose and folded, and that under the jaws and in the neck becoming heavy, thickened, and folded. . . . hair flaxen and soft, the whole expression of the face remarkably placid. The tongue broad and thick, voice guttural, and the pronunciation as if the tongue were too large for the mouth. . . ." This passage attests to Gull's ability to make a keen observation and to communicate it in a characteristic "pregnant brevity of speech." Undoubtedly, he was exercising those same faculties when he described himself: "I am a clinical physician, or nothing." His contemporaries, not as brief, described Gull as a clinical physician, and more. As a teacher, he was adored by his pupils. As an investigator, he wrote on posterior spinal lesions causing ataxia, on systemic arteriocalillary fibrosis associated with Bright's disease of the kidney, on intermittent hemoglobinuria, on anorexia nervosa, and on xanthelasma. As a humanitarian, he was responsible for abolishing the routine use of restraints in psychiatric wards.

Gull was born December 31, 1816 at Thorpe-le-Soken, a secluded Essex village. His father died young, leaving the family in financial difficulties. He went to work, having neither time nor money for formal schooling; but the rector in a neighboring village tutored him in classical studies. When Gull was 18, the rector introduced him to Benjamin


Harrison, treasurer of Guy's School and Hospital in London, who offered him work as a counting clerk at the hospital. Harrison made Gull at age 22 a "perpetual student" of the Guy's School of Medicine, waiving all fees, providing housing and placing him under the supervision of Thomas Stocker, one of the hospital's finest physicians. As Gull pursued M.B. and M.D. degrees, he had an invaluable opportunity to learn clinical medicine. For nine years he resided in the hospital, helping Stocker and serving as medical superintendent of the psychiatric wards.

Out of this wealth of experience grew a style of medicine that endeared Gull to patients. Always considerate, he did not allow himself to be hurried with patients; a master of physical diagnosis, he performed thorough examinations of every organ system. He promoted a scientific approach to medicine, believing that vigorous treatment of half-understood diseases was not only useless but dangerous: "[Jenner and I] have disabused the public of the belief that doctoring consists in drenching them with nauseous drugs." His therapeutic approach excluded prescriptions except for such time-tested drugs as digitalis, mercury, and opium.

Gull's attitudes toward science and therapy were apparent in the article describing hypothyroidism. In keeping with his dictum, "savages explain, science investigates," he admitted that he was unable to explain the etiology of the changes he described. He had no suggestions for therapy other than warm baths and exercise to maintain strength, but predicted that as more cases were identified clinical management would improve. The clinician was correct. In 1891, one year after Gull died of cerebral hemorrhage, Murray successfully treated hypothyroidism with thyroid extract administered subcutaneously. In 1892 Fox reported that sheep thyroid "lightly fried and minced, to be taken with currant jelly once a week," was equally successful in treating Gull's disease. ■

—Edward S. Schroering, Jr., M.D.
and Francis A. Neelon, M.D.

Duke University Medical Center, Durham 27710



"The Power of the Pen"

When you decide to use Bactrim, use the power of the pen as well. Protect your prescribing decision in accordance with your state regulations to prevent substitution. It guarantees your patients will get the power of Bactrim.

Specify
"Dispense as written"

Bactrim™
(trimethoprim and
sulfamethoxazole/Roche)

Roche Laboratories
a division of Hoffmann-La Roche Inc.
340 Kingsland Street, Nutley, New Jersey 07110-1199

Copyright © 1988 by Hoffmann-La Roche Inc. All rights reserved.

Our **A**lumni Make Great Recoveries.

They needed our program to solve the problems, so you probably won't hear them brag about their Alma Mater. But they're proud of us and we're proud of them, because they continue to live straight and sober after they leave our program.

Some people call it success. We call it recovery. And it happens because of teamwork. Our staff, our client's physician, employer, and family, all working together with each patient for the same goal: freedom from drugs and alcohol one day at a time.

Guaranteed. That's right, if a patient follows our program and doesn't remain drug and alcohol free, we'll provide additional treatment at *no charge*.

Don't lose your patients to alcohol and drugs. Get them back with our help and discover what recovery can mean for your patient's life.

We offer 24 hour free confidential evaluations and case consultations 7 days a week.



**Charter
Northridge
Hospital**

400 Newton Road
Raleigh, NC 27615
1-800-447-1800

Patient costs covered by Medicaid, Medicare, and most insurance companies.



A Facility of Charter Medical Corporation
Quality Hospitals.

For urinary tract infection



Illustration of
Bactrim power
in urinary tract
infection.

Bactrim Power

- Penetrates
- Concentrates
- Overpowers
- Persists

Bactrim penetrates all tissues¹ to overpower most common susceptible uropathogens including *E. coli*, *Klebsiella* species, *Enterobacter* species, *Morganella morganii*, *Proteus* (*in vitro*) year after year.² B.i.d. dosing, easy transition from IV to oral, and economy help keep successful therapy within your power. Especially when you remember to protect your prescribing decision by specifying D.A.W.

Please note that *in vitro* data may not correlate with clinical experience. Bactrim is contraindicated in infants less than two months of age, in pregnancy at term, during lactation, and in documented megaloblastic anemia due to folate deficiency. Maintain adequate fluid intake.

Specify "*Dispense as written*"

Bactrim™ DS

(160 mg trimethoprim and 800 mg sulfamethoxazole/Roche)



Bactrim™

(trimethoprim and sulfamethoxazole/Roche)

Before prescribing, please consult complete product information, a summary of which follows:
CONTRAINDICATIONS: Hypersensitivity to trimethoprim or sulfonamides; documented megaloblastic anemia due to folate deficiency; pregnancy at term and during the nursing period; infants less than two months of age.

WARNINGS: FATALITIES ASSOCIATED WITH THE ADMINISTRATION OF SULFONAMIDES, ALTHOUGH RARE, HAVE OCCURRED DUE TO SEVERE REACTIONS, INCLUDING STEVENS-JOHNSON SYNDROME, TOXIC EPIDERMAL NECROLYSIS, FULMINANT HEPATIC NECROSIS, AGRANULOCYTOSIS, APLASTIC ANEMIA AND OTHER BLOOD DYSCRASIAS.

BACTRIM SHOULD BE DISCONTINUED AT THE FIRST APPEARANCE OF SKIN RASH OR ANY SIGN OF ADVERSE REACTION. Clinical signs, such as rash, sore throat, fever, arthralgia, cough, shortness of breath, pallor, purpura or jaundice, may be early indications of serious reactions. In rare instances a skin rash may be followed by more severe reactions, such as Stevens-Johnson syndrome, toxic epidermal necrolysis, hepatic necrosis or serious blood disorder. Perform complete blood counts frequently. BACTRIM SHOULD NOT BE USED IN THE TREATMENT OF STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A β -hemolytic streptococcal tonsillopharyngitis have a greater incidence of bacteriologic failure when treated with Bactrim than with penicillin.

PRECAUTIONS: *General:* Give with caution to patients with impaired renal or hepatic function, possible folate deficiency (e.g., elderly, chronic alcoholics, patients on anticonvulsants, with malabsorption syndrome, or in malnutrition states) and severe allergies or bronchial asthma. In glucose-6-phosphate dehydrogenase deficient individuals, hemolysis may occur, frequently dose-related.

Use in the Elderly: May be increased risk of severe adverse reactions in elderly, particularly with complicating conditions, e.g., impaired kidney and/or liver function, concomitant use of other drugs. Severe skin reactions, generalized bone marrow suppression (see WARNINGS and ADVERSE REACTIONS) or a specific decrease in platelets (with or without purpura) are most frequently reported severe adverse reactions in elderly. In those concurrently receiving certain diuretics, primarily thiazides, increased incidence of thrombocytopenia with purpura reported. Make appropriate dosage adjustments for patients with impaired kidney function (see DOSAGE AND ADMINISTRATION).

Use in the Treatment of Pneumocystis Carinii Pneumonia in Patients with Acquired Immunodeficiency Syndrome (AIDS): AIDS patients may not tolerate or respond to Bactrim in same manner as non-AIDS patients. Incidence of side effects, particularly rash, fever, leukopenia, elevated aminotransferase (transaminase) values, with Bactrim in AIDS patients treated for *Pneumocystis carinii* pneumonia reported to be greatly increased compared with incidence normally associated with Bactrim in non-AIDS patients.

Information for Patients: Instruct patients to maintain adequate fluid intake to prevent crystalluria and stone formation.

Laboratory Tests: Perform complete blood counts frequently, if a significant reduction in the count of any formed blood element is noted, discontinue Bactrim. Perform urinalyses with careful microscopic examination and renal function tests during therapy, particularly for patients with impaired renal function.

Drug Interactions: In elderly patients concurrently receiving certain diuretics, primarily thiazides, an increased incidence of thrombocytopenia with purpura has been reported. Bactrim may prolong the prothrombin time in patients who are receiving the anticoagulant warfarin. Keep this in mind when Bactrim is given to patients already on anticoagulant therapy and reassess coagulation time. Bactrim may inhibit the hepatic metabolism of phenytoin. Given at a common clinical dosage, it increased the phenytoin half-life by 39% and decreased the phenytoin metabolic clearance rate by 27%. When giving these drugs concurrently, be alert for possible excessive phenytoin effect. Sulfonamides can displace methotrexate from plasma protein binding sites, thus increasing free methotrexate concentrations.

Drug/Laboratory Test Interactions: Bactrim, specifically the trimethoprim component, can interfere with a serum methotrexate assay as determined by the competitive binding protein technique (CBPA) when a bacterial dihydrofolate reductase is used as the binding protein. No interference occurs if methotrexate is measured by a radioimmunoassay (RIA). The presence of trimethoprim and sulfamethoxazole may also interfere with the Jaffe alkaline picrate reaction assay for creatinine, resulting in overestimations of about 10% in the range of normal values.

Carcinogenesis, Mutagenesis, Impairment of Fertility: **Carcinogenesis:** Long-term studies in animals to evaluate carcinogenic potential not conducted with Bactrim. **Mutagenesis:** Bacterial mutagenic studies not performed with sulfamethoxazole and trimethoprim in combination. Trimethoprim demonstrated to be nonmutagenic in the Ames assay. No chromosomal damage observed in human leukocytes *in vitro* with sulfamethoxazole and trimethoprim alone or in combination; concentrations used exceeded blood levels of these compounds following therapy with Bactrim. Observations of leukocytes obtained from patients treated with Bactrim revealed no chromosomal abnormalities. **Impairment of Fertility:** No adverse effects on fertility or general reproductive performance observed in rats given oral dosages as high as 70 mg/kg/day trimethoprim plus 350 mg/kg/day sulfamethoxazole.

Pregnancy: Teratogenic Effects: Pregnancy Category C. Trimethoprim and sulfamethoxazole may interfere with folate acid metabolism; use during pregnancy only if potential benefit justifies potential risk to fetus. Nonteratogenic Effects: See CONTRAINDICATIONS section.

Nursing Mothers: See CONTRAINDICATIONS section.

Pediatric Use: Not recommended for infants under two months (see INDICATIONS and CONTRAINDICATIONS sections).

ADVERSE REACTIONS: Most common are gastrointestinal disturbances (nausea, vomiting, anorexia) and allergic skin reactions (such as rash and urticaria). **FATALITIES ASSOCIATED WITH THE ADMINISTRATION OF SULFONAMIDES, ALTHOUGH RARE, HAVE OCCURRED DUE TO SEVERE REACTIONS, INCLUDING STEVENS-JOHNSON SYNDROME, TOXIC EPIDERMAL NECROLYSIS, FULMINANT HEPATIC NECROSIS, AGRANULOCYTOSIS, APLASTIC ANEMIA AND OTHER BLOOD DYSCRASIAS (SEE WARNINGS SECTION).**

Hematologic: Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, neutropenia, hemolytic anemia, megaloblastic anemia, hypoprothrombinemia, methemoglobinemia, eosinophilia. **Allergic Reactions:** Stevens-Johnson syndrome, toxic epidermal necrolysis, anaphylaxis, allergic myocarditis, erythema multiforme, exfoliative dermatitis, angioedema, drug fever, chills, Henoch-Schoenlein purpura, serum sickness-like syndrome, generalized allergic reactions, generalized skin eruptions, photosensitivity, conjunctival and scleral injection, pruritus, urticaria and rash. Periarthritis nodosa and systemic lupus erythematosus have been reported. **Gastrointestinal:** Hepatitis (including cholestatic jaundice and hepatic necrosis), elevation of serum transaminase and bilirubin, pseudomembranous enterocolitis, pancreatitis, stomatitis, glossitis, nausea, emesis, abdominal pain, diarrhea, anorexia. **Genitourinary:** Renal failure, interstitial nephritis, BUN and serum creatinine elevation, toxic nephrosis with oliguria and anuria, crystalluria. **Neurologic:** Aseptic meningitis, convulsions, peripheral neuritis, ataxia, vertigo, tinnitus, headache. **Psychiatric:** Hallucinations, depression, apathy, nervousness. **Endocrine:** Sulfonamides bear certain chemical similarities to some goitrogens, diuretics (acetazolamide and the thiazides) and oral hypoglycemic agents; cross-sensitivity may exist. Diuresis and hypoglycemia have occurred rarely in patients receiving sulfonamides. **Respiratory:** Pulmonary infiltrates. **Musculoskeletal:** Arthralgia, myalgia. **Miscellaneous:** Weakness, fatigue, insomnia.

DOSAGE AND ADMINISTRATION: Not recommended for use in infants less than two months of age.

URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN: Usual adult dosage for urinary tract infections is one DS tablet, two tablets or four teaspoonfuls (20 ml) b.i.d. for 10 to 14 days. Use identical daily dosage for 5 days for shigellosis. **Recommended dosage for children** with urinary tract infections or acute otitis media is 8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses every 12 hours for 10 days. Use identical daily dosage for 5 days for shigellosis. **Renal Impaired:** Creatinine clearance above 30 ml/min, give usual dosage; 15-30 ml/min, give one-half the usual regimen, below 15 ml/min, use not recommended.

ACUTE EXACERBATIONS OF CHRONIC BRONCHITIS IN ADULTS: Usual adult dosage is one DS tablet, two tablets or four teasp. (20 ml) b.i.d. for 14 days.

PNEUMOCYSTIS CARINII PNEUMONIA: Recommended dosage is 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

HOW SUPPLIED: DS (double strength) Tablets (160 mg trimethoprim and 800 mg sulfamethoxazole)—bottles of 100, 250 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 20. Tablets (80 mg trimethoprim and 400 mg sulfamethoxazole)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40. **Pediatric Suspension** (40 mg trimethoprim and 200 mg sulfamethoxazole per teasp.)—bottles of 100 ml and 16 oz (1 pint). **Suspension** (40 mg trimethoprim and 200 mg sulfamethoxazole per teasp.)—bottles of 16 oz (1 pint).

STORE TABLETS AT 15°-30°C (59°-86°F) IN A DRY PLACE PROTECTED FROM LIGHT. STORE SUSPENSIONS AT 15°-30°C (59°-86°F) PROTECTED FROM LIGHT.

Roche Laboratories

a division of Hoffmann-La Roche Inc.

340 Kingsland Street, Nutley, New Jersey 07110-1199

P.I. 0288

YOCON®

YOHIMBINE HCl

Description: Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalamic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it, however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympatholytic and mydriatic. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.^{1,2} Also dizziness, headache, skin flushing reported when used orally.^{1,3}

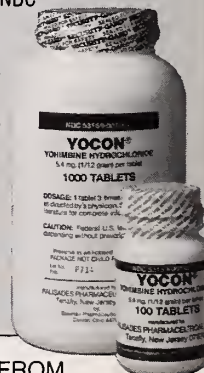
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.^{1,3,4} 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to 1/2 tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.³

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:

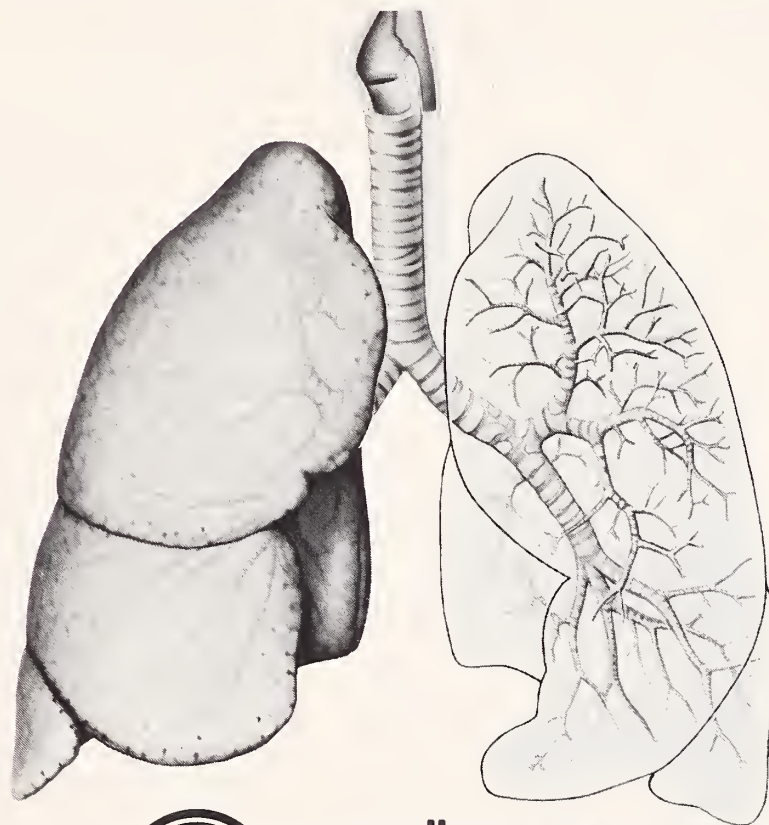
1. A. Morales et al., New England Journal of Medicine: 1221, November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

Rev. 1/85



AVAILABLE EXCLUSIVELY FROM
PALISADES PHARMACEUTICALS, INC.
 219 County Road
 Tenafly, New Jersey 07670
 (201) 569-8502
 Outside NJ 1-800-237-9083

Consider the causative organisms...



Ceclor[®]
cefactor

250-mg Pulvules[®] t.i.d.
offers effectiveness against
the major causes of bacterial bronchitis

Haemophilus influenzae and *Streptococcus pneumoniae*
(ampicillin-susceptible and ampicillin-resistant)

Note: Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

Ceclor[®] (cefactor)

Summary. Consult the package literature for prescribing information.

Indication: Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A β -hemolytic streptococci).

Contraindication:

Known allergy to cephalosporins.

Warnings:

CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients. Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:

- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:

- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] or the above skin manifestations accompanied by arthritis/arthritis and, frequently, fever): 1.5%, usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nerv-

ousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported. • Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%; and, rarely, thrombocytopenia.

Abnormalities in laboratory results of uncertain etiology

- Slight elevations in hepatic enzymes.
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis; elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinistest[®] tablets but not with Tes-Tape[®] (glucose enzymatic test strip, Lilly).

PA 0709 AMP

©1987, ELI LILLY AND COMPANY CR-5005-B-849318



Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285.
Eli Lilly Industries, Inc.
Carolina, Puerto Rico 00630

Edward C. Halperin, M.D., Book Review Coordinator

With this month's issue of the *North Carolina Medical Journal*, we introduce "Carolina Physician's Bookshelf." This book review column will keep our readers abreast of new and interesting medical and non-medical books. We plan to emphasize books of general rather than narrow interest, books which specifically concern North Carolina and/or southern medicine, and medical books by North Carolina authors. We welcome the input of our readers. Your suggestions for books to be reviewed as well as your reviews are welcome.

Bernie S. Siegel. *Love, Medicine and Miracles*. New York: Harper and Row, 1986, 243 pages (\$15.95)

Reviewed by Rachel Schanberg, M.Ed., N.C.C., Director, Duke Cancer Patient Support Program, Duke University Medical Center, Box 3843, Durham 27710.

The issue of the mind influencing the body in relationship to serious illness is a controversial one in medical circles. *Love, Medicine and Miracles* is a recent best seller which emphasizes the significance of positive thinking in living with cancer.

Bernie Siegel, M.D., was trained at Cornell Medical School, Grace-New Haven Hospital, and Pittsburgh Children's Hospital, and is currently a practicing surgeon, yet his book is frowned upon by many of his medical colleagues. They feel that there is sparse evidence to support his view that a patient's psychological outlook significantly influences the course and outcome of his or her disease. Siegel is accused of placing an unfair burden of guilt and a sense of failure upon patients who are unable to achieve a cure through positive thinking and a sense of responsibility in their medical treatment.

Historically, due to an inadequate emphasis in medical training on psychological issues, a fear of emotional involvement with patients, and excessive patient loads, oncologists have steered clear of seriously considering how daily life is for the cancer patient. Siegel obviously has confronted some of the issues a patient must cope with in adjusting to the diagnosis and treatment of cancer.

Although significant scientific progress has been made in

the treatment of cancer, patients and their families still live in constant dread of the future. The discomfort of side effects from current modes of treatment, accompanied by uncertainty concerning the outcome and by mortality statistics which are improving but still grim, often mean a lifestyle lacking in purpose or quality. Once cancer enters the life of an individual that life is never again the same.

Is it acceptable for physicians dealing with cancer patients to ignore coping techniques which help the patient live a meaningful life? Dr. Siegel's use of personal vignettes may overstate his case (according to current medical belief) about the role of positive thinking in curing cancer. He may even sometimes place a burden of guilt on patients by suggesting that they have contributed to the onset of their disease and may be perpetuating their own illness through a lack of personal responsibility and an inadequate will to live. Guilt, however, is a way of life for people who are seriously ill. All such patients wonder why this happened to them and what they did to "deserve" it. The patient undergoing surgery or chemotherapy who is not cured often wonders if he or she didn't cooperate adequately or follow instructions faithfully.

However, Siegel has something significant to offer to some cancer patients and the physicians who treat them. The fact that multitudes of patients have been injected with strong doses of courage and an ability to live life in a manner that emphasizes creativity, contentment and love cannot be ignored. *Love, Medicine and Miracles* advocates warm, friendly patient/physician relationships. Visual imagery, relaxation techniques and an optimistic, loving approach are suggested as tools for living with cancer. Patients use drawings as a mode of expression, and through the drawings they and their physicians identify some of the worries that

From the Division of Radiation Oncology, Box 3085, Duke University Medical Center, Durham 27710.

plague them. These drawings often raise issues that might not be revealed and addressed otherwise. Insomnia, anxiety attacks, psychosomatic symptoms, and a sense of isolation are problems that cancer patients frequently experience. Is it fair to eliminate any possible avenue of support?

Although there are questionable aspects of *Love, Medicine and Miracles*, important issues are raised which have been essentially ignored by traditional medicine. It behooves those dealing with cancer patients to consider the useful elements of this book in their attempts to help patients live with disease and with the difficult treatments prescribed. Not everything purported need be accepted. Dr. Siegel, however, has become the "guru" of many cancer patients and his book has been widely read. Obviously, what he has to say is reaching many patients and, from their comments, influencing the quality of their lives in important ways. He provides hope and does not eliminate some of the dreams that are an important part of living. As a complement to accepted medical treatment, his methods help patients develop the courage to confront their illness and all it entails. Each patient is an individual, and *Love, Medicine and Miracles* provides a framework of understanding and hope which better enables some patients to face the devastating intrusion of cancer.

H.G. Jones. *North Carolina Illustrated, 1524-1984*. Chapel Hill: The University of North Carolina Press, 1983, 482 pages, illustrated (\$24.95)

Reviewed by Edward C. Halperin, M.D.

When we read history we feel in touch with our past and achieve a better understanding of the present. Native-born North Carolinians have the benefit of learning state history in secondary school and college. Those of us who are Carolinians by choice, if not by birth, can similarly benefit by becoming acquainted with state history. In *North Carolina Illustrated, 1524-1984*, H.G. Jones provides us with a diverting and enjoyable history. Jones is the former director of the North Carolina Department of Archives and History. He is currently adjunct professor of history and curator of North Caroliniana at the University of North Carolina at Chapel Hill.

Jones surveys North Carolina history in a series of essays — each covering a portion of the state's history. Individual essays cover the European discovery and colonization of Carolina, the era of the American Revolution, early statehood, the Civil War era, Reconstruction, and the 20th century. I found Jones's descriptions of the Regulator crisis, the Secession of 1861, and Reconstruction particularly enlightening. Jones has an eye for the important influences of economic forces on history. He is also particularly good at clarifying the situation of the common person during history.

The book contains over 1,150 pictures including reproductions of sketches, paintings, manuscripts, photographs, books, newspapers, broadsides, music, maps, and political

cartoons. Detailed captions augment each illustration. This is a book for the coffee table, the waiting room, for leisurely browsing, and to come back to time and time again. For those of us who time or circumstance denied an introduction to state history, *North Carolina Illustrated* is a pleasant introduction. ■



"If I Grow Up..."

Every child likes to play "grown-up", but no child should have to suffer the very grown-up symptoms of childhood cancer.

At St. Jude Children's Research Hospital, we're fighting to put an end to this senseless loss, and we're working toward a day when no innocent "grown-up" will lose her life to cancer.

To find out how you can help, write to St. Jude, 505 N. Parkway, Memphis, TN 38105, or call 1-800-238-9100.

**ST. JUDE CHILDREN'S
RESEARCH HOSPITAL**
Danny Thomas, Founder

PHYSICIANS Ambulatory Care Clinics

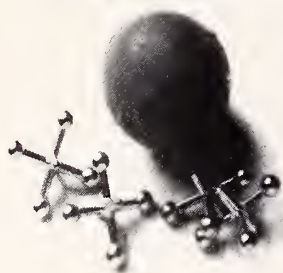
John Short & Associates, Inc., an internationally recognized health care management and consulting firm, is actively seeking **PHYSICIANS** with experience and credentials in **FAMILY MEDICINE/GENERAL PRACTICE** and **PRIMARY CARE SPECIALTIES**.

Full or part-time positions are available to staff a Primary Care Clinic in the **Coastal Region of North Carolina**. Qualifications, except for General Practitioners, include Board Certification or Board Eligibility.

John Short & Associates, Inc. offers competitive compensation including paid malpractice insurance, professional development funding and incentive programs. **For additional information please contact: Susan Bray, Recruiting Director, John Short & Associates, Inc., Box 1305, Columbia, MD 21044.**

E/O/E

CHILD'S PLAY Is Not ENOUGH.



Surveys indicate that many parents overestimate the physical fitness of their children because they appear so active. The fact is, to be physically fit, children need one to two hours of vigorous exercise each day.

With the right amount of daily exercise, teenagers and children of all ages will get the most from school . . . and play.

For more information, write to:
Fitness, Dept. 84,
Washington, DC
20001.

**The President's
Council on
Physical Fitness
and Sports**



CARAFATE[®] (sucralfate) Tablets

BRIEF SUMMARY

CONTRAINDICATIONS

There are no known contraindications to the use of sucralfate.

PRECAUTIONS

Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that simultaneous administration of CARAFATE (sucralfate) with tetracycline, phenytoin, digoxin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The clinical significance of these animal studies is yet to be defined. However, because of the potential of CARAFATE to alter the absorption of some drugs from the gastrointestinal tract, the separate administration of CARAFATE from that of other agents should be considered when alterations in bioavailability are felt to be critical for concomitantly administered drugs.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Chronic oral toxicity studies of 24 months' duration were conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). There was no evidence of drug-related tumorigenicity. A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies were not conducted.

Pregnancy: Teratogenic effects. Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients treated with sucralfate, adverse effects were reported in 121 (4.7%).

Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

OVERDOSAGE

There is no experience in humans with overdosage. Acute oral toxicity studies in animals, however, using doses up to 12 gm/kg body weight, could not find a lethal dose. Risks associated with overdosage should, therefore, be minimal.

DOSAGE AND ADMINISTRATION

The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

HOW SUPPLIED

CARAFATE (sucralfate) 1-gm tablets are supplied in bottles of 100 (NDC 0088-1712-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1712-49). Light pink scored oblong tablets are embossed with CARAFATE on one side and 1712 bracketed by C's on the other.

Issued 1/87

References:

1. Korman MG, Shaw RG, Hansky J, et al: *Gastroenterology* 80:1451-1453, 1981.
2. Korman MG, Hansky J, Merrett AC, et al: *Dig Dis Sci* 27:712-715, 1982.
3. Brandstaetter G, Kratochvil P: *Am J Med* 79 (suppl 2C):36-38, 1985.
4. Marks IN, Wright JP, Gilinsky NH, et al: *J Clin Gastroenterol* 8:419-423, 1986.
5. Lam SK, Hui WM, Lau WY, et al: *Gastroenterology* 92:1193-1201, 1987.

Another patient benefit product from



0825A8

Ulcer therapy that won't yield, even to smoking

YIELD



What do you do for duodenal ulcer patients who should stop smoking, but won't? Both cimetidine¹ and ranitidine² have been shown less effective in smokers than nonsmokers.

Choose CARAFATE® (sucralfate/Marion). Two recent studies show Carafate to be as effective in smokers as nonsmokers.^{3,4} A difference further illustrated in a 283-patient study comparing sucralfate to cimetidine⁵:

Ulcer healing rates:
(at four weeks of therapy)⁵

Sucralfate:

All patients	79.4%
Smokers	81.6%*

Cimetidine:

All patients	76.3%
Smokers	62.5%

*Significantly greater than cimetidine smoker group ($P < .05$).

Carafate has a unique, nonsystemic mode of action that enhances the body's own ulcer healing ability and protects the damaged mucosa from further injury.

When your ulcer patient is a smoker, prescribe the ulcer medication that won't go up in smoke: safe, nonsystemic Carafate.

Nothing works like

CARAFATE®
sucralfate/Marion

Please see adjoining page for references and brief summary of prescribing information.

0825A8



ALLAN J. HAMILTON, M.D.

Neurosurgical Resident and Research Fellow,
Massachusetts General Hospital, Boston, Massachusetts.
Captain, U.S. Army Reserve.

EDUCATION Ithaca College, B.A. (Magna Cum Laude);
Hamilton College (Pre-med); Harvard Medical School.

RESIDENCY General Surgical Internship. Neurosurgical
Residency, Massachusetts General Hospital.

CONTINUING EDUCATION Neurology and Neuro-
surgery Research Fellowship Training, National Institutes
of Health.

OUTSTANDING ACHIEVEMENTS Olsen Memorial
Fellowship, National Masonic Medical Research Foundation;
Albert Schweitzer Fellowship, International Albert Schweitzer
Foundation; Harvard Medical School Cabot Prize for Best
Senior Thesis; recently published article, "Who Shall Live
and Who Shall Die" in Newsweek Magazine.



Soldier being examined for effects of high-altitude cerebral edema.

“The work I’m doing in the Army Reserve fits perfectly with my academic research interests in civilian life. The Army is very concerned with the effects of high-altitude cerebral edema, which is a mirror model of cerebral hypoxia, something I deal with every day in our neurosurgical intensive care unit. I couldn’t ask for a smoother transition. And that’s true for a lot of Reserve physicians. All we really do is change our clothes, not our mindset.

“Some of the projects the Army is undertaking are on the cutting edge of research. For example, I’m currently involved in developing for the Army a prototype of a non-invasive intracranial pressure-monitoring device that we hope will allow us to measure pressure changes as the brain swells—without drilling holes in the skull. If we can get our design to work, such a device could revolutionize high-altitude medicine as well as civilian neurosurgical care.

“The quality of medicine and the caliber of people I’ve been associated with in the Army Reserve are, without question, equal to civilian hospitals. In fact, I’m giving serious consideration to applying for an active duty academic position in Army Medicine when my residency ends at Massachusetts General.”

Find out more about the medical opportunities in the Army Reserve. Call toll free 1-800-USA-ARMY.

**ARMY RESERVE MEDICINE.
BE ALL YOU CAN BE.**

Assessment of Medical Staff Performance by a New Independent Peer Review Organization for Hospital Trustees and Medical Staffs

A new foundation devoted to assessing the competence of hospital-staff physicians has been formed by a coalition of distinguished medical and medico-legal leaders. This non-profit organization will perform independent peer review for hospital trustees and medical staffs.

Richard S. Wilbur, M.D., Chairman, announced that the new American Medico-Legal Foundation (AMLF) will utilize distinguished senior clinicians from both medical centers and community hospitals to provide an impartial assessment of medical-staff performance. Each report will be further reviewed by physician-attorneys in the reviewing specialties to evaluate the medico-legal implications and to ensure that the judgment is legally correct.

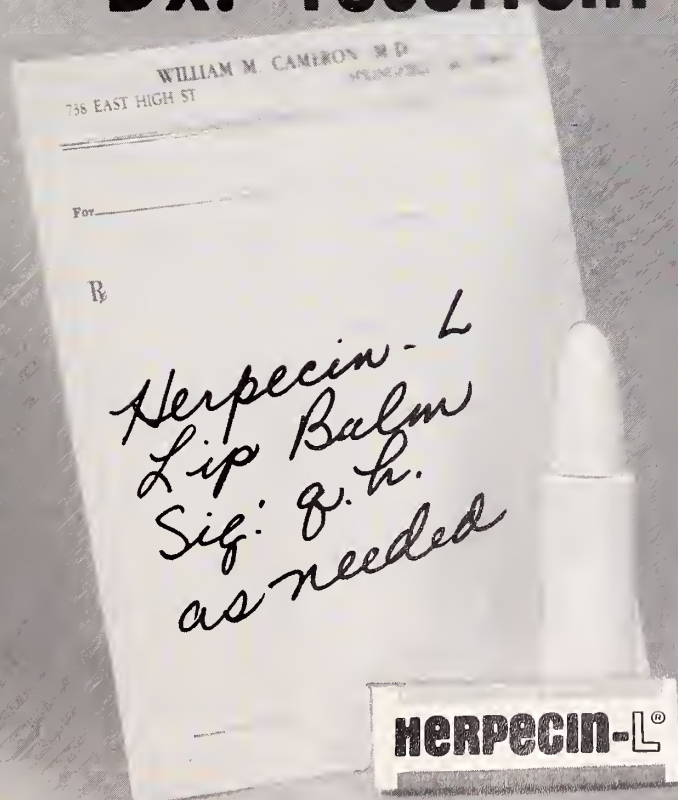
Conscientious hospital leaders sometimes face the dilemma of balancing patient safety against the individual rights of the staff physician. Wilbur points out that if they wait until there is a malpractice suit, it is too late to protect that patient and prevent unnecessary legal expense for the hospital; yet if they act early, on the basis of "allegations or decisions by the physician's local competition," they risk doing injustice and they risk an expensive antitrust suit. By utilizing the foundation, Wilbur feels, hospital trustees can be responsive to the "Health Care Quality Improvement Act of 1986" (P.L. 99-660, Sec. 410-432).

The AMLF is officed at The Barclay, Rittenhouse Square, Philadelphia, PA 19103-6064; 215/545-2161.

The board of directors includes: Richard S. Wilbur, M.D.,

Executive Vice President, Council of Medical Specialty Societies; Secretary, Accreditation Council for Continuing Medical Education; John E. Affeldt, M.D., Past President, Joint Commission on Accreditation of Hospitals (1977-1986); James W. Bartlett, M.D., former Medical Director, Strong Memorial Hospital, Rochester, NY (1967-1983), Associate Dean, University of Rochester School of Medicine & Dentistry (1966-1981); H. Robert Cathcart, President, Pennsylvania Hospital, former Chairman, Board of Trustees, American Hospital Association (1976); J.D. Epstein, J.D., President, American Academy of Hospital Attorneys, partner, Wood, Luchsinger & Epstein, Houston, TX; Saul J. Farber, M.D., Chairman, Department of Medicine, New York University, Former Chairman American Board of Internal Medicine (1973-1976), former President American College of Physicians (1984-1985); Evelyn M. Goldstein, J.D., pharmacologist, attorney, partner, Perry, Goldstein, Fialkowski & Perry, Philadelphia, PA; E. Craig Heringman, M.D., former Chairman of Vascular Surgery, Cedars Sinai Medical Center, Los Angeles, CA; Cyril H. Wecht, M.D., J.D., Chairman, Board of Trustees, American Board of Legal Medicine, former President, American College of Legal Medicine (1969-1972) and American Academy of Forensic Sciences (1971-1972); Claude E. Welch, M.D., former President, American College of Surgeons (1973-1974), Clinical Professor of Surgery Emeritus, Harvard Medical School. ■

Dx: recurrent herpes labialis



"HERPECIN-L is my **treatment of choice** for perioral herpes." GP, NY

"HERPECIN-L appears to actually **prevent** the blisters . . . used **soon enough**." DDS, MN

"HERPECIN-L® . . . a **conservative approach** with **low risk/high benefits**." MD, FL

"Used at **prodromal symptoms** . . . blisters **never formed** . . . remarkable." DH, MA

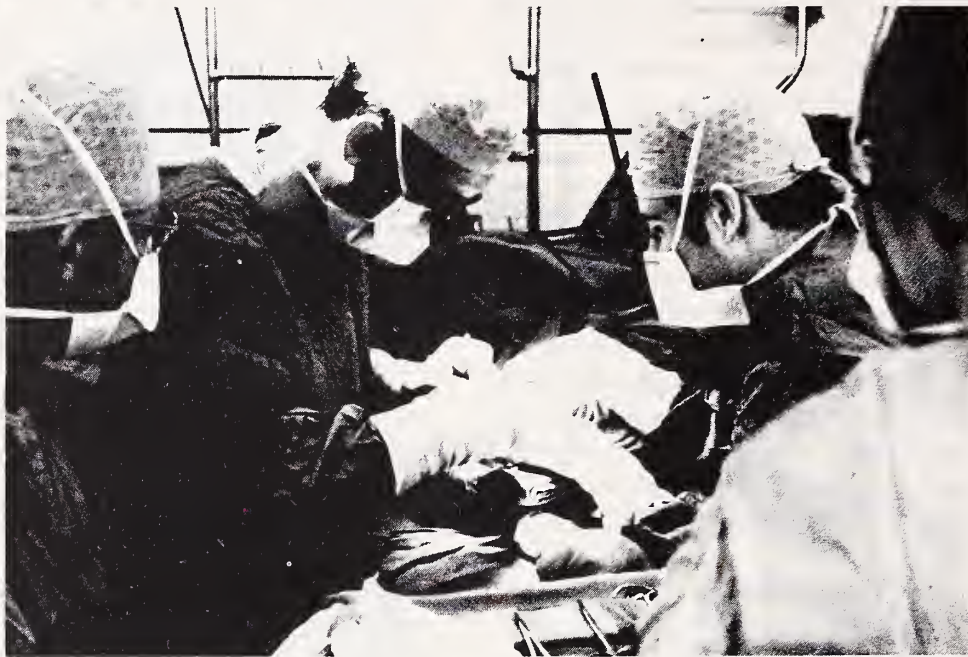
"(In clinical trials) . . . **response was dramatic**. HERPECIN-L . . . **proven far superior**." DDS, PA

"All patients claimed **shorter duration** . . . at **prodromal symptoms** . . . HERPECIN-L **averted the attacks**." MD, AK

OTC. See P.D.R. for information. For samples to make your own clinical evaluation, write: CAMPBELL LABORATORIES, INC., P.O. BOX 812-MD, FDR STATION, NEW YORK, N.Y. 10150

In North Carolina HERPECIN-L is available at all *Crown, Eckerd, Kerr, Mutual Drug, Revco and RiteAid* and other select pharmacies.

THE ARMY RESERVE OFFERS NEW FINANCIAL INCENTIVES FOR RESIDENTS.



If you are a resident in Anesthesiology or Surgery*, the Army Reserve has a new and exciting opportunity for you. The new Specialized Training Assistance Program will provide you with financial incentives while you're training in one of these specialties.

Here's how the program can work for you. If you qualify, you may be selected to participate in the Specialized Training Program. You'll serve in a local Army Reserve medical unit with flexible scheduling so it won't interfere with your residency

training, and in addition to your regular monthly Reserve pay, you'll receive a stipend of \$644 a month.

You'll also have the opportunity to practice your specialty for two weeks a year at one of the Army's prestigious Medical Centers.

Find out more about the Army Reserve's new Specialized Training Assistance Program.

Call or write your US Army Medical Department Reserve Personnel Counselor:

**Army Reserve Health Care Team
2634 Chapel Hill Blvd.
Suite 205
Durham, NC 27707-2875
(919) 493-1364 Collect**

* General, Orthopaedic, Neuro, Colon/Rectal, Cardio/Thoracic, Pediatric, Peripheral/Vascular, or Plastic Surgery.

ARMY RESERVE MEDICINE. BE ALL YOU CAN BE.

Letters to the Editor

The antivivisection movement: four comments on Dr. Sabiston's article

Dr. Burke's comment

To the Editor:

Logic — 1. A science that deals with the rules and tests of sound thinking and proof by reasoning. . . . 2. Sound reasoning.¹

Medicine is often referred to as both an art and a science. This implies that some of the aspects of our profession cannot be firmly proven by a scientific method. This duality does *not* however imply that aspects of medicine are either illogical or unscientific. Indeed medicine has a long and distinguished history as a stalwart against the unscientific and the illogical. We expect modern medicine to remain faithful to its scientific foundation and its logical roots. We have a right to expect as much from our medical literature.

It is precisely this tenet of modern medicine that forces me to respond to a recent Society and Medicine article in NCMJ (Sabiston DC. The antivivisection movement. 1987;48:653-5).

Attention to the issue of animal experimentation is a logical and worthy interest of medicine. However, irrespective of one's personal view regarding humanely conducted animal research, Dr. Sabiston's comments do not provide "proof" of its necessity, nor is the article an example of "sound reasoning."

In his first paragraph Dr. Sabiston prejudices his case by his choice of adjectives. He sets the stage of an impending threat of "crippling" legislation and cites such luminary sources of "thoughtful" opposition as the *Washington Post* and the *Wall Street Journal*. While both these publications have their areas of expertise they hardly present themselves as examples of reasoned scientific thinking.

Dr. Sabiston then embarks on a short history of the antivivisection movement, adding his own comments to denigrate any thoughtful analysis of the group's evolution. He specifically points to Lord Shardsbury's selection as the first president of the society as being motivated solely by "social prestige" and his "political power." Throughout his criticism, the author never gives even cursory acknowledgment to any moral considerations or rational choices the subject may have considered.

The restrictions placed on animal experimentation by the Cruelty to Animals Act of 1876 are decried because experimenters are required to adhere to "strict protocols." While the author feels this is detrimental, it can easily be

argued that meaningful results from experimentation are only achieved by a well designed, strictly adhered to protocol for the study.

The aside that "all investigators recognize" that frequent changes lead to true research is a glowing example of an "ad populum" logical fallacy. This error recurs when, after extolling the achievements of modern medicine that have followed animal experimentation, the author asks the rhetorical question: "Is it conceivable that an intelligent, informed, conscientious public could believe it ethical to give a human such vaccines without previous testing in animals to assure safety?" This line of argument follows the pattern, "If logical people believe it to be true, it must be true." This error in logical thinking is at least as old as Aristotle, who first codified it.²

Later in the article numerous examples of this same appeal "to the people" are evident in such statements as "To those who are educated and knowledgeable, it is apparent . . ." and "The facts are unmistakable and the reasons self evident . . ." Such obvious errors in logic do not belong in a scientific article and the editors do a disservice to their readership by including them.

Aside from the multitude of technical fallacies that exist within the text of Dr. Sabiston's article, two major errors — "material fallacies" in the formal logical sense — pervade the entire paper.

Dr. Sabiston argues that animal experimentation is necessary and desirable because good results have been obtained and, predictably, will continue to be obtained. Such argumentation takes the form of the end justifying the means and avoids any critical analysis. Could these "good" results be obtained only by the process of animal experimentation? If the 1876 restrictions placed on animal experimentation were extended, would insulin and an effective Polio vaccine still have been developed?

These questions may be unanswerable but questions regarding different routes to the same result are valid. Just as whether the use of animals in studies is done out of necessity or out of habit and convenience.

The second, and most fundamental, of the errors made by the author involves the logical principle of "petitio principii" — begging the question. There is no argument that recognizing the rights of animals would profoundly change the methodology of research, perhaps even restrict the development of new medical advances. None of this however addresses the underlying issue. Do we as humans have the right to inflict uncontrolled pain and suffering on animals for any reason? Is it justifiable if humans benefit from the

studies? Or are there inherent restrictions that should be placed on all experimenters to protect "lower" animals from undue suffering?

Dr. Sabiston gives this main source of contention short shift, relegating it to a cursory single sentence in the next to last paragraph of his article and invoking "... obligations to conduct experiments with appropriate sensitivity ..."

While ignoring the most central arguments, the author feels secure in calling for "... citizens to join in supporting the principle ..." of animal experimentation with no, or minimal, restrictions.

Dr. Sabiston's viewpoint, no matter how eloquently expressed, contains fundamental errors in argumentation and logical thinking. It can hardly be considered either a coherent or a logical argument in favor of animal experimentation. As members of a profession based in science, we have an obligation to remain faithful to our roots. The Journal has failed in this regard by including articles such as Dr. Sabiston's without comment.

Perhaps the time has come when, just as we have statisticians review medical studies, we need to have those versed in logic and semantics review comments in the opinion section of medical journals.

Patrick J. Burke, M.D.
111 Fairview Plaza, Suite 100
5950 Fairview Road
Charlotte 28210

References

- 1 Woolf HB (ed.). The Merriam/Webster Dictionary. New York: Pocket Books, 1974.
- 2 Aristotle. On sophistical refutations. The Works of Aristotle, Vol. 1 translated by WA Pickard-Cambridge. Chicago: Encyclopedia Britannica, Inc., 1984.

From the Editor:

Dr. Burke in his letter suggests that the editor should use persons skilled in logic and semantics to review manuscripts which express opinions rather than factual laboratory-derived data. The editor found this suggestion attractive and asked Dr. David Sanford, Professor of Philosophy at Duke, to comment on the presentations by Dr. Sabiston and Dr. Burke. He writes me as follows, below. Two additional letters commenting on Dr. Sabiston's article have arrived in the meantime from Dr. Blythe and Dr. Greenberg, and they appear below.

Eugene A. Stead, Jr., M.D.

Dr. Sanford's comment on Dr. Sabiston's article and Dr. Burke's letter

To the Editor:

At the request of the editor, I have looked back and forth between "The Antivivisection Movement" by David C. Sabiston, Jr. 1987;48:653-5), and the letter from Patrick J. Burke (above). In this letter that conveys my impressions, I will use "DCS" and "PJB" to refer both to the authors and to their papers.

Just before the end of the article, DCS refers to the "ob-

ligations to conduct experiments with appropriate sensitivity for all animals." Yet some kinds of sensitivity are conspicuously absent from DCS; DCS provides no recognition that the antivivisection movement has a single decent motive or plausible argument. One reason millions of pound animals are killed each year that could be used in laboratory experiments is that many people hold the belief that rather than use a stray dog in a medical experiment, it is more humane for a "Humane Society" to kill a stray dog quickly and painlessly. DCS does not question this belief, attempt to override it, or show how it is misdirected; DCS does not even acknowledge its existence.

Anyone with sympathy for the antivivisection movement has a right to be irritated with DCS for many of the reasons pointed out by PJB — and for additional reasons as well. Yet PJB's emphasis on logical fallacy seems slightly off target. DCS is so obviously convinced of the total correctness of his side that he feels it unnecessary to mention any points on the other side. Few readers, seeing immediately which side DCS is on and seeing absolutely no concession to the other side, will take DCS to be developing logical arguments in accord with impartial reason. DCS never pretends to be impartial; he reveals his position in his opening sentence.

The opening sentence, like many others, is troubling. Does the adjective "crippling" immediately reveal DCS's position, or does it rather serve to formulate a kind of premise from which conclusions may be drawn? The answer is, I think, it does both. The expression of strong opinion and the provision of reasons for holding that opinion are not clearly distinguished in DCS. PJB is quite correct about DCS, I think, that "it can hardly be considered either a coherent or a logical argument in favor of animal experimentation." On the other hand, PJB offers no argument against animal experimentation — not that he claims otherwise.

PJB uses the term "material fallacy," that was introduced in Whatley's *Elements of Logic* (1826) to deal with a distinction drawn in Aristotle's treatise *On Sophistical Refutations*. An argument commits a material fallacy when it contains a premise to which it is not entitled.

Is DCS entitled to the premise that animal experiments are essential to medical progress? A logic textbook entitled *Arguments* by Howard Pospesil contains the following epigraph by Robert Boyle:

Testimony is like an arrow shot from a longbow; the force of it depends on the strength of the hand that draws it. But argument is like an arrow from a cross-bow, which has equal force if drawn by a child or a man.

DCS gives testimony, but no argument, for an important premise. A useful argument one way or the other requires much more than skill at logic. When there are sharp disagreements about the correct answer to a question of the form "What will happen if such-and such?" experience some-

times eventually shows that everyone was wrong. "What will happen to medical research if dogs and cats from the pound are unavailable for medical research?" is a difficult question. Answering it may itself require some experiments (with research programs). Yet disagreements about this and similar questions are behind much of the dispute over use of animals in medicine.

PJB accuses DCS of begging the question: "There is no argument that recognizing the rights of animals would profoundly change the methodology of research, perhaps even restrict the development of new medical advances. None of this however addresses the underlying issue. Do we as humans have the right to inflict uncontrolled pain and suffering on animals for any reason?"

An argument begs the question when a premise is identical to its conclusion. Although DCS does fail to address an underlying issue, he does not beg the question. PJB, on the other hand, might be accused of committing another Aristotelian "material fallacy," the fallacy of many questions. PJB's question presupposes the existence of uncontrolled pain and suffering.

It is difficult to reach agreement on the amount of pain and suffering that animal experimentation involves. And it is difficult to reach agreement on the extent to which animal experimentation is essential to medical research. But even if these two issues could be settled, there would still be, as PJB suggests, the question of balancing the benefit of the research against the evil of the suffering. I lack firm conviction on each of these three issues.

There are difficulties with the reasoning implicit in DCS that PJB does not mention. DCS begins with a discussion of the Mrazek bill concerning pound animals and ends with the same issue. In the same penultimate paragraph that mentions the 5,000,000 pet animals killed each year in pounds, DCS suggests that "Civilization as we know it today, and indeed survival, may be at stake, given, for example, the necessity to control the AIDS crisis." DCS presumably means that survival may depend on animal experimentation in general, but it almost looks as if the survival of civilization may depend on dogs and cats from the pound. DCS does not identify any particular research programs as using dogs or cats. One uses Chinese hamsters; several use primates; several others use "experimental animals" not further identified. If none of these are dogs or cats, none is affected by the Mrazek bill. The Mrazek bill does not attempt to eliminate all animal experimentation; and arguments in favor of animal experimentation, such as they are, need not be arguments against the Mrazek bill.

DCS's quote from Lister reveals, perhaps, how little DCS understands his adversaries. Many of them completely agree with Lister: it is most inconsistent to eat mutton chops, shoot pheasants, and complain about using a guinea pig in medical experiments. These advocates of "animal rights" do not eat mutton chops, or chops or steaks or meaty stews of any

kind; they do not shoot pheasants, or ducks or deer or anything else. They would empty the pens and cages on the farm as quickly as they would empty the cages in the laboratory. One who wishes to attack this variety of antivivisectionist should begin with something other than an accusation of inconsistency.

David H. Sanford, Ph.D.

Dr. Greenberg's comment on Dr. Sabiston's article

To the Editor:

"The Antivivisection Movement: A Threat to Medical Research and Future Progress" (1987;48:653-5), by Dr. David Sabiston, is misleading on numerous points. Dr. Sabiston tries to have the reader associate the end of progress in medical research with passage of bills regulating the use of animals in laboratories. Throughout the article he uses blanket opposition and fear-engendering tactics against much-needed reform in the use of animals in research. In opposing such legislation, he even states: "Civilization as we know it today, and indeed survival, may be at stake . . ."

The Mrazek bill to prevent the use of pound animals for research sponsored by the National Institutes of Health has the support of numerous scientists, physicians, local animal control authorities, and members of Congress (over 60 congressional representatives have already become co-sponsors). The Sabiston article opposes this bill on the grounds that the cost of research would greatly increase if pound animals could not be used. The reasoning behind that statement will not benefit science, and represents poor economics and a bad public policy.

Because the background and health of pound animals are unknown, these animals are frequently inappropriate for research that attempts to predict results in humans. His reference to a few major successes of medical research does not erase the numerous examples where extrapolation from results in animals has proven incorrect. (Incidentally, the polio vaccine development that Dr. Sabiston describes was achieved not by the use of animals, but through the technique of cell culture of viruses, for which a Nobel Prize was awarded.)

The use of pound animals instead of animals bred specifically for research may well be ultimately more expensive. Pound animals harbor diseases and require expensive quarantine periods. Many die before they can be used. To quote a National Institutes of Health publication, "In addition to altering experimental results, the use of pound dogs may also increase research costs, in spite of the initial low cost of the dog . . . the cost of the dogs is a minor part of the total expense, yet the untimely death of each subject dog escalates the overall cost of experimentation" (NIH publication 72-333).

Use of pound animals is bad policy because the public looks upon shelters and pounds as places where unwanted pets or homeless animals can be brought and adopted or humanely euthanized. Surveys have shown that people would not bring animals to shelters if they thought those animals

were to be used in research. In communities without shelters, animals are often abandoned to inevitably die in great suffering. The public's preference for a humane death for homeless and abandoned animals instead of use in research is justified. Dr. Sabiston uses faulty reasoning when he argues that they would nevertheless be killed in pounds. It ignores the realities documented in a recent study of 52 randomly selected research reports. The median length of experiments was ten days (the range extending to 5.5 years); 32% lasted over one month. Sixty-six percent of experiments involved significant pain or discomfort. (Eckstein RA. Use of mongrel dogs in biomedical research. Physicians Committee for Responsible Medicine, Washington, D.C., 1987.)

Although Dr. Sabiston maintains that "all investigators should be constantly aware of their obligation to conduct experiments with appropriate sensitivity for all animals," the documented exposés of animal abuse even in laboratories of major universities speak to the need for support of legislation and regulations that attempt to guarantee humane standards of care for laboratory animals.

The important issue is not "antivivisection" versus "medical research and progress," but progress in promoting human health together with a commitment to preventing or reducing the suffering of all living beings.

Robert A. Greenberg, M.D.
214 Moonridge Road
Chapel Hill 27516

Dr. Blythe's comment on Dr. Sabiston's article

To the Editor:

I write to thank Dr. Sabiston for writing — and you for publishing — "The Antivivisection Movement: A Threat to Medical Research and Future Progress" (1987;48: 653-5).

Although one might disagree with some of what I consider minor points, I believe that the crux of the matter is stated in the last paragraph of the article, "The issue is an exceedingly crucial one, and there is compelling need for responsible citizens to join in supporting the principle of animal research in the prevention and treatment of disease for the betterment of all humankind."

William B. Blythe, M.D.
Department of Medicine
University of North Carolina
Chapel Hill 27514

Dr. Sabiston's reply

To the Editor:

The letters concerning the commentary on "The Antivivisection Movement: A Threat to Medical Research and Future Progress" have been reviewed. The author found them interesting and recognizes the right of readers to hold differing opinions on this issue. It is of interest that an editorial on this subject has just been published in a widely circulated journal (Animals in Research, JAMA, 259:2007,

1988) which begins, "This commentary is an appeal to American physicians and scientists to assume a primary role in defending the use of animals for biomedical research." This was the intent which stimulated preparation of the paper for the *North Carolina Medical Journal*. While unclaimed animals in pounds which would otherwise be destroyed is an important issue in itself, the subject actually involves the use of *all* types of animals in medical research. This point is also stressed in the current JAMA article which emphasizes the views of the late Walter B. Cannon of the Harvard Medical School and one of the most outstanding physiologists of this century. Cannon said: "The only persons who are in a strong strategic position to defend research and preserve it to that freedom which is necessary for the unrestricted advance of our knowledge of disease and its control, are you, the practicing physicians and surgeons. You are in a position, through your special training, to speak with authority concerning the benefits derived from animal experimentation, for you are employing information thus derived in the daily treatment of the sick. You are also in a position to know the methods employed in medical laboratories to advance our knowledge of disease." In his letter, Dr. Blythe speaks directly to this point when he emphasizes "... the crux of the matter is stated in the last paragraph of the article: 'The issue is an exceedingly crucial one, and there is a compelling need for responsible citizens to join in supporting the principle of animal research in the prevention and treatment of disease for the betterment of all humankind.'"

David C. Sabiston Jr., M.D.
Chairman, Department of Surgery
Duke University Medical Center
Durham 27710

Thanks for the tribute to Dr. Baylin

To the Editor:

I want to congratulate you and the Journal on your tribute to George Baylin (1988;49:163-7), who was truly one of the outstanding teachers that I had an opportunity to encounter during the nine years that I spent in the Duke University medical environment as a student and as an intern and resident.

I, like many others, did not really appreciate all of the information that George passed on to us from the black and white pictures. Perhaps most important was the correlation with the clinical information and its correlation with what we were seeing on the black and white images.

There is no question that George knew more about the temporal bone from the plain radiographs than most people can tell you today from thin-slice CT scan of the temporal bone. Indeed, George is one of a kind and I congratulate you on paying tribute to such a remarkable man.

Simmons I. Patrick, M.D.
Kinston Radiological Associates, P.A.
Doctors Drive
Kinston 28501

More letters, p. 281

**The benefit of antianginal
protection plus safety...**



CARDIZEM®
diltiazem HCl/Marion

A FULLER LIFE

A remarkable safety profile^{1,6}

The low incidence of side effects with Cardizem allows patients to feel better.

Protection against angina attacks^{1,5,7-9}

The predictable efficacy of Cardizem in stable exertional* and vasospastic angina allows patients to do more.

A decrease in myocardial oxygen demand

Resulting from a lowered heart rate-blood pressure product.⁵

Compatible with other antianginals⁶⁺

Safe in angina with coexisting hypertension, COPD, asthma, or PVD^{1,3,5,6}

*CARDIZEM® (diltiazem HCl) is indicated in the treatment of angina pectoris due to coronary artery spasm and in the management of chronic stable angina (classic effort-associated angina) in patients who cannot tolerate therapy with beta-blockers and/or nitrates or who remain symptomatic despite adequate doses of these agents.

¹See Warnings and Precautions.

Please see brief summary of prescribing information on the next page.

60 mg
90/120 mg
**GREATER
DOSAGE
FLEXIBILITY**



CARDIZEM[®] ANTIANGINAL PROTECTION diltiazem HCl/Marion PLUS SAFETY

Usual maintenance dosage range: 180-360 mg/day

BRIEF SUMMARY

Professional Use Information

CARDIZEM[®]

(diltiazem HCl)

30 mg, 60 mg, 90 mg, and 120 mg Tablets

CONTRAINDICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, (3) patients with hypotension (less than 90 mm Hg systolic), and (4) patients who have demonstrated hypersensitivity to the drug.

WARNINGS

- Cardiac Conduction.** CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1,243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.
- Congestive Heart Failure.** Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt). Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
- Hypotension.** Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.
- Acute Hepatic Injury.** In rare instances, significant elevations in enzymes such as alkaline phosphatase, LDH, SGOT, SGPT, and other phenomena consistent with acute hepatic injury have been noted. These reactions have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in most cases, but probable in some. (See PRECAUTIONS.)

PRECAUTIONS

General. CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.

Dermatologic events (see ADVERSE REACTIONS section) may be transient and may disappear despite continued use of CARDIZEM. However, skin eruptions progressing to erythema multiforme and/or exfoliative dermatitis have also been infrequently reported. Should a dermatologic reaction persist, the drug should be discontinued.

Drug Interaction. Due to the potential for additive effects, caution and careful titration are warranted in patients receiving CARDIZEM concomitantly with any agents known to affect cardiac contractility and/or conduction. (See WARNINGS.)

Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)

As with all drugs, care should be exercised when treating patients with multiple medications. CARDIZEM undergoes bio-

transformation by cytochrome P-450 mixed function oxidase. Coadministration of CARDIZEM with other agents which follow the same route of biotransformation may result in the competitive inhibition of metabolism. Dosages of similarly metabolized drugs, particularly those of low therapeutic ratio or in patients with renal and/or hepatic impairment, may require adjustment when starting or stopping concomitantly administered CARDIZEM to maintain optimum therapeutic blood levels.

Beta-blockers: Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities.

Administration of CARDIZEM (diltiazem hydrochloride) concomitantly with propranolol in five normal volunteers resulted in increased propranolol levels in all subjects and bioavailability of propranolol was increased approximately 50%. If combination therapy is initiated or withdrawn in conjunction with propranolol, an adjustment in the propranolol dose may be warranted. (See WARNINGS.)

Cimetidine: A study in six healthy volunteers has shown a significant increase in peak diltiazem plasma levels (58%) and area-under-the-curve (53%) after a one-week course of cimetidine at 1,200 mg per day and diltiazem 60 mg per day. Ranitidine produced smaller, nonsignificant increases. The effect may be mediated by cimetidine's known inhibition of hepatic cytochrome P-450, the enzyme system probably responsible for the first-pass metabolism of diltiazem. Patients currently receiving diltiazem therapy should be carefully monitored for a change in pharmacological effect when initiating and discontinuing therapy with cimetidine. An adjustment in the diltiazem dose may be warranted.

Digitalis: Administration of CARDIZEM with digoxin in 24 healthy male subjects increased plasma digoxin concentrations approximately 20%. Another investigator found no increase in digoxin levels in 12 patients with coronary artery disease. Since there have been conflicting results regarding the effect of digoxin levels, it is recommended that digoxin levels be monitored when initiating, adjusting, and discontinuing CARDIZEM therapy to avoid possible over- or under-digitalization. (See WARNINGS.)

Carcinogenesis, Mutagenesis, Impairment of Fertility. A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in *in vitro* bacterial tests. No intrinsic effect on fertility was observed in rats.

Pregnancy. Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater

R_x

*Cardizem[®]
(diltiazem HCl)*

☐ 60 mg ☐ 90 mg

☐ 120 mg

Sig: tid

than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences as well as their frequency of presentation are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%). In addition, the following events were reported infrequently (less than 1%):

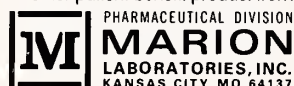
Cardiovascular:	Angina, arrhythmia, AV block (first degree), AV block (second or third degree—see conduction warning), bradycardia, congestive heart failure, flushing, hypotension, palpitations, syncope.
Nervous System:	Amnesia, depression, gait abnormality, hallucinations, insomnia, nervousness, paresthesia, personality change, somnolence, tinnitus, tremor.
Gastrointestinal:	Anorexia, constipation, diarrhea, dysgeusia, dyspepsia, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase.
Dermatologic:	Petechiae, pruritus, photosensitivity, urticaria.
Other:	Amblyopia, CPK elevation, dyspnea, epistaxis, eye irritation, hyperglycemia, nasal congestion, nocturia, osteoarticular pain, polyuria, sexual difficulties.

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established. Issued 6/87

See complete Professional Use Information before prescribing.

References: 1. Schroeder JS: *Mod Med* 1982;50(Sept):94-116. 2. Cohn PF, Brounwald E: Chronic ischemic heart disease, in Brounwald E (ed): *Heart Disease: A Textbook of Cardiovascular Medicine*, ed 2. Philadelphia, WB Saunders Co, 1984, chap 39. 3. O'Rourke RA: *Am J Cardiol* 1985;56:34H-40H. 4. McCall D, Walsh RA, Frohlich ED, et al: *Curr Probl Cardiol* 1985;10(8):6-80. 5. Frishman WH, Chorlop S, Goldberger J, et al: *Am J Cardiol* 1985;56:41H-46H. 6. Shopiro W: *Consultant* 1984;24(Dec):150-159. 7. O'Horo MJ, Khurmi NS, Bowles MJ, et al: *Am J Cardiol* 1984;54:477-481. 8. Strouss WE, McIntyre KM, Ponsi AF, et al: *Am J Cardiol* 1982;49:560-566. 9. Feldman RL, Pepine CJ, Whittle J, et al: *Am J Cardiol* 1982;49:554-559.

Another patient benefit product from



More praise for Dr. Anderson's editorial

To Dr. Anderson:

I enjoyed your editorial in the *North Carolina Medical Journal* (49:105; see letters, 49:225-6). There is a quote I heard a number of years ago you might use on another occasion. "One man's signal is another man's noise."

Andrew G. Wallace, M.D.
Vice President for Health Affairs
Duke University Medical Center
P.O. Box 3708
Durham 27710

Thanks from two authors

To the Managing Editor:

Thank you for your thoughtfulness in sending me the February copy of *North Carolina Medical Journal* containing my article on the Osler Tradition at Duke (1988;49:91-6).

I am very pleased with the way it came out. The unusual, if not unique, placement in the center on a different type of paper makes it very easy to remove and save as one would with a reprint. It also signals that the article is different from the scientific and clinical pieces. I had not seen a copy of the journal for many years. This new format is a decided improvement over those I remember during my years at Duke and Bowman Gray in the 30s, 40s and early 50s.

George T. Harrell, M.D.
2010 Eastridge Road
Timonium, MD 21093

To the Managing Editor:

I am very pleased at how the article looks in print (What does it take to stop smoking? 1988;49:145-50), and I appreciate the obvious care with which you edited it.

I thoroughly enjoyed working with you on this project, and hope there may be opportunities to do so again in the future. I will certainly keep you in mind if any paper topics present themselves which would be suitable for the NCMJ.

Steve Herman, Ph.D.
Department of Psychiatry
Division of Medical Psychology
Duke University Medical Center
Durham 27710

Dr. Dykers's reply to Dr. Chaplin's letter:

Thank you so much for the trouble you have taken to read and criticize my article (Dykers JR. AIDS: discrimination and justice. NCMJ 1987;48:661-3; and Chaplin DC, letter to the Editor, NCMJ 1988;49:171). Obviously if you assume that testing is inaccurate, your criticisms are well founded. My assumptions are based on the actual experience of the army as reported to me by Drs. Redfield and Burke at the National Conference on HIV in November 1987, in Washington. They are quite aware that their experience

clashes with the report of the Office of Technology Assessment.

I agree that physicians *should* treat HIV positive persons. I don't think there is any way that anyone can say one *must* and enforce it. But I have no quarrel with the strong languages indicating a societal expectation.

Again, thank you for your thoughtful considerations.

John R. Dykers, Jr., M.D.
P.O. Box 565
Siler City 27344

The Board of Medical Examiners explained

To the Editor:

The NC Board of Medical Examiners is appointed by the Governor of North Carolina under Statute 90-2. Eight individuals are appointed by the Governor; one of these individuals is a public member with no previous connection with the medical profession.

Appointment is for three years, renewable one time: the board elects its own officers.

The statute states, "The Board of Medical Examiners shall assemble once in every year in the city of Raleigh, and shall remain in session from day to day until all applicants who may present themselves for examination within the first two days of this meeting have been examined and disposed of; other meetings in each year may be held at some suitable point in the State if deemed advisable."

In fact, the Board regularly meets seven times a year, not always but usually in Raleigh, and the meetings last from four to five days. The Board consists of physicians who are appointed by the Governor, can be nominated by the NC Medical Society, and those who serve are those who are willing to serve when appointed.

The expenditure of time is great, and it is difficult for those in solo practice and positions demanding day-to-day clinical activities to serve on the Board.

The members of the Board are not represented as specialists in any category and neither are physicians in this state or any other state licensed as specialists. The members of the Board feel they represent all of medicine, and in point of fact are dealing with standards of care and the management of patients. Whenever a problem of expertise arises outside the realm of any member of the Board, consultation is readily available.

The NC Board of Medical Examiners is well served by its executive secretary and by an adequate staff in Raleigh, North Carolina.

All new licensees are personally interviewed by members of the Board on an individual basis or by the entire Board when there are any questions regarding licensure.

Physicians licensed in North Carolina must register with the Board during the month of January every even-numbered year.

The funds for the activities of the Board come from applications for licenses and from registration fees. The Board employs four investigators, one of whom is an attorney,

and at least one of whom is a woman. These skilled investigators investigate any problems coming to the Board requiring investigation and report to the Board for its decision.

A number of informal interviews are held at each meeting where problems can be discussed and resolved without public or lengthy formal proceedings.

A number of formal hearings are held according to North Carolina general statutes. NC General Statute 90-14 (a) (1-13) outline the acts, conduct, or reasons to permit the Board to deny, annul, suspend or revoke a license to practice medicine in the State of North Carolina.

The Board of Medical Examiners has access to the computerized file of the American Medical Association and the Federation of State Medical Boards which alerts the Board to any revocation or suspension of license in any other state. Hospitals are required to report physicians whose privileges have been revoked, suspended or limited or resignations. Liability insurance companies must also report any award of damages or settlement of a suit or any cancellation or non-renewal of liability coverage.

The NC Board of Medical Examiners functions with counsel present throughout all the deliberations of the Board involving any legal matters, and any consent order, charges, or revocations of licenses are formally made for the Board by such counsel.

Due process for all individuals coming before the Board is strictly observed. Any decision of the Board shall be subject to judicial review in Superior Court of Wake County.

Eben Alexander, Jr., M.D.
Chairman, Board of Medical Examiners
Bowman Gray School of Medicine
Wake Forest University
Winston-Salem 27103

Dr. Mack's reply to Dr. Smeraski:

I am pleased that anyone reads my writings; I am especially pleased that anyone reads them as carefully as Dr. Smeraski does. He is absolutely correct of course. Re-evaluation of the current literature^{1,2} finds that several authors believe that a disulfiram-like reaction can occur when ethanol and metronidazole are co-ingested *possibly* by inhibition of the enzyme aldehyde dehydrogenase, not alcohol dehydrogenase. The laboratory evidence for this is soft, and animal studies have not substantiated this claim. Furthermore, some studies do not confirm this adverse drug interaction in human subjects either. I do not feel qualified to answer the question concerning enzyme inhibition of dopamine (beta)-hydroxylase, but Dr. Smeraski's explanation makes sense to me.

Thanks to Dr. Smeraski for keeping me honest. I know that I will never mix Flagyl with Chianti again when I am writing an article.

Ronald B. Mack, M.D.
Bowman Gray School of Medicine
Wake Forest University
Winston-Salem 27103

References

- 1 Ellen MJ, Barceloux DG. Medical toxicology. New York; Elsevier, 1988, p.784.
- 2 Poisindex, Micromedex Inc., Metronizadole, Vol. 56.

A comment on Dr. Mack's article

To the Editor:

Being a psychiatrist with an interest in substance abuse, pharmacology, and drug interactions, I tend to gravitate toward "Toxic Encounters." In the article, "A Trollope Is Not Necessarily a Ho-Ho," by Ronald B. Mack, M.D. 1988;49:133-5), it is erroneously stated that the co-ingestion of ethanol and metronidazole can result in a disulfiram-like reaction due to inhibition of the enzyme alcohol dehydrogenase. In fact, the enzyme that can be inhibited is hepatic aldehyde — NAD oxidoreductase (A.K.A. acetaldehyde dehydrogenase). Further, I wondered if the psychic and central nervous system effects associated with metronidazole overdose were a result of enzyme inhibition of dopamine (beta)-hydroxylase, an enzyme also inhibited by disulfiram?

Philip J. Smeraski, M.D.
East Carolina School of Medicine
Department of Psychiatric Medicine
Greenville 27858-4354

NCMJ Classified Ads . . .

Send your ad to:

**Managing Editor
Box 3910
Duke University Medical Center
Durham 27710**

Please specify the number of issues in which you'd like it to appear. Include your name, address, and phone number.

Closing date is the 25th of the second prior month. For cost and billing information, call 919/684-5728.

Continuing Medical Education

Please note: The Continuing Medical Education Programs at Bowman Gray, Duke (DUMC), East Carolina (ECU) and UNC Schools of Medicine, and Dorothea Dix are accredited by the American Medical Association. Therefore CME programs sponsored or cosponsored by these schools automatically qualify for AMA Category I credit toward the AMA's Physician Recognition Award, and for North Carolina Medical Society Category A credit. Where AAFP credit has been obtained, this also is indicated.

May 20

Fifth Annual Eye Conference: Corneal and External Diseases

Place: Winston-Salem

Credit: 9 hours Category I AMA

Info: Sally Hudson Gulley, Div. of CME, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4450

May 20-21

17th Annual Pediatric Pulmonary/GI Program

Place: Durham

Fee: \$90

Info: Dr. Alexander Spock, Duke University Medical Center, Box 2994, Durham 27710. 919/681-3364

June 4-5

Women Physicians Meeting

Place: Asheboro

Credit: 4.5 hours AAFP

Info: Lois Voelker, Meeting Coordinator, NCAFP, P.O. Box 18469, Raleigh 27619. 919/781-6467

June 13-17

Diagnostic Ultrasound (Obstetrics)

Place: Winston-Salem

Info: Registrar, Ultrasound Center, Bowman Gray School of Medicine, 300 S. Hawthorne Rd., Winston-Salem 27103. 919/748-4505

June 16-18

1988 Mountaintop Medical Assembly

Place: Waynesville

Info: R. Stuart Roberson, M.D., Director, Mountaintop Medical Assembly, 305 Grimball Dr., Hazelwood, NC 28738. 704/456-3662

June 20-24

Diagnostic Ultrasound (General)

(See June 13-17 for information)

July 1-3

18th Annual Sports Medicine Symposium

Place: Wrightsville Beach

Info: W. Alan Skipper, NCMS, P.O. Box 27167, Raleigh 27611. 919/833-3836; 800/722-1350 (NC only)

July 24-29

Southern OB-GYN Seminar

Place: Asheville

Info: W. Otis Duck, M.D., Box 729 Mars Hill, NC. 704/689-2411

New Members

Alexander Mellon Eaton, 17 E. 89th St. New York, NY 10128
Joseph Francis Zastrow, 6606 Point Comfort Ln., Pineville 28134

Buncombe

David Allen Brown (A), 390 S. French Broad Ave., Asheville 28801

Edward Kenneth Isbey, III (OPH), 495 Biltmore Ave., Asheville 28801

Durham-Orange

Wayne Eugene Cascio (CD), CB 7075, Burnett-Womack Bldg., UNC, Div. of Cardiology, Chapel Hill 27599

Mark Christopher Chandler (RESIDENT), N.C. Memorial Hospital, Chapel Hill 27514

Larry Van-Thomas Crisco (STUDENT), 1210 Roosevelt Dr., Chapel Hill 27514

Lisa Tiffany Degnore (RESIDENT), 432 Fearrington Post, Pittsboro 27312

Edward Franklin Eisenberg (RESIDENT), 600 Duluth St. Durham 27705

Ronald Jonathan Falk (NEP), 3034 Old Clinic Bldg./NEP, UNC School of Medicine, Chapel Hill 27599

Jeffrey James Fassero (RESIDENT), 8 Pedestal Rock Lane, Durham 27712

Marc David Feldman (RESIDENT), 1315 Moreene Rd., Apt. 21E, Durham 27705

Mary Lee Howell (RESIDENT), 3037 Carver St., Apt. A-9, Durham 27705

Andrew Jon Kaplan (RESIDENT), 14 Westridge Dr., Durham 27713

Christian James Lambertsen, Jr., (FP), PO Box 12833, 22 Park Plaza, Research Triangle Park 27709

Terri Regina Martin (STUDENT), 331 W. Rosemary St., #21, Chapel Hill 27514

Chapman Teague McQueen (STUDENT), Apt. 885 Old Well Apts., Carrboro 27510

Michael John Miller (RESIDENT), Box 31040, DUMC, Durham 27710

John Franklin Murchison (OPH), Box 3802, DUMC, Durham 27710

Wanda Kay Nicholson (STUDENT), 647 Craige Dorm, UNC, Chapel Hill 27514

Virginia W. Pact (N), Henderson Neurology Ctr., Maria Parham Hospital, Henderson 27536

Neil Stuart Roth (STUDENT), Box 2817, DUMC, Durham 27710

Margaret Lynn Smiley (IM), CB #7030 Burnett-Womack, UNC, Dept. of Medicine, Chapel Hill 27514

Anil Kumar Sood (STUDENT), 7E, Estes Park Apts., Carrboro 27510

Joel Tepper (ON), NC Memorial Hospital, Radiation Onc., APCF, Chapel Hill 27514

Gilbert Rivers Upchurch, Jr., (STUDENT), 103 Goldston Dr., Carrboro 27510

Mark Edward Williams (IM), 5039 Old Clinic Bldg., 226H, UNC, School of Medicine, CB #7110, Chapel Hill 27599

Margaret Henry Woodbury (STUDENT), 4-A Briarbridge Ln., Chapel Hill 27514

Forsyth-Stokes-Davie

Lisa Marie Calderone (STUDENT), 3421 Old Vineyard Rd., #C41, Winston-Salem 27103

Gordon Charles Kammire (RESIDENT), Rt. #12, Box 934, Lexington 27292

Walter Joseph Linz (STUDENT), 1944 Hinshaw Ave., Apt. 3A, Winston-Salem 27104

Lisa Dawn Miller (STUDENT), 1715 Elizabeth Ave., Winston-Salem 27103

Richard William Prensner, Jr. (STUDENT), 3141 Burkemill Ct., Winston-Salem 27103

Dan Neil Richardson (RESIDENT), 618 Knollwood St., Winston-Salem 27103

Sharon Roberta Smith-Cook (STUDENT), 312-10 Linville Ridge Ct., Winston-Salem 27101

Gaston

Daniel Timothy Cotter (AN), 2122 Shannon Dr., Gastonia 28054

High Point

Allen Gafford Jones (IM), 624 Quaker Ln., Ste, 2076, High Point 27262

Richard L. Orr, Jr., 624 Quaker Ln., Ste 205-A, High Point 27262

Henderson

Lloyd Raymond Gibson (ORS), 20 Hospital Dr., Brevard 28712

David Randall Williams (U), 512 6th Ave. West, Hendersonville 28739

Johnston

Siamak Marzbani (OBG), 601-A N. Eighth St., Smithfield 27577

Lee

Olson Parrott, II (OBG), 1832 Doctors Dr., Sanford 27330

Mecklenburg

James Francis Alderman (PD), 101 W.T. Harris Blvd., #201C, Charlotte 28213

Terry Lee Benson (FP), 2315 Rama Road, Charlotte 28212

David Andrew Dowdy (CD), 6720 Ciscayne Place, Charlotte 28211

William Helmsley Merwin, Jr. (OTO), 1350 S. Kings Dr., Charlotte 28207

Miriam Eunice Ridley (OPH), 1416 E. Morehead St., #300, Charlotte 28204

Jerry Ewing Squires (PTH), PO Box 36507, 2425 Park Rd., Charlotte 28236

Moore

Stephan Faine Strasser (DR), PO Box 638, Southern Pines 28387

Nash

Jimmie Ray Crow (GS), 1041 Noell Ln., Rocky Mount 27804

Pasquotank-Camden-Currituck-Dare

William Lee Mossburg (GS), 2131 Rivershore Rd., Elizabeth City 27909

Pitt

Louis John Dolinar (P), ECU School of Medicine, Dept. of Psychiatry, Greenville 27858

Gregory Scott McCarty (STUDENT), 2693 Mulberry Lane, Arlington Square Apts., Greenville 27858

John Emanuel Poulos (STUDENT), 1306-B E. 14th St., Greenville 27834

Randolph

Robert James Risner (OBG), 127 McArthur St., Asheboro 27203

Robeson

Glenn Paul Hittel (FP), 4112 Vann Dr., Lumberton 28358

Sampson

Carl Henry Jones, III, (FP), 403 Fairview St., Clinton 28328

Scotland

Jeffrey Alan Moore (PUD), Rt. #6, Box 94, Blue's Farm Rd., Laurinburg 28352

Vance

Steven Henry Dennis (OTO), Vance Medical Arts Bldg., Henderson 27536

Wake

Philip Douglas Burton (FP), 802 S. Main St., Wake Forest 27587

Juan Luis Granados (OBG), 3000 New Bern Ave., Raleigh 27610

Terrance Patrick Murphy (PD), 516 Ridgecrest Rd., Cary 27511

Kenneth J. Rich (NS), 3320 Wake Forest Rd., Ste., 410, Raleigh 27609

Malcolm David Rosenson (ID), 1212 Cedarhurst Dr., Raleigh 27612

Watauga

Daniel Paul Krontz (OPH), 200 Doctor's Dr., Boone 28607

AUTHORS

INSTRUCTIONS FOR SUBMITTING PAPERS

Copyright of an article published in the *North Carolina Medical Journal* is retained by the author, but the copyright to each entire issue is the property of The North Carolina Medical Society, and permission to reprint all or any part of a published article must be negotiated with the author and the editor jointly. The reprinted material must carry a credit line signifying that it appeared in the *North Carolina Medical Journal*.

Medical articles, editorials, patient oriented articles, letters to the editor and all other text submitted for publication must be double-spaced throughout, including references and legends. The material should be typed on one side of the paper with 1¼ inch margins all around. Do not use an all-caps or a script typeface. Submit one original and one copy. Please be sure to include your phone number.

The author is responsible for the accuracy of all statements and references. Acronyms and other abbreviations should be kept to a minimum; *any acronym used should be fully translated in the text*. Refer to pharmaceutical products by their generic names; brand names may follow in parentheses. Units of measure should appear in the metric system. References, typed double-spaced, should be listed in the order of their citation in the text, not alphabetically. They should follow the style used in the *Journal*.

Illustrations should be black and white glossy prints or color or black and white slides, with legends typed in double-space on a separate sheet of paper. Since the *Journal* has a limited budget for color, it may be a factor in publishing color illustrations.

Attach to the two copies of the manuscript a cover letter giving the address and telephone number of the person who will correspond about it, and address the completed communication to the Editor, Box 3910, Duke University Medical Center, Durham, NC 27710.

All manuscripts are subject to editorial changes. If extensive revision is necessary, the author may be sent a draft of the edited article for approval before publication. The author will be sent galley proofs if the paper is published.

Authors interested in more effective writing may find *The Elements of Style* by Strunk and White and *How to Write and Publish a Scientific Paper* by Day helpful.

Extracted, with permission, from *Virginia Medical* with thanks.

Classified Ads

CONSIDER the cost-effective potential of adding a physician assistant to your practice. The North Carolina Academy of Physician Assistants will help you advertise to a large pool of qualified PAs at no cost to you. For information on how you can advertise your PA employment opportunity, contact: Bob Franks, PA-C, NCAPA Employment Chairman, 206 Camelia Dr., Goldsboro 27530. 919/731-3225 (work); 919/734-4657 (home).

FAMILY PRACTITIONER to join four man Family Practice group in Southern Piedmont area, 20 miles south of Charlotte, NC. 160 bed community hospital. New office with full lab and x-ray facilities. Please contact William Deskins, M.D. or Paul Kitchin, M.D. at Monroe Family Medical Center, P.A., 1420 E. Franklin St., Monroe, NC 28110. 704/289-8427.

PRACTICE SALES, mergers, equity associateships, or appraisals from the nation's oldest practice transition firm. Aftco Associates, Charlotte, P.O. Box 4126, Rock Hill SC 29731. 803/329-9655.

FAMILY PHYSICIAN BC/BE needed to replace retiring member of four physician F.P. group. OB optional. Available 7-88 or after. Pine Ridge Family Practice, PA. 147 Columbine Drive, Winston-Salem 27106.

GENERAL INTERNIST desired to replace retiring member of four physician F.P. group. Busy general adult medicine practice. Pine Ridge Family Practice, P.A. 147 Columbine Dr., Winston Salem, NC 919/722-9535.

RADIOLOGIST: Nice, small, well located North Carolina town. Join active hospital based, service oriented practice. General DX, NM, US, CT — future arteriography. Reply with C.V. to: code 60, NCMJ, Box 3910, DUMC, Durham 27710.

INTERNIST to join established multi-specialty group. Cardiology experience preferred. Practice is based in scenic, waterfront community; hospital with three nursing homes. Near Norfolk, VA. Competitive salary/benefits. Send CV to: Box 429, Edenton, NC 27932.

NORTH CAROLINA: Attending faculty position available July 1, 1988 at the assistant professor level or more, in tenure track, depending upon candidate's qualifications. Emergency medicine residency training or board preparation preferred. Emergency department has fully autonomous academic departmental status. Emergency medicine residency began July 1983. Hospital designated as Level I regional trauma center. Helicopter service began April 1985. Compensation competitive, plus excellent fringe benefits. Please contact E. Jackson Allison, Jr., MD/MPH, FA-

CEP, Professor and Chairman, Department of Emergency Medicine, East Carolina University School of Medicine, Pitt County Memorial Hospital, Greenville, NC 27858-4354; or call 919/551-4757. Federal law requires proper documentation of identity and employability prior to final consideration for this position. East Carolina University is an Equal Opportunity/Affirmative Action Employer.

URGENT CARE PHYSICIANS needed to staff several free-standing acute care facilities to open soon in Central and Western NC. attractive salary, benefit, and incentive package with flexible scheduling. BC/BE in IM, FP, EM, or previous urgent care experience required. Send CV in confidence to: Attention R. Reavis, M.D., Physician Recruitment, Southeastern Health Services, P.O. Box 2952, Burlington, NC 27215.

FAMILY PHYSICIAN (BC/BE preferred) to join two doctor team. Spacious office, X-ray and lab facilities. Fifty bed hospital seven miles away. Near Benson, Campbell University, and junctions of I-95 and I-40. Thirty miles from Raleigh and Fayetteville. Excellent growth potential. Contact Donald Moore, 919/897-6423.

GENERAL INTERNIST with general or subspecialty interest wanted to join group of three in Winston-Salem, North Carolina. Practice largely fee for service oriented. Please send qualifications to Code 55, NCMJ, Box 3910 DUMC, Durham 27710.

HICKORY — Board cert./elig. child and adolescent psychiatrist. Position available immediately and/or July 1989, to join one child/general psychiatrist in a rapidly expanding multidisciplinary (psychologists, social worker, physician's assistants, educators, and nurses) private practice. Excellent inpatient and outpatient potential. Send vitae to Philip J. Schmitt, M.D., Piedmont Treatment Center, PO Box 9149, Hickory, NC 28603.

OBSTETRICIAN/GYNECOLOGIST B/E, B/C - for 15 physician multispecialty group located in beautiful Piedmont area of North Carolina. Present B/C doctors have busy practice and desire to share work load with a congenial, supportive and professional associate who desires time for a personal life. Group practice is in close proximity of two hospitals. In-house Lab, X-ray, Stress lab and Echo. Association leads to equal shareholdership in one to two years. Full benefit package, guaranteed salary and professional management. Send CV to: Administrator, Statesville Medical Group, P.O. Box 1460, Statesville, NC 28677, or call 704/878-2011.

BUSINESS MANAGER: Local Executive of a nation-

wide company seeks Business Manager position for the medium to large practice in the Triangle area. Qualifications include an advanced degree in a medically related discipline, extensive experience with computers and management tools, knowledge of procedural and diagnostic codes for third party billing, business negotiations and investment analysis, as well as personnel management. Available one month after employment agreement is reached. Interested parties should respond in complete confidence to: Business Manager, P.O. Box 13761, RTP, NC 27709-3761.

MEDICAL POSITION available in family practice consisting of two well equipped, well staffed offices, hospital and nursing home practice located in High Point and Kernersville, North Carolina. Practice ideally located in Central Piedmont, North Carolina close to all major cities and medical schools. New modern hospital with all facilities and specialties represented. Good call schedule, immediate income, professional corporation with good benefits. Call or write Samuel T. Bickley, M.D., P.A., 204 Boulevard, High Point 27260, 919/883-0912; or 133 South Main St., Kernersville 27284, 919/993-3838.

OPPORTUNITIES available in the following medical specialties: Family Practice, ENT, Anesthesiologist, Radiologist, Orthopedic Surgeon, Internal Medicine (pulmonary and non-invasive cardiology), OB/GYN. Rapidly expanding medical community with progressive new hospital. Located in beautiful Western North Carolina in close proximity to ski and golf resorts and other outdoor activities. Excellent recruitment package. Please send CV to Les A. Donahue, Administrator, The McDowell Hospital, P.O.Box 730, Marion, NC 28752, 704/652-6688.

OWNER MUST SELL — will take loss, magnificent newly built tri-level four-bedroom, four-bathroom, garage, gazebo dining room area, fireplace. Completely furnished with linens, drapes, wood floors, dining and cooking utensils. Located on 1.5 acres at Fairfield Mountain, Lakelure, NC. Two 18-hole golf courses, clubhouse, 26 mile lake, boating, fishing, health club, tennis courts, three pools, gourmet restaurants on premises and area. Call collect, Helen Kittay, 1-800/327-4287.

UROLOGIST — needed for private practice in progressive community in Mooresville, NC. Near beautiful Lake Norman. Guaranteed income plus benefits. Please send CV to Richard Blackburn, Executive Director, Lake Norman Regional Medical Center, PO Box 360, Mooresville, 28115. 704/663-1113.

PSYCHIATRIST — needed for inpatient medical director and solo practice, 30 minutes north of Charlotte, NC. Near beautiful Lake Norman. Excellent financial package. Please send CV to Richard Blackburn, Executive Director, Lake Norman Re-

gional medical Center, PO Box 360, Mooresville 28115. 704/663-1113

PRIMARY CARE physicians — coastal areas. We are a subsidiary of Coastal Group, Inc. and we are adding contracts to provide primary medical care for military beneficiaries. We therefore need physicians who are residency trained in IM, FP, EM, PED or OB/GYN. We provide excellent hours, compensation and procured liability insurance. If you have an interest, please call Scott Caldie at 800/672-1665 or send your curriculum vitae to: Coastal Government services, Inc, P.O. Box 15066, Durham 27704.

ASSISTANT HEALTH DIRECTOR — Mecklenburg County is currently seeking an Assistant Health Director to head the Personal Health Division consisting of seven programs for a large urban county health department. Program areas include Child Health, Children's Special Health Services, Dental Health, Nutrition and Dietetic Services, WIC, Family Planning and Maternity care. Administratively responsible for a staff of 85 in addition to clinical responsibilities of direct patient care. Must be board certified in OB/GYN Specialty, eligible for NC Medical Licensure, public health experience/training preferred. Salary range \$61,554 to \$77,711 with competitive fringe benefits package including malpractice insurance. Qualified applicants should submit resume and salary history in confidence to: Mecklenburg County Personnel Department, Charlotte-Mecklenburg Government Center, 600 East Fourth Street, Charlotte 28202-2836. EEO M/F/H

INTERNAL MEDICINE — The Kaiser Permanente Medical Care Program of North Carolina has immediate openings for BC/BE internists to staff positions available in our Charlotte Medical Offices. Competitive salary and benefits to include full malpractice and retirement plan. CV to: Stephen A. Silbiger, M.D., Carolina Permanente Medical Group, P.A., 3 Fairview Plaza, Suite 100, 5950 Fairview Rd., Charlotte 28210. Call 704/551-4200.

FOR SALE — Established Practice of Urology in the Piedmont area of North Carolina. Easy access to metropolitan areas via Interstate highway. Solid opportunity in a growing area. For details, send inquiry with address and telephone number to Mr. C. David Carpenter, Professional Consulting Services, Inc. 125 E. Pennsylvania Avenue, Southern Pines, NC 28387.

RESEARCH TRIANGLE AREA: Busy, well established pediatric practice for sale. Suitable for one/two pediatricians. Community near hospitals with level 2 and 3 nurseries, full time ER, pediatric teaching program. Seller will stay to introduce buyer. Please reply to Code 70, NCMJ, Box 3910, DUMC, Durham 27710.

NORTH CAROLINA: emergency department positions available for primary care physicians in Edenton, located on the Albemarle Sound. Low volume/low trauma

makes this an excellent first ED practice opportunity. Easy/access to East Carolina University School of Medicine for CME. Flexible scheduling. No overhead or on-call duties. Competitive compensation plus professional liability insurance program. Please call or submit your CV to: Coastal Emergency Services of Durham, Inc., 3200 Croasdaile Dr., Dept. SMY, Ste. 403, Durham 27705; 919./383-0367, 800/672-1665 in NC, 800/334-3306 in US.

PHYSICIANS OFFICE EQUIPMENT including Burdick treadmill, 4-channel monitor, 3-channel ECG,

defibrillator, examination table, desks and filing cabinets. Call evenings, 704/251-2645.

DOCTORS OFFICE EQUIPMENT FOR SALE: EKG machine, two treatment tables, scales and miscellaneous items. P.O. Box 18314, Asheville, NC 28814. 704-252-2635, 704-254-0721 (answering service).

ESTATE SALE: Former EENT physician with solo practice in Burlington, NC, located next to Alamance County Hospital. Excellent facility, ideal location, and substantial client base. Call Rhodes Craver, Attorney, 919/490-0500.

AIM HIGH

YOU CAN KEEP THEM IN BALANCE— YOUR FAMILY LIFE AND YOUR MEDICAL PRACTICE.



We'd like to help you spend more time with your family yet receive professional satisfaction from your medical practice. As a member of the Air Force health care team, you'll be able to participate in our group practice concept which will free you of most administrative duties.

Air Force benefits are also very attractive. You and your family will enjoy 30 days of vacation with pay each year plus many more Air Force advantages. Call

CAPT CHUCK HELVEY

919-850-9549

STATION-TO-STATION COLLECT



Index to Advertisers

Baron Advisory Services, Inc.	233	Peace Corps	288b
B & B X-Ray, Inc.	254	Republic Health Corp.	274
Burroughs Wellcome Co.	240a-b, 241	Roche Laboratories	249, 268, 269, 270, 288b
Campbell Laboratories, Inc.	275		Cover 3-4
Carolina Manor	245	Saint Albans Psychiatric Hospital	236
Charter Northridge Hospital	268	Smith Kline and French Laboratories	288a
Coast Realty and Construction Co.	266	Southern Medical Association	234
Crompton Company	Cover 2	Unique Boutique	254
Eli Lilly	271	U.S. Air Force	287
Hill, Rose & Farmer	245	U.S. Army	246
Hinrichs Financial Group	242	U.S. Army Reserve	274b, 276
Marion Laboratories	274, 274a, 280a-b	U.S. Navy	248
Medical Mutual Insurance Company of N.C.	250	Winchester Surgical Supply Co.	288
Medical Protective Company	247	Wyeth-Ayerst Laboratories	246a-d
Palisades Pharmaceuticals	270		

Winchester®

"CAROLINAS' HOUSE OF SERVICE"

Winchester Surgical Supply Company

200 South Torrence St. Charlotte, N.C. 28204

Phone No. 704/372-2240

Winchester Home Healthcare

Medical supplies and equipment for your patients at home

Charlotte, N.C. Greensboro, N.C. Hickory, N.C.

704/332-1217 919/275-0319 704/324-0336

704/547-0708

**Serving the MEDICAL PROFESSION of NORTH CAROLINA
and SOUTH CAROLINA since 1919.**

We equip many physicians beginning practice each year and invite your inquiries.

Our salesmen are located in all parts of North Carolina.

*We have DISPLAYED at every N.C. State Medical Society Meeting since 1921
and advertised CONTINUOUSLY in the N.C. Journal since January 1940 issue.*

Before prescribing, see complete prescribing information in SK&F LAB CO. literature or PDR. The following is a brief summary.

Contraindications: There are no known contraindications to the use of 'Tagamet'.

Precautions: While a weak antiandrogenic effect has been demonstrated in animals, 'Tagamet' has been shown to have no effect on spermatogenesis, sperm count, motility, morphology or in vitro fertilizing capacity in humans.

In a 24-month toxicity study in rats at dose levels approximately 9 to 56 times the recommended human dose, benign Leydig cell tumors were seen. These were common in both the treated and control groups, and the incidence became significantly higher only in the aged rats receiving 'Tagamet'.

Rare instances of cardiac arrhythmias and hypotension have been reported following the rapid administration of 'Tagamet' HCl (brand of cimetidine hydrochloride) injection by intravenous bolus.

Symptomatic response to 'Tagamet' therapy does not preclude the presence of a gastric malignancy. There have been rare reports of transient healing of gastric ulcers despite subsequently documented malignancy.

Reversible confusional states have been reported on occasion, predominantly in severely ill patients.

'Tagamet' has been reported to reduce the hepatic metabolism of warfarin-type anticoagulants, phenytoin, propranolol, chlordiazepoxide, diazepam, lidocaine, theophylline and metronidazole. Clinically significant effects have been reported with the warfarin anticoagulants; therefore, close monitoring of prothrombin time is recommended, and adjustment of the anticoagulant dose may be necessary when 'Tagamet' is administered concomitantly. Interaction with phenytoin, lidocaine and theophylline has also been reported to produce adverse clinical effects.

However, a crossover study in healthy subjects receiving either 'Tagamet' 300 mg. q.i.d. or 800 mg. h.s. concomitantly with a 300 mg. b.i.d. dosage of theophylline (Theo-Dur®, Key Pharmaceuticals, Inc.),

demonstrated less alteration in steady-state theophylline peak serum levels with the 800 mg. h.s. regimen, particularly in subjects aged 54 years and older. Data beyond ten days are not available. (Note: All patients receiving theophylline should be monitored appropriately, regardless of concomitant drug therapy.)

Lack of experience to date precludes recommending 'Tagamet' for use in pregnant patients, women of childbearing potential, nursing mothers or children under 16 unless anticipated benefits outweigh potential risks; generally, nursing should not be undertaken in patients taking the drug since cimetidine is secreted in human milk.

Adverse Reactions: Diarrhea, dizziness, somnolence, headache, rash. Reversible arthralgia, myalgia and exacerbation of joint symptoms in patients with preexisting arthritis have been reported. Reversible confusional states (e.g., mental confusion, agitation, psychosis, depression, anxiety, hallucinations, disorientation), predominantly in severely ill patients, have been reported. Gynecomastia and reversible impotence in patients with pathological hypersecretory disorders receiving 'Tagamet', particularly in high doses, for at least 12 months, have been reported. Reversible alopecia has been reported very rarely. Decreased white blood cell counts in 'Tagamet'-treated patients (approximately 1 per 100,000 patients), including agranulocytosis (approximately 3 per million patients), have been reported, including a few reports of recurrence on rechallenge. Most of these reports were in patients who had serious concomitant illnesses and received drugs and/or treatment known to produce neutropenia. Thrombocytopenia (approximately 3 per million patients) and a few cases of aplastic anemia have also been reported. Increased serum transaminase and creatinine, as well as rare cases of fever, interstitial nephritis, urinary retention, pancreatitis and allergic reactions, including hypersensitivity vasculitis, have been reported. Reversible adverse hepatic effects, cholestatic or mixed cholestatic-hepatocellular in nature, have been reported rarely. Because of the predominance of cholestatic features, severe parenchymal injury is considered highly un-

likely. A single case of biopsy-proven periportal hepatic fibrosis in a patient receiving 'Tagamet' has been reported.

How Supplied: Tablets: 200 mg. tablets in bottles of 100; 300 mg. tablets in bottles of 100 and Single Unit Packages of 100 (intended for institutional use only); 400 mg. tablets in bottles of 60 and Single Unit Packages of 100 (intended for institutional use only), and 800 mg. 'Tiltab' tablets in bottles of 30 and Single Unit Packages of 100 (intended for institutional use only).

Liquid: 300 mg./5 ml., in 8 fl. oz. (237 ml.) amber glass bottles and in single-dose units (300 mg./5 ml.), in packages of 10 (intended for institutional use only).

Injection:

Vials: 300 mg./2 ml. in single-dose vials, in packages of 10 and 30, and in 8 ml. multiple-dose vials, in packages of 10 and 25.

Prefilled Syringes: 300 mg./2 ml. in single-dose prefilled disposable syringes.

Plastic Containers: 300 mg. in 50 ml. of 0.9% Sodium Chloride in single-dose plastic containers, in packages of 4 units. No preservative has been added.

ADD-Vantage® Vials: 300 mg./2 ml. in single-dose ADD-Vantage® Vials, in packages of 25.

Exposure of the premixed product to excessive heat should be avoided. It is recommended the product be stored at controlled room temperature. Brief exposure up to 40°C does not adversely affect the premixed product.

'Tagamet' HCl (brand of cimetidine hydrochloride) injection premixed in single-dose plastic containers is manufactured for SK&F Lab Co. by Travenol Laboratories, Inc., Deerfield, IL 60015.

* ADD-Vantage® is a trademark of Abbott Laboratories.

BRS-TG-L73B

Date of issuance Apr. 1987

SK&F LAB CO.
Cidra, P.R. 00639

© SK&F Lab Co., 1988

In peptic ulcer:

RELIEF REASSURANCE REWARD



Tagamet®
brand of cimetidine
First to Heal

You'll both feel good about it.

RESULTS

**We need
someone
with the
confidence
of a surgeon,
the dedication
of a
marathoner
and the
courage of
an explorer.**

We need someone to fill a unique job opening.

Someone to spend two years in another country. To live and work in another culture. To learn a new language and acquire new skills.

We need someone who wants to help improve other people's lives. Who's anxious to build lasting friendships. To gain memories and experience that will last a lifetime. And a sense of fulfillment few jobs can match.

We need a Peace Corps volunteer. Interested? The first step is easy. Call 1-800-424-8580, Ext. 93.

Peace Corps.

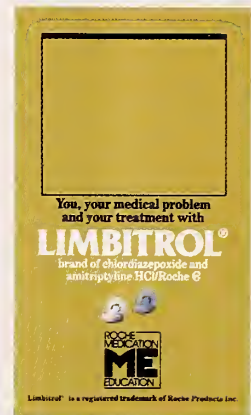
The toughest job you'll ever love.



FORGET



NOT



Roche Medication Education Booklets supplement your instructions to patients. So forget **ME** not. The Limbitalol® (chloridiazepoxide and amitriptyline HCl/Roche)® booklet is part of The Roche Medication Education Program.

This important program helps your patients remember and understand:

- What the medication is and why they are taking it
- The importance of staying with the prescribed course of treatment
- What foods and drinks to avoid
- Possible side effects

For a free supply of Limbitalol booklets, complete the coupon below and mail it to: Professional Services Department, Roche Laboratories, a division of Hoffmann-La Roche Inc., 340 Kingsland Street, Nutley, New Jersey 07110-1199

NAME _____

STREET ADDRESS _____

CITY _____

STATE _____

ZIP _____



Roche Laboratories

a division of Hoffmann-La Roche Inc.

PLANDEX 35201

CURRENT
JNLS
W1
NO
407

The
Official Journal
of the
North Carolina
Medical Society
June 1988
Volume 49
Number 6

North Carolina Medical
Journal
UCSF LIBRARY
Received on: 06-21-88

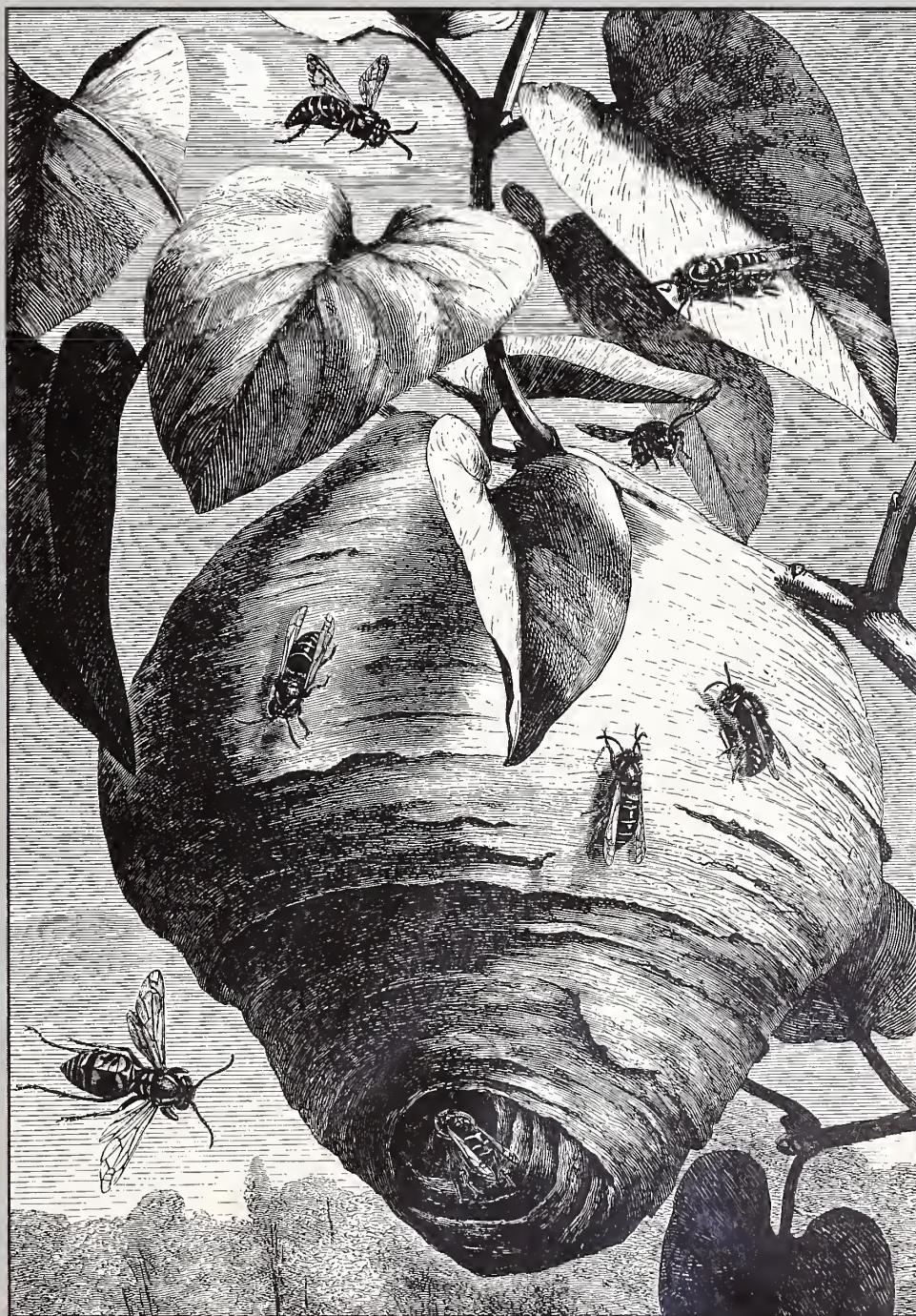
North Carolina Medical Journal

For Doctors and their Patients

**Insect Sting:
Why We Need
a Lay Program
for Dealing with
Severe Allergic Reaction**
Claude A. Frazier, M.D.

**Liver Transplantation:
The First Program
in North Carolina**
Richard McCann, M.D.,
R. Randal Bollinger, M.D., Ph.D.,
William C. Meyers, M.D.,
Timothy J. Quill, M.D.,
Paul G. Killenberg, M.D.

**Freestanding Outpatient
Surgical Center:
License Number One**
Lewis F. Brinton, M.D.



Contents page 291

Sting, page 315

THERE IS
SOMETHING
IN OUR NAME
THAT BRINGS YOU
A FEELING OF
SECURITY.

CRUMPTON COMPANY.

Why do so many NC physicians participate in the Crumpton Plan of Disability Income Protection?

THE ANSWER is the 47 years of successful relationship and personal service at claim time!

Yes, the feeling of security as well as economic advantage in knowing the program is a plan of carefully designed benefits.

The plan is not filled with a lot of "purple duck feathers," but provides income when you are unable to produce — not promises, but performance.

Why not call us today to obtain the latest details for your group practice? We are delighted to offer our broadened portfolio of professional insurance.



Commercial Insurance Company

Crumpton Company
Box 8500 Academy Center, Durham 27707
800/672-1674 919/493-2441

Keep Your Patients Loyal to You

Giving your patients the peace of mind that will keep them loyal to you is critical to the survival of your practice. By having the best equipment, you give your patients that peace of mind. Since today's health-conscious women are aware of the value of mammographic examinations, now is the time to evaluate the benefits of mammography for your practice and your patients.

Last year alone there were 41,000 breast cancer deaths and over 130,000 reported new cases of breast cancer in the United States. Call B & B X-Ray today at 1-800-447-XRAY to find out how the Bennett Micro-Fine Mammography System can help keep your patients loyal to you.

B & B X R A Y

working for the end result — optimum quality radiographs
P.O. Box 802 Matthews, NC 28105 1-800-447-XRAY
704/847-8521



NORTH CAROLINA MEDICAL JOURNAL

For Doctors and their Patients

June 1988, Volume 49, Number 6

Published Monthly as the Official Organ of the North Carolina Medical Society

(ISSN-0029-2559)

STAFF

Eugene A. Stead, Jr., M.D.
Rt. 1, Box 194, Bullock
EDITOR
919/693-4531
Francis A. Neelon, M.D.
Durham
ASSOCIATE EDITOR
F. Maxton Mauney, Jr., M.D.
Asheville
ASSOCIATE EDITOR
Eben Alexander, Jr., M.D.
Winston-Salem
ASSOCIATE EDITOR
William B. Blythe, M.D.
Chapel Hill
ASSOCIATE EDITOR
William W. Fore, M.D.
Greenville
ASSOCIATE EDITOR
Edward C. Halperin, M.D.
Durham
ASSOCIATE EDITOR
Laurel Ferejohn
Durham
MANAGING EDITOR
919/684-5728

Jane Whalen
Durham
EDITORIAL ASSISTANT
George E. Moore
Raleigh
BUSINESS MANAGER

EDITORIAL BOARD

Charles W. Styron, M.D.
Raleigh
CHAIRMAN
Edwin W. Monroe, M.D.
Greenville
Robert W. Prichard, M.D.
Winston-Salem
Louis deS. Shaffner, M.D.
Winston-Salem
Jay Arena, M.D.
Durham
Jack Hughes, M.D.
Durham
William B. Blythe, M.D.
Chapel Hill
Margaret C. Swanton, M.D.
Clinton

The appearance of an advertisement in this publication does not constitute any endorsement of the subject or claims of the advertisement.

The Society is not to be considered as endorsing the views and opinions advanced by authors of papers delivered at the Annual Meeting or published in the official publication of the Society. — *Constitution and Bylaws of the North Carolina Medical Society*, Chapter IV, Section 3, page 4.

NORTH CAROLINA MEDICAL JOURNAL

Box 3910, Duke University Medical Center, Durham, NC 27710 (919/684-5728), is owned and published by The North Carolina Medical Society under the direction of its Editorial Board. Copyright © The North Carolina Medical Society 1988. Address manuscripts and communications regarding editorial matters, advertising, subscription rates, etc., to the Managing Editor at the Durham address. All advertisements are accepted subject to the approval of a screening committee of the State Medical Journal Advertising Bureau, 711 South Blvd., Oak Park, Illinois 60302 and/or by a Committee of the Editorial Board of the North Carolina Medical Journal in respect to strictly local advertising. Instructions to authors appear in each issue (see table of contents). Annual Subscription, \$12.00 (+ tax in NC). Single copies, \$2.00. Publication office: The Ovid Bell Press, Inc., 1201-05 Bluff St., Fulton, MO 65251. *Second-class postage paid at Raleigh, North Carolina 27611 and additional mailing offices.* Postmaster: Send address changes to North Carolina Medical Society, 222 N. Person St., Raleigh, NC 27611.

THE SECRET IS OUT



“I built a new office a year ago and I was able to take advantage of the SMA’s Physicians’ Purchasing Program. Their availability of very fine medical equipment at discounted prices came in quite handy.”

**Benjamin Anderson, M.D.
Family Practice
Cedartown, GA**

Since 1906, the Southern Medical Association has been the best kept secret in the South. No longer! The word is out and everybody’s talking.

They’re talking about the educational benefits of belonging to the largest regional multi-specialty association in the U.S. and the diversity of the Annual Scientific Assembly.

They’re talking about a non-political association whose only mission is to provide the best educational and financial benefits available anywhere.

They’re also talking about unrivaled member benefits including the SMA Insurance Program, the Physicians’ Purchasing Program, the SMA Retirement Program, SMA Travel Services, Dial Access, the *Southern Medical Journal* and many, many more.

But most of all, they’re talking about how SMA can offer so much at such a low cost.

Call the SMA for more information and a membership application. Find out why more and more physicians are joining the SMA every day.

Join the SMA today . . . You’ll be talking about us too!

Post Office Box 190088
Birmingham, Alabama 35219



1-800-423-4992
(205) 945-1840

North Carolina Medical Journal

F O R D O C T O R S A N D T H E I R P A T I E N T S

Contents / June 1988, Volume 49, Number 6

SCIENTIFIC ARTICLES

- 292 Carbon Monoxide Poisoning *Phillip R. Mitchell*
297 AIDS: A Primer for the Primary Care Practitioner *Sandy Pomerantz*
306 Interstitial Irradiation in the Management of Recurrent Carcinoma of the Cervix, after Previous Radiation Therapy *Marcus E. Randall and Rolland J. Barrett*

MODERN MEDICINE

- 312 Freestanding Outpatient Surgical Center: License Number One *Lewis F. Brinton*
324 Liver Transplantation: Initiation of the First Program in North Carolina *Richard McCann, R. Randal Bollinger, William C. Meyers, Timothy J. Quill, and Paul G. Killenberg*

FOR PATIENTS

- 315 Insect Sting: Why We Need a Lay Program for Dealing with the Emergency of a Severe Allergic Reaction *Claude A. Frazier*
318 Keeping Lice at Bay *Ellen Rudy Clore*

CAROLINA HISTORY

- 328 Richard Gatling and His Gun *William G. Porter*
329 "Stuart Factor" (Coagulation Factor X): A North Carolina Saga *John B. Graham*

EDITORIALS

- 334 Marketing, Malpractice and the Value of "I Don't Know" *James P. Weaver*
336 Facing a Bad Result *Arnold G. Schuring*

CAROLINA PHYSICIAN'S BOOKSHELF

- 338 Book Reviews *Coordinated by Edward C. Halperin*

LETTERS TO THE EDITOR

BULLETIN BOARD

- 320 Instructions to Authors
344 Continuing Medical Education
344 New Members
346 Classified Advertisements
348 Index to Advertisers

Carbon Monoxide Poisoning

Phillip R. Mitchell, M.B.Ch.B.

An overview of this common syndrome with emphasis
on the pathogenesis, diagnosis and management.

Carbon monoxide is responsible for nearly half of the three thousand fatal poisonings that occur in the United States each year.¹ The true incidence may be far higher with an initial misdiagnosis in up to 30% of patients.² Diagnosis depends on a high degree of awareness by the physician of the protean clinical manifestations of the syndrome.

Mechanisms of Toxicity

Carbon monoxide is a colorless, odorless gas. When it is inhaled it diffuses across the alveolar membrane quickly into the bloodstream. There it both binds directly to the hemoglobin molecules in the red cells and dissolves in the plasma. The dissolved carbon monoxide then circulates around the body where it binds directly to other intracellular hemoproteins. The most important of these are cytochrome oxidase and myoglobin. Carbon monoxide is hence responsible for the production of two different types of hypoxia. The first is called *anoxic hypoxia* (a failure in delivery of oxygen to the tissues) and the second is known as *histotoxic hypoxia* (an interference in the energy producing respiratory pathways within the mitochondria).

Anoxic hypoxia results from the direct competition of carbon monoxide and oxygen for binding sites on the hemoglobin molecule. Carbon monoxide binds some 250 times more avidly than oxygen to hemoglobin. Consequently, trace atmospheric concentrations of carbon monoxide may result in significant blood levels of carboxyhemoglobin. The resultant reduction in oxygen transport is directly related to the level of carboxyhemoglobin. Anoxic hypoxia also results from the interference by carboxyhemoglobin with the release of oxygen from hemoglobin in the peripheral tissues. This results from the effect of carboxyhemoglobin in moving

the oxyhemoglobin dissociation curve to the left. Thus, oxygen is only released into the tissues when there is a lower than normal tissue oxygen tension.

Histotoxic hypoxia results from the 10% to 15% of carbon monoxide that binds to intracellular hemoproteins. In particular, binding of carbon monoxide to cytochrome aa₃ (figure 1) produces a poisoning of cellular respiratory function, with a toxicity similar to that produced by cyanide. There is a direct inhibition of cellular Redox reactions of the cytochrome system resulting in a failure of energy production within the cell.

Clinical Presentation

The tissue toxicity of carbon monoxide is generalized to all the organs of the body (see figure 2). Hence, patients may present with symptoms or signs referable to any organ system. However, the symptoms often involve those organs with a high metabolic rate, such as the brain and heart. The acute presentation should be distinguished from the chronic.

Symptoms The classic acute presentation is that of a patient complaining of an acute throbbing frontal headache, nausea, and vomiting, and having a history of exposure to exhaust fumes. Automobile exhausts contain up to 60% carbon monoxide, but significant exposures can also result from improperly vented hot water heaters, furnaces and fireplaces. Increasing numbers of cases present after exposure to faulty space heaters, sometimes due to use of heavy oil (which is cheaper) in kerosene-rated equipment. A large number of patients evaluated for burns have significant serum concentrations of carboxyhemoglobin. An unusual source of carbon monoxide poisoning is paint stripper with methyl chloride as the active ingredient. This can cause significant levels of carboxyhemoglobin in patients exposed to the fumes.

Most commonly, however, the neurological symptoms presented by the patient are of a nonspecific nature. Symp-

From Department of Anesthesiology, F.G. Hall Environmental Laboratory, Box 3094, Durham 27710.

The Site of Interference of Carbon Monoxide on the Respiratory Pathway within the Mitochondria

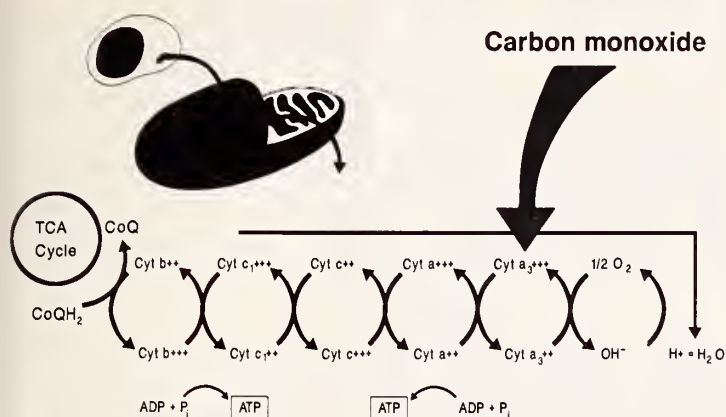


Figure 1. The electron transport chain, with CO binding to cytochrome aa₃, resulting in impairment of oxidative phosphorylation.

toms of sleepiness, generalized weakness, tinnitus, dizziness, visual disturbances and dysarthria may mimic other clinical syndromes. In a recently published study from France, carbon monoxide poisoning was misdiagnosed on the initial presentation in up to 30% of cases.² The most common misdiagnosis was food poisoning. Other common misdiagnoses were acute alcoholic intoxication, migraine, cerebral hemorrhage and acute ischemic cerebral disease. Patients with carbon monoxide poisoning have also been misdiagnosed as having car sickness or influenza. Not uncommonly, patients will present with new onset of seizures.

Other acute symptoms of carboxyhemoglobin intoxication may suggest cardiac disease with complaints of chest pain, syncope, palpitations, and shortness of breath. The patients typically complain of dyspnea with significant poisoning. Delayed symptoms of CO exposure are most commonly neurological complaints. Parkinsonian syndromes, Wernicke's aphasia, manic depressive psychoses, dementia,

The Symptoms of Carbon Monoxide Poisoning

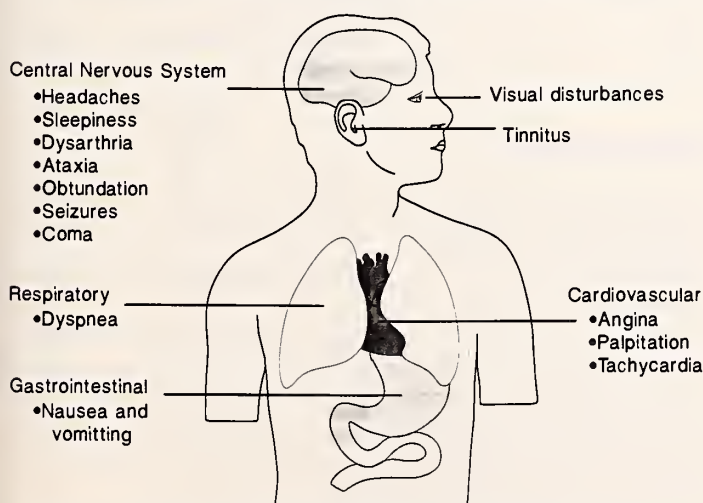


Figure 2. CO poisoning may result in a variety of symptoms and signs, most associated with the central nervous system.

cortical blindness and innumerable other neurological syndromes are described.

Signs General examination may reveal the cherry red mucosa so often described in medical texts, but this is an unusual finding. The patients are often tachypneic, with a tachycardia. An irregular pulse with PVCs and PACs is a common presenting feature.

Carbon monoxide poisoning in patients with heart disease may precipitate congestive heart failure, with distended neck veins, S3 or S4 gallop and basilar rales. A baseline neurological examination may not be sensitive enough to detect minor degrees of neurological impairment, and often quite simple arithmetic tasks such as serial sevens will be enough to demonstrate quite severe impairment. Psychometric tests are used at the Maryland Shock Trauma Center to detect subtle neurological impairment.³ Generally there are degrees of obtundation ranging from sleepiness in a mild case of poisoning to deep coma. Lateralizing signs are uncommon and should suggest another cause for coma.

Special Investigations

The investigations may be classified as either specific in aiding diagnosis and management, or general in excluding other possible diagnoses.

Specific

Carboxyhemoglobin level: useful in documenting exposure but not now considered useful in guiding management, as it is a poor predictor of outcome and tissue hypoxia (see below). A CO-oximeter is an important diagnostic tool in any ER or blood gas laboratory.

Arterial blood gas: a useful monitor of the degree of tissue hypoxia and metabolic acidosis.

Lactate: a useful guide to the severity and cause of the associated anion gap acidosis.

Neuropsychological screening tests: useful for detection of more subtle neurological defects not routinely assessed on neurological examination.⁴

X-ray: useful to rule out aspiration pneumonia or left heart failure in severely poisoned patients.

General

Serum glucose: a routine essential test to rule out hypoglycemia in the patient with an impaired level of consciousness. Commonly, there is associated hyperglycemia as a part of a generalized stress response.

Drug screening: concomitant poisoning with other drugs is not uncommon (particularly in suicide attempts) and should be ruled out. In most hospitals this will include a barbiturate, alcohol, aspirin and acetaminophen level.

Electrocardiogram: Signs of myocardial ischemia and ventricular irritability are common.

Computed tomography of the head: useful in excluding intracranial pathology in the patient with focal neurological signs.

E.E.G.: Useful to exclude subclinical status epilepticus as a cause of severe obtundation.

Management

The management of the patient with carbon monoxide poisoning is based on rapid elimination of CO from binding sites on hemoglobin, cytochrome oxidase, and myoglobin, while providing hemodynamic and respiratory support.

Specifically, the patient should be made to breathe 100% oxygen from a sealed facemask with a rebreathing bag attached. This should be done immediately and blood gases drawn as soon as possible after arrival at the hospital. If there is any doubt as to the patient's ability to ventilate, or in order to protect the airway, the patient should be intubated and ventilated with 100% oxygen. The half life of carboxyhemoglobin is between 180 and 200 minutes breathing room air. The half life of COHb if the patient is breathing 100% oxygen at ambient pressure is between 45 and 80 minutes. This is further reduced to twenty minutes breathing 100% oxygen at three atmospheres pressure in a hyperbaric environment.

Any further resuscitative measures to optimize oxygen delivery, such as fluid or inotropic support, should be initiated early. Correction of acidosis, however, should only be considered if the pH is below 7.2 as further disruption of oxygen delivery will occur with aggressive normalization of the pH. This occurs by further shifting the oxyhemoglobin dissociation curve to the left. Moreover, the avidity with which CO binds to Hb is reduced in the presence of acidosis.

When to Refer for Hyperbaric Therapy

It was previously believed that levels of carboxyhemoglobin more than 20% to 25%, or persisting neurological deficit, constituted the sole reason to transfer a patient for hyperbaric therapy. Only recently has it become clear that the initial carboxyhemoglobin level bears no relation to the degree of tissue hypoxia or to the final neurological outcome. A recent review of 115 cases of carbon monoxide poisoning treated at the Virginia Mason Clinic in Seattle⁴ showed no significant difference in carboxyhemoglobin levels between unconscious patients who survived (Mean carboxyhemoglobin level 29.3%) and those who died (Mean carboxyhemoglobin level 30.8%). Additionally, work conducted at the Maryland Shock Trauma center indicated that more precise psychometric testing of patients with CO poisoning is required to demonstrate neurological deficits.³ The psychometric deficits in their patients resolved with hyperbaric therapy. These patients with psychometric deficits all had levels of carboxyhemoglobin that would have been regarded as normal. The incidence of neurological sequelae after carbon monoxide poisoning in patients treated with hyperbaric therapy is also significantly lower.⁴ Pregnant patients in particular deserve referral to a hyperbaric facility as there is good

experimental evidence to suggest that fetal wastage is reduced in an animal model of carbon monoxide poisoning during pregnancy.

In a recent editorial on the subject,⁵ Dr. Eric Kindwall comments, "The decision to refer (for hyperbaric therapy) is judgmental and must be balanced against the possible medicolegal consequences of not doing so. Judgments as high as \$3 million have been rendered against hospitals that have failed to treat or properly refer CO patients to hyperbaric facilities. A consultation with a hyperbaric facility recorded on the chart could prove to be the most valuable notation in the medical record."

Medicolegal actions notwithstanding it is in the patients' interest to consult with hyperbaric physicians accustomed to dealing with patients poisoned with carbon monoxide.

We are fortunate in North Carolina to be able to consult directly via a collect call to the DAN (Divers Alert Network) Center at Duke University Medical Center, where consultation without charge may be obtained 24 hours a day with a hyperbaric physician experienced in treating carbon monoxide poisoned patients. The telephone number is 919/684-8111; ask for the Divers Alert Network Hyperbaric physician on call. They will be able to advise on treatment and say whether the patient requires hyperbaric oxygen therapy.

General guidelines for treatment include: (1) heavy exposure (suggested by COHb \geq 20%); (2) symptomatic poisoning (history of unconsciousness, confusion, arrhythmias, nausea, vomiting and cardiovascular decompensation).

The decision to transfer the patient must involve consultation with the state transport team. The patient may require intensive resuscitation en route to a hyperbaric facility and require the skills of a highly trained transport team accustomed to providing life support during transportation.

In summary, carbon monoxide poisoning is a common syndrome with a nonspecific clinical presentation whose recognition depends upon a high degree of suspicion on the part of the physician. Management is aimed at optimizing carbon monoxide elimination, regeneration of cellular respiratory pathways and excellent cardiopulmonary support. Consultation with a hyperbaric physician should be initiated early in all patients with poisoning to ensure optimal management and transport of the critically ill CO patient. ■

References

- 1 National Safety Council: Accident facts. Chicago, National Safety Council, 1982, pp 80-4.
- 2 Barret L, Danel V, Faure J. Clinical Toxicology 1985;23:309-13.
- 3 Myers RAM, Messier LD, Jones DW, et al. New directions in the research and treatment of carbon monoxide exposure. AJEM 1983;2:226-30.
- 4 Norkool DM, Kirkpatrick JN. Treatment of acute carbon monoxide poisoning with hyperbaric oxygen: a review of 114 cases. Ann Emerg Med 1985;14:1168-71.
- 5 Kindwall EP, editorial. Hyperbaric treatment of carbon monoxide poisoning. Ann Emerg Med 1985;14: 1233-4.

HOW TO ANSWER PERPLEXING QUESTIONS IN TWO MINUTES FLAT.



The Carolina Consultation Center at the University of North Carolina medical center provides reliable help, fast and free.

The Carolina Consultation Center provides rapid access to top specialists and advanced clinical information in virtually all fields. We put 530 specialists—the entire staff of the UNC medical center—at your fingertips.

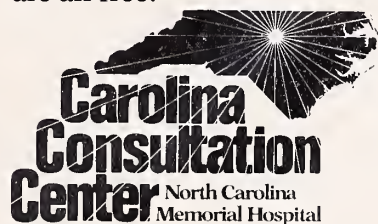
Over the past 20 months more than 5,000 physicians—one of every two practicing in North Carolina—have used the center for information, requests for support and contacts to expedite transfers of patients.

The center is staffed by trained information specialists who have only one job—to put

you in touch with the resources you need. With our computerized registry, we can make your connection quickly and see that your questions are answered in minutes.

For a free copy of the Carolina Consultation Center's Directory of Consultants, call 1-800-UNC-NCMH. This up-to-date listing of the medical staff, complete with biographies and areas of expertise, is an invaluable tool to help you determine the consultant you need, before you place your call.

The call, the directory, and the service are all free.



1-800-862-6264

For professionals, a major disability or illness can be financial disaster.

A disability income protection plan from Connecticut Mutual replaces earnings lost because of disability.

Our plan includes:

- high benefit limits that replace more of your income;
- special reduced rates for non-smokers;
- proportionate benefits when you can only work part-time but still

need a full-time income;

- the ability to increase your basic policy benefit as your income increases, regardless of your health;
- reimbursement for vocational and educational expenses during rehabilitation;
- an "Own Occupation" rider that pays full benefits if you are unable to perform the main duties of your own occupation, even if you earn income from a different job or business;
- we can also pay dividends that

reduce the cost of your coverage.

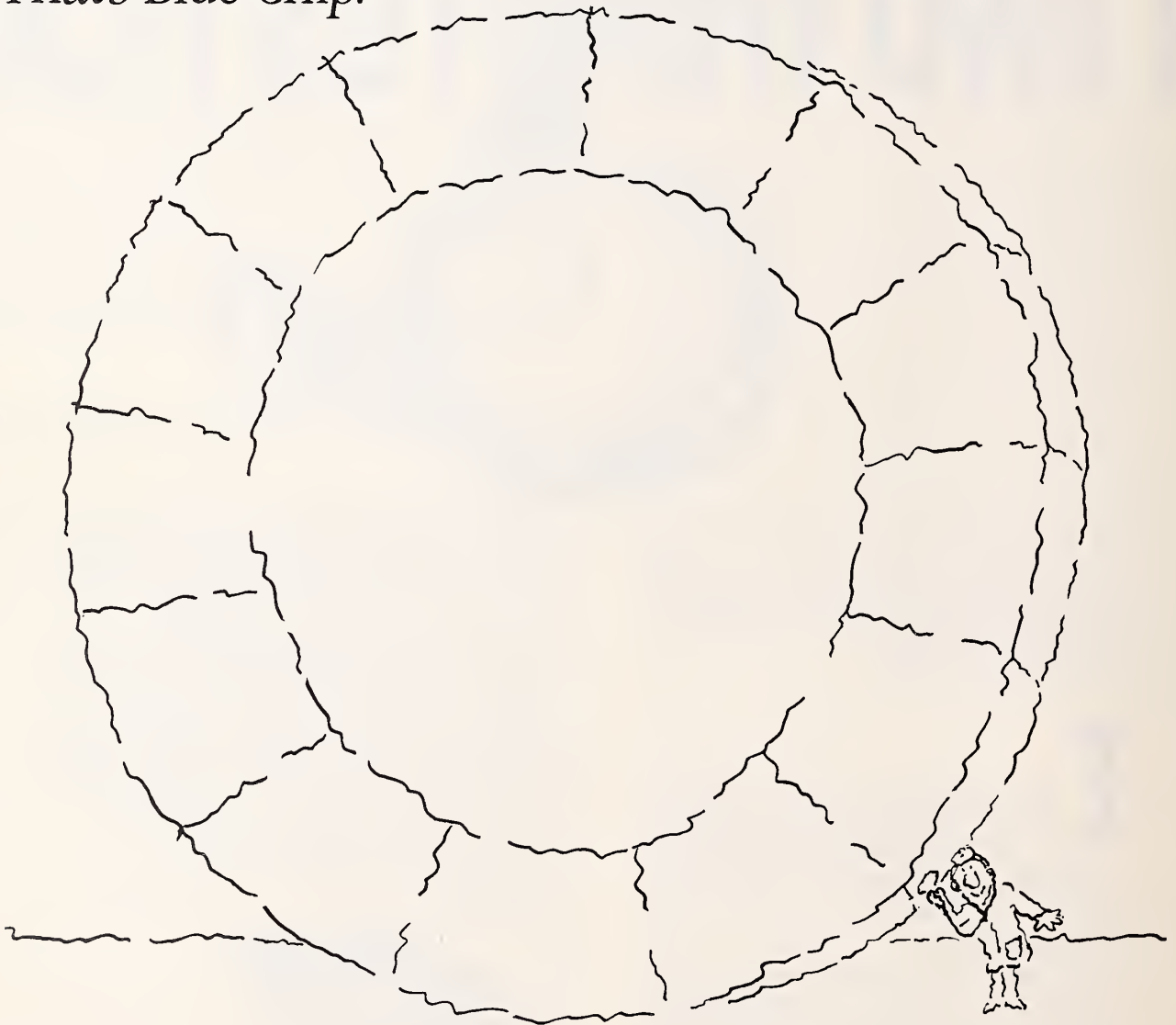
Call today to find out how we can custom design a Blue Chip protection plan to keep your income healthy.

The Hinrichs Financial Group

1600 Charlotte Plaza
Charlotte, NC 28244
(704) 371-8600

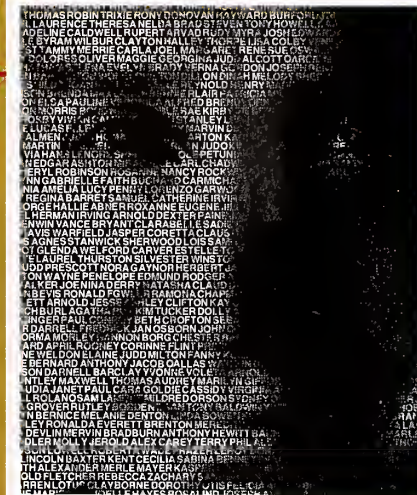
An affiliate of the  **Alliance**

*Disability insurance that keeps your income healthy.
That's Blue Chip.*



Connecticut Mutual Life Insurance Company (Hartford CT)

(PROPRANOLOL HCl)
LONG ACTING CAPSULES 60, 80, 120, 160 mg



[illegible]

ON

...like the more than one million patients who have received **INDERAL® LA**.

In a recent survey, 4,120 participating physicians gave us their views¹ on **INDERAL LA** in the treatment of hypertension, angina and migraine.

INDERAL LA is their preferred beta blocker

...of the nearly three out of four physicians responding to the questionnaire, an impressive 97% rated **INDERAL LA** good to excellent for overall performance. Virtually all cited efficacy, tolerability, long-term cardiovascular protection and once-daily convenience as important factors in their choosing to prescribe **INDERAL LA**.

INDERAL LA promotes patient compliance

...Virtually every responding physician rated patient satisfaction with **INDERAL LA** to be as good as, or better than, other beta blockers.

Like conventional **INDERAL** Tablets, **INDERAL LA** should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree and bronchial asthma.

ONCE-DAILY
INDERAL® LA
 (PROPRANOLOL HCl)
 LONG ACTING CAPSULES
 60, 80, 120, 160 mg

The one you know best keeps looking better

Please see next page for brief summary of prescribing information.

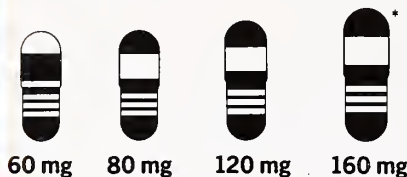
ROBERT KRISTEN ARNOLD
 MARCUS RHODA JEREMY
 LIAN FLOYD ELLIOTT HAR
 MYRA JOSH EDWARD A
 AMMY MERRIE CARLA JO
 LEY IRIS STEPHANIE CHA
 JESSICA BERNARD MA
 BLAIR PATRICIA MIL
 ANNON MORRIS BOND
 AHAM ELEANORE GIN
 MORE CLAY PEARCE G
 NICOLE PETUNIA HA
 LEE CHERYL ROBINS
 ERVIN HUNTER NEVIN
 RTLAND COLEMAN C
 ER PAINE JANE SH
 AWLEY KATHERINE
 E IRMA MYLES JULI
 INETTE LAUREL TH
 RANDALL PHYLLIS
 RION JULIUS GLENN
 JESSE ASHLEY CLIF
 ANCHE ROBIN JACQ
 RK NOAH STEWART
 ORINNE FLINT PRES
 RON NORTON JULIE
 SHIRLEY HARPER PE
 OLDIE CASSIDY VIRGI
 VLYDIA GROVER RUTL
 SIBYL NOEL HUMPHR
 BILL LILLIAN MARLE
 ADE FRAZER LEROY DO
 SMEREDITH ALEXAND
 SMOND TONY HILARY
 ERTA LEONORA BART
 ENNIS CULLEN TABIT
 RENDAN GUNTHER E
 MARIO JAYNE MELIS
 SPER VITO NICHOLA
 Y JONATHAN SALLY
 N SEAN WALDEN ROS
 RT DIANE JENNIFER LE
 LLEEN DWIGHT MITCH
 INGRID CHANNING LIN
 ANSON ANDREW GALL
 ER ROXANNE ASHBY HAR
 JA TRIXIE RORY BAYARD CH
 JOSEPH PAGE JULIE REX RE
 LEONA RUDY MARCUS SLOAN
 RA DONNA CRAIG ANNE ELMER
 HAM ADELINE HALLEY MILFORD DE
 ON PRISCILLA WILSON RUPERT HAR
 A TH STEVEN BRONSON JEAN PETER DIA
 NE LORNA ROBERTA NOBLE TOM SABIN
 T MIA BARTLETT BEAU DINAH JIM FRITZ D
 NE CECILIA TAMARA BEN ROSABELLE JU
 LE SIMPSON BERNARD ERROL CORETTA
 VERETT MARGO LENA LORENZO CLIFF RI
 N MARTIN THOMASTONY COLEMAN LUCI
 DEN REBECCA COURTNEY NICOLE BREWS
 ER RHONDA TURNER MADELINE ELLEN MC
 OWLER JANET TONY THOMAS ROBERTSO
 T ROBIN HARDEN BRETT NEIL BORDEN OT
 WATSON GEORGIA BARCLAY ODESSA
 ADWICK APRIL TODD ARDEN LAUR
 MABEL SHERWIN PATIDA GINA
 ARD ARNOLD HILLARD SILVES
 ORA DONAHUE EGAN MURRA
 AMDEN EDNA MILES AL BE
 RUSSSEL AUDREY ELIDewe
 NOLD TONY WILFRED CL
 DAM TYSON LARISSA A
 ON LIBBY OSCAR PHY
 OYD PHOEBE ARCH
 S FRANKLIN LOT
 M RENEE CHA
 AN ZELDA
 AS MEGA
 Y CRY
 SHEE

Feel like a MILLION



ONCE-DAILY
INDERAL[®] LA
(PROPRANOLOL HCl) LONG ACTING CAPSULES 60, 80, 120, 160 mg

The one you know best
keeps looking better



BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)

INDERAL[®] LA brand of propranolol hydrochloride (Long Acting Capsules)

DESCRIPTION. INDERAL LA is formulated to provide a sustained release of propranolol hydrochloride. INDERAL LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure, and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

INDICATIONS AND USAGE. **Hypertension:** INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock; 2) sinus bradycardia and greater than first-degree block; 3) bronchial asthma; 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. **CARDIAC FAILURE:** Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T₄ and reverse T₃, and decreasing T₃.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL: Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL (propranolol HCl) is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure, or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenytoin, phenobarbitone, and rifampin accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels of both drugs.

Antipyrine and lidocaine have reduced clearance when used concomitantly with propranolol.

Thyrotoxicosis may result in a lower than expected T₃ concentration when used concomitantly with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: Bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System: Light-headedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to cataplexy; visual disturbances; hallucinations; vivid dreams; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy, and vivid dreams appear dose related.

Gastrointestinal: Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: Bronchospasm.

Hematologic: Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: Alopecia, LE-like reactions, psoriasisiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctiva reported for a beta blocker (practolol) have not been associated with propranolol.

DOSEAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg-for-mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—Dosage must be individualized. The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—Dosage must be individualized. Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—Dosage must be individualized. The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximal dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

Reference:

1. Data on file, Ayerst Laboratories.

D7295/188

**WYETH
AYERST**
PHILADELPHIA, PA 19101

© 1988, Wyeth-Ayerst Laboratories

AIDS

A Primer for the Primary Care Practitioner

Sandy Pomerantz, M.D.

Don C. Chaplin, M.D., of Burlington, has found this information helpful, and suggested that we publish it. He comments as follows: “As a rule, I do not favor ‘cookbook medicine,’ but as all practitioners in North Carolina are very much like interns and medical students when it comes to the actual diagnosing and treating of this unfortunate, low-incidence disease in North Carolina, the availability of quick reference and clinical outlines are usually enormously helpful.”

Introduction

A great deal has been published recently about AIDS, much of it from the standpoint of how AIDS is spread, how to detect exposure to the AIDS virus, and what are the signs which establish a clinical diagnosis of AIDS or AIDS-Related Complex (ARC).

Despite this volume of published material in both the medical literature and popular press, the Board of Medical Quality Assurance has noted increased anecdotal evidence that primary care physicians are not recognizing the early (or even late) signs of infection with Human Immunodeficiency Virus (HIV), and the various AIDS-associated illnesses to which the HIV-infected individual is prone. Even when AIDS is suspected, many primary care practitioners are not knowledgeable on how to diagnose and treat AIDS-related illnesses, nor do they always know to whom they can turn to get the answers they need.

As a service to the practicing primary care physicians of this state, the Board is publishing the following “Primer”

for primary care practitioners. The Primer focuses on how to recognize and treat the most common AIDS-related illnesses. It is organized in such a way that it should be usable as a future reference guide.

The Diseases of AIDS

The spectrum of diseases seen in HIV* infected individuals is broad. While some clinical syndromes are rare, others are quite common. Most physicians should have little trouble recognizing and treating these common HIV-associated illnesses once they become familiar with them. This primer will attempt to describe the more frequently seen illnesses, how they present, how to diagnose and treat them and what common adverse effects to monitor.

A good way to approach the syndromes seen in HIV-infected individuals is to break them into the different organ systems which are affected. To that end, the most common illnesses can be grouped into the following areas:

Pulmonary	Lymph Nodes
Neurological	Fever of Unknown Origin
Gastro-intestinal	Retinal
Skin/Mucosal Surfaces	

Assistant Clinical Professor of Internal Medicine at the University of California, Davis, and Medical Director of the Sacramento AIDS Foundation. Reprinted from *Action Report*, No. 34, March 1988, 3–6, the bulletin of the California Board of Medical Quality Assurance, 1430 Howe Ave., Sacramento, CA 95825.

*A list of abbreviations and acronyms can be found at the end of this PRIMER.

I. Pulmonary

A. Symptoms: Fever, non-productive cough, dyspnea

B. Signs:

1. High temperature
2. Little, if any, auscultatory findings
3. Chest x-ray (CXR): early — little or no findings; later — progressive bilateral *interstitial* infiltrates; not always symmetric, not always bilateral
4. Arterial blood gases (ABG): early — mild hypoxemia (pO₂ 70 to 90 torr.); later — progressive hypoxemia with respiratory alkalosis
5. Gallium lung scan: usually quite "hot" at 48 to 72 hour interval even when CXR shows little to no disease
6. Pulmonary function tests (if done): increased flow rates, decreased diffusion capacity

C. Etiology:

1. If bilateral with primarily an interstitial process, consider:

Rank	Organism
------	----------

#1 to 90	<i>Pneumocystis carinii</i> pneumonia (That is to say, PCP is the most common initial pulmonary pathogen and must be the single most suspected etiologic agent)
----------	--

#91	<i>Cytomegalovirus</i> (CMV)
-----	------------------------------

#92	<i>Legionella</i> species
-----	---------------------------

#93	<i>Mycobacterium avium intracellulare</i> (MAI) and/or <i>Mycobacterium Tuberculosis</i> (MTB)
-----	--

#94	<i>Toxoplasma gondii</i> (toxoplasmosis)
-----	--

#95	<i>Blastomycosis</i>
-----	----------------------

#96	<i>Histoplasma capsulatum</i>
-----	-------------------------------

#97	<i>Coccidioides immitis</i>
-----	-----------------------------

#98	<i>Nocardia</i>
-----	-----------------

2. If unilateral and significant alveolar pattern:

#99	MAI and/or MTB
#100	pulmonary <i>Kaposi's sarcoma</i> (KS) — especially if accompanied by a pleural effusion
3. Additionally, do not forget the common or ordinary bacterial pathogens — especially *Staphylococcus aureus*/*Hemophilus influenzae* and *Streptococcus pneumoniae* which are being seen in increased numbers.

D. Work-up:

1. CXR (PA + LAT); ABG; serum LDH; erythrocyte sedimentation rate (ESR)
2. Induced sputum for Gram stain, silver or other stains which rapidly identify pneumocystis cysts/oocysts, AFB smear, wetmount, culture for routine C&S, fungi and AFB.
3. If CXR negative, proceed to gallium lung scan and scan at 48 to 72 hours if patient's clinical status permits the time delay.
4. If CXR shows bilateral interstitial infiltrate, or

if gallium lung scan positive at 48 to 72 hours,* then bronchoscope with lavage and brush, and if clotting parameters reasonable, endobronchial biopsy. Of course, if patient is able to raise sputum and it is positive on silver stain, bronchoscopy can be avoided.

E. Treatment:

In the clinical setting, if highly suspicious for PCP, in a high risk individual with fever, cough, dyspnea, mild hypoxemia and interstitial infiltrate, initiate treatment immediately. *Pneumocystis* organisms will be present at least 5 to 7 days after institution of effective treatment. They may even be present following a full 21 day course of treatment when the patient has already defervesced. For the initial episode of PCP, it is mandatory to obtain stain confirmation since:

1. this establishes the diagnosis of AIDS in an individual who has no other reason for immunosuppression, and allows access to state and federal benefits such as Medi-Cal/Medicaid, supplemental security income (SSI) and the like;
2. some health insurers may require a histologic diagnosis for the patient to receive the new drug, azidothymidine (AZT, Retrovir);
3. protocols for trials of new antivirals will require histologic/pathologic proof of clinical diagnosis.

Length of treatment: 14 to 21 days.

Treatment failure: progression of disease by Day 5 to 6. Note: with all regimens, many patients continue to worsen for 3 to 4 days. By Days 5 to 6, however, patient's fever curve should be down with evidence of a clinical response. Radiologic findings often lag 48 to 72 hours behind clinical improvement. If no better by Day 5 to 6, certainly by one week, consider this a treatment failure and change to second agent.

In addition to the agents listed below, new treatments are expected to be available in the near future including (1) inhalation pentamidine and (2) trimetrexate, a new lipid-soluble analogue of methotrexate, in combination with folinic acid (leucovorin).

F. Choice of Drugs:

1. Trimethoprim/sulfamethoxazole (Septra DS, Bactrim DS) Dose: 15 to 20 mg/kg of trimethoprim component divided into 4 daily doses for 21 days. Route: Initial intravenous (IV); subsequent to defervescence orally (PO). Advantages: If effective and if there are no adverse reactions, then treatment can be changed to PO for HOME USE. Disadvantages: HIGH (50%

*Especially if the LDH and/or ESR are elevated.

to 75%) incidence of adverse reactions, which are:

- a. Drug fever
- b. Neutropenia
- c. Thrombocytopenia
- d. Erythroderma which can progress to toxic epidermal necrolysis (TEN) with Stevens-Johnson syndrome. These reactions typically occur between Day 4 and Day 8.

In the author's personal experience TMP/SMX has been effective but he has been able to complete a 21 day course of therapy with TMP/SMX only three times in 75 to 125 episodes of PCP in some 40 patients over the last 3 years.

2. Pentamidine (Pentam) dose: 4 mg/kg IV or IM every 24 hours for 21 days. Advantages: effective, one time daily dose. Disadvantages:

- a. IV use is the preferable route of administration. Arranging home IV therapy is difficult and sometimes dangerous. Intramuscular use is sometimes accompanied by sterile abscesses at injection site, is quite painful and may have higher incidence of hypo- and hyperglycemias.

- b. Sudden hypotension. While in-house, monitor blood pressure every 15 to 20 minutes during infusion and for 1 hour afterwards. Warn patient about getting up slowly. Do not use other drugs (e.g., antiemetics) which also can cause hypotension. If blood pressure drop is sudden and severe, treat with intravenous saline, Trendelenburg positioning, etc. Dopamine or other pressor agents are rarely required.

- c. Late glycemics — both hypo- and hyper- have been reported. Monitor blood sugars carefully, at least via fingerstick each day and for any symptoms of hyper- or hypoglycemia. These reactions typically occur between Day 10 and Day 17.

- d. Nephrotoxicity: more common in dehydrated patients. During first week of treatment give IV saline. Monitor blood urea nitrogen (BUN), creatinine and electrolytes. (In the author's experience this has never required discontinuation of treatment, even when BUN levels have hit the 50s, creatinine levels of 3.0 or so. All abnormalities were completely reversed once treatment was finished and fluids replaced.)

- e. Neutropenia: many patients infected with HIV have evidence of myelosuppression and may be on other therapies which induce neutropenia as well (i.e., AZT, vinca alkaloid chemotherapy for Kaposi's sarcoma, alpha-2 interferon for KS, DHPG (ganciclovir) for

CMV retinitis, colitis, etc.). Folinic acid as a kind of "leucovorin rescue" may be of some help as may Lithium carbonate. If granulocytes drop below 750 or certainly less than 500, consideration must be given to changing therapies or adding more routine antibiotic coverage for the granulocytopenic patient.

3. Dapsone and Trimethoprim. While adverse effects of trimethoprim/sulfamethoxazole (TMP/SMX) are extremely common, they have not been as frequently observed with other sulfa compounds. Dapsone, an older sulfa used in treatment of leprosy, has been shown to be highly effective against pneumocystis organisms when used in combination with trimethoprim.

Dose: Dapsone 100 mg. PO qd x 21 days with trimethoprim at dose of 15 to 20 mg/kg in 4 divided doses (i.e., 300 mg PO qid).

Advantages:

- a. all PO meds
- b. lower incidence of sulfa drug toxicities.

Disadvantages:

- a. The same toxicities can occur as with TMP/SMX. (In this author's experience, only one person could not complete 21 day course.)
- b. Anemia: Dapsone should not be used in glucose-6-phosphatase deficient (G6PD) individuals as this will cause methemoglobinemia. Even in people with normal G-6P levels, anemia may be profound, so monitor hemoglobin and hematocrit at a minimum of every 2 to 3 days.
- c. Renal toxicity seems to be worse than with TMP/SMX; keep patient well hydrated.
- d. Hallucinoses has been reported. Giving medication at bedtime may reduce altered mental status.

4. *Fansidar* (pyrimethamine/sulfadoxine) (author has not used).

5. Dimethyl sulfoxide (DMSO) (author has not used). Some studies suggest this is less effective than numbers 1 to 3, above.

Prophylaxis against recurrent PCP is being used with increasing evidence of efficacy. However, effects on the survival curves of AIDS patients with PCP may not change. Regimens are generally based on what agent(s) have been effective in treating the original clinical pneumonia, i.e., pentamidine parenterally or via inhalation, TMP/SMX bid, Fansidar 1 to 2 x/week or Dapsone 50 mg qd.

In terms of treatment for other pathogens, empiric prescribing is hard to defend. If an organism is isolated,

treatment appropriate to that organism is indicated. The finding of cytomegalovirus (CMV) inclusion bodies, not just CMV cultures on a bronchoscopically obtained specimen, is absolutely necessary to call it CMV pneumonitis. If inclusion bodies are found, treatment with the experimental acyclovir derivative, ganciclovir (DHPG), is indicated. Unfortunately, the data for efficacy of DHPG in CMV pneumonitis in AIDS are only about 50%, not as good as for its use in CMV retinitis. Nevertheless, it is worth a try.

II. Neurological

HIV is a primary pathogen in the nervous system. In addition, many opportunistic neurologic illnesses may occur. The differentiation must be made between HIV as a primary pathogen and other secondary opportunistic infections and cancers, as some of the latter are treatable. Unfortunately, the clinical presentations of these illnesses often overlap. In general, if focal long tract neurologic findings are present, a search for an opportunistic infection (or central nervous system [CNS] lymphoma) must be made.

Symptoms and signs can be grouped as follows:

A. Fever, headache, focal neurologic signs and symptoms. Consider:

1. *CNS toxoplasmosis* (toxoplasmosis). CT scans often, but not universally, show ring enhancing lesion(s) with contrast (the "signet ring" sign) which, while not pathognomonic of CNS toxo, is highly suggestive (any microbial-induced abscess can appear this way). MRI lesions in the basal ganglia are also suggestive of toxo.
2. *Progressive multifocal leukoencephalopathy* (PML)
3. *Tuberculoma* (secondary to MTB)
4. *CMV meningo-encephalitis*
5. *Herpes simplex virus* (HSV) *meningo-encephalitis*
6. *CNS lymphoma*

B. Fever (at times low grade), headache, photophobia, with or without seizures, with or without nuchal rigidity. Think: *cryptococcal meningitis*, *aseptic meningitis* or *primary HIV meningitis*.

C. A progressive spinal cord syndrome with or without a transverse myelitis, characterized by a neurogenic bladder with unilateral or bilateral flaccid motor weakness has been described. Primary etiologic pathogens are felt to be HIV itself, with or without HSV and CMV. Diagnosis can be made by culture of any of these viruses from spinal fluid. It may respond to high dose Acyclovir (i.e., 300 mg IV every 6 to 8 hours) along with AZT.

D. Change in personality, progressive loss of short term memory, social isolation, mutism often accompanied by seizures and ataxia. Consider *HIV encephalopathy* (AIDS Related Dementia).

E. Peripheral neuropathy: Consider HIV and/or side effects of chemotherapy, especially vincristine.

F. Polymyopathy: Consider autoimmune phenomena with auto-antibodies against skeletal muscle (anti-sarcolemma antibodies). In addition, a polymyopathy has been described as secondary to AZT.

Work-up of Central Nervous System Disease: Lumbar puncture (LP), CT with dye or preferably MRI (the latter is more sensitive and can show lesions not present on CT). MRI findings in HIV encephalopathy are highly characteristic: patchy white matter disease with widened sulci often extending deep into the cerebellum. By MRI, focal disease in basal ganglia is highly suspicious for CNS toxo as opposed to PML or CNS lymphoma. Spinal fluid should be sent for gram stain, AFB stain, India ink preparation, cell count with differential, protein, and VDRL as well as culture for bacteria, AFB, fungi and viral studies if available. Remember routine lab serologies for toxo either in serum or in CSF are *unreliable* as diagnostic examinations.

Work-up of Peripheral Neurologic Disease: CPK, aldolase, antibodies to skeletal muscle (anti-sarcolemma), electromyography and nerve conduction velocities.

Treatment: treat what you can. The most common treatable illnesses are toxoplasmosis, tuberculomas, cryptococcal meningitis and syphilis. If focal CNS disease is suspect and CT scan with contrast and/or MRI confirms its presence, initiate a two-week therapeutic trial of antitoxo meds, then repeat CT with contrast and/or MRI. If lesions improve, brain biopsy may be spared as diagnosis is evident. If disease worsens during trial or there is no change on scans after two weeks, then brain biopsy is indicated.

Toxo treatment is: Pyrimethamine in 25 to 75 mg daily doses plus sulfadiazine one gram qid for life. As pyrimethamine is a folate antagonist, leucovorin is needed.

In sulfa allergic patients, or if sulfa reaction occurs, clindamycin in doses of 600 to 900 mg every 8 hours PO has been used with anecdotal reports of response. To emphasize, meds must be continued forever, since in all studies to date, if patient initially survived he/she:

1. will relapse as the disease recurs in time or,
2. will still have *t.gondii* organisms present in the brain at autopsy when such patient dies of other opportunistic infections.

The acute *HSV meningoencephalitis*, and the acute *CMV meningoencephalitis* are both treatable — the former with acyclovir 800 mg IV every 6 to 8 hours, and the latter with DHPG, SMA/Kg IV every 12 hours.

In the few case reports of CNS tuberculomas, they were due to *Mycobacterium tuberculosis* (MTB) and not *MAI/kansasii*; 3 or 4 drug chemotherapy should be

used. (See comments under Section VI — Fever of Unknown Origin.)

In cryptococcal meningitis: amphotericin B in doses of 0.3 to 0.5 mg/kg daily, and in overwhelming disease up to 1 mg/kg daily, has been used after initial test dose. Total dose is gradually increased to desired end point, then maintenance, 3 times/week. Watch for the usual “ampho” -toxicities. Of note, intrathecal administration of amphotericin B has been used with some researchers reporting excellent responses with marked decrease in toxicities. There are no reports of better results with systemic versus intrathecal amphotericin B at this time. One should note that this drug has severe side effects and it comes by its nickname, “ampho-terrible” (and other more graphic epithets) with reason. Requires lifelong maintenance therapy.

III. Gastrointestinal Syndromes

These can be grouped into symptoms referable to the upper GI tract, those in the lower GI tract, and those inducing liver dysfunction.

A. Dysphagia, hiccough: Consider *candida esophagitis*

Diagnosis: characteristic mucosal pattern; endoscopy with biopsy showing invasive yeast.

Treatment: Ketoconazole 400 to 600 mg per day x 6 weeks, then maintain on 200 mg daily forever. In treatment failures with these regimes, low dose (10 or 15 mg) of amphotericin B may be highly effective and much less toxic than when this agent is used in higher dose to treat systemic fungal diseases.

Other pathogens:

1. CMV causing ulcerations — Treatment: DHPG in dose of 5 mg/kg IV bid;
2. MAI/MTB;
3. *Herpes esophagitis*: treat with acyclovir 350 mg qid 8 hours.

Other diseases:

Kaposi's Sarcoma (KS) — see skin/mucosal surfaces.

B. Abdominal pain syndromes without diarrhea. Consider:

1. CMV — Treat with DHPG.
2. MAI/MTB — see above.
3. KS — see below.
4. *Cryptosporidium* — see below. Biliary disease with obstructive pattern of liver function tests and a “sclerosing cholangitis” has been reported.
5. Abdominal lymphoma.

C. Diarrhea with/without cramps. Consider:

1. While not usually considered to be opportunistic infections (OI), the following are common and can be treated with the usual agents: *Shigella*, *Campylobacter*, *Giardia*, *Entamoeba histolytica* and *Blastocystis hominis*.

2. *Cryptosporidium/isospora belli* — note: control may be achieved with tetracycline or TMP/SMX, but organisms are still found in stool using a modified acid fast stain. Spiramycin does not appear to be effective.
3. A sprue-like illness has been described with no clear etiology. Control with agents such as diphenoxylate with atropine may be difficult. In this author's experience there is no effective treatment.
4. *Clostridium* — oral vancomycin is the treatment of choice although Flagyl has also been used.

D. Liver dysfunction: consider all the systemic opportunistic organisms and neoplastic disorders seen in AIDS, and virtually all the treatments thereof, and you will rarely see normal liver function in a person with AIDS. However, the author has not seen liver abnormalities to the extent that they have affected a patient's clinical status except in three individuals with both disseminated MAI and cryptosporidial enteritis, whose terminal events included obstructive jaundice.

IV. Skin/Mucosal Surfaces

A. Kaposi's Sarcoma (KS): This multicentric sarcoma derives from the endothelial cell of the lymphatics in skin and mucosal surfaces. Its characteristic hue is due to extravasation of hemosiderin into the false vascular slits or channels seen on microscopy. It may be associated with CMV infection.

When lesions are few in number and confined to skin or mouth, it may be best to leave them untreated. When lesions begin to accelerate in number or are found in GI tract, lungs or other viscera, treatment is incumbent. Modalities of therapy include:

1. Chemotherapy. The most common and successful regimen has been to use vinca alkaloids, namely vincristine 1.4 to 2.0 mg IV, to alternate weekly with vinblastine 4 to 10 mg IV. This avoids the common dose reductions needed when employing vinblastine alone due to vinblastine's increased myelosuppression. However, peripheral neuropathies are more frequent due to vincristine toxicity, and the appearance of these may be difficult to distinguish from the effects of HIV itself in the nervous system. In addition, single agent bleomycin has been used by others with some success.
2. Alpha-2 interferon. Recombinant alpha interferon has recently been released for treatment of hairy cell leukemia. It has been shown by a number of investigators to be effective in treatment of KS with results comparable to those of chemotherapy (1/3 remission, 1/3 stabilization,

1/3 no response). It is given at a dose much higher than what is used for hairy cell leukemia, namely 36-54 million units IM per day for 28 days then 3 times weekly. For the 1/3 who show regression of lesions, treatment is then continued. Common side effects: fever and an influenza-like illness essentially the same as serum sickness. Of note: myelosuppression is common, and may be dose limiting.

3. Radiation: Palliation of large lesions is readily achieved and can be employed for cosmetically unappealing or painful lesions. While KS is not painful in general, if it occurs in confined spaces (i.e., ear lobe, nose, etc.) it can be exquisitely so. Radiation treatment has been helpful to quite a few of the author's patients. (A note of caution, however — palatine lesions when radiated with traditional doses have been associated with severe mucositis. Lower doses are required.
 4. In addition, some clinical investigators have used an intralesional injection of 0.1 cc of 1.0% solution of normally reconstituted Velban with some success.
- B. There are a host of other skin and mucosal syndromes which include:
1. Oral candidiasis — controlled with either Nystatin, clotrimazole mouth troches, or systemic ketoconazole at 200 mg per day. Be aware that aphthous ulcers may be candidal or herpetic in origin.
 2. Gingivitis — a necrotizing gingivitis is not uncommon and can lead to severe problems requiring all teeth to be removed. Routine hydrogen peroxide mouthwashes may help prevent its occurrence. Betadine intraorally has been used for this as well. Also consider herpetic lesions.
 3. Shingles — Varicella zoster can be a severe and recurrent problem at any stage of HIV infection. Use of acyclovir in doses of 600 to 800 mg orally every 6 to 8 hours helps. *Do not use prednisone.*
 4. Florid seborrheic dermatitis. Use nonfluorinated steroid topically. Also try topical ketoconazole cream; some patients respond.
 5. Watch for other syndromes: psoriasis, herpetic ulcerations, *molluscum contagiosum*, and do not overlook *syphilis*.

V. Lymph Nodes

Patients with HIV infection will universally develop generalized lymphadenopathy. The nodes are multiple, oftentimes symmetric, not fixed, and not hard. Biopsy will reveal follicular hyperplasia with an immunoblastic response. As time passes, the lymphadenopathy tends to diminish. The pathology on biopsy will involute and change to more of a lymphocyte-depleted node. This

is often a prodrome to OIs, so with disappearance of previously known lymphadenopathy, watch carefully. In addition, the following generalizations, while not universal, are true more often than not:

1. If one or a group of nodes rapidly enlarges, think lymphadenopathic KS or lymphoma.
2. If femoral (not inguinal), abdominal (i.e., para-aortic and/or retroperitoneal) nodes develop, think lymphadenopathic KS or lymphoma.
3. If hilar adenopathy develops, think lymphoma, MTB or MAI.

VI. Fever of Unknown Origin (FUO):

FUO with or without other signs such as anemia, liver dysfunction and splenomegaly: suspect disseminated MAI or lymphoma. Obviously many of the other OIs are included in differential diagnosis, but MAI is most common. To evaluate, the best and most common way to isolate is not in sputum but in cultures of the buffy coat of the blood. Sputum, of course, may show AFB as well as stool, urine, bone marrow and liver, and rectal swabs are frequently positive. Unfortunately, disseminated MAI does not respond well to antituberculous medication, even in the non-immunocompromised host, and in this author's experience is not a treatable OI. (Ansamycin and clofazamine which appear effective in vitro are not generally effective in vivo.) Treatment of localized disease, such as scrofula or pneumonia, has included Isoniazid, rifampin, ethionamide and amikacin (ansamycin or clofazamine being added in 1 pt oho replaced) with good response in nine of the author's patients.

VII. Retinal Problems

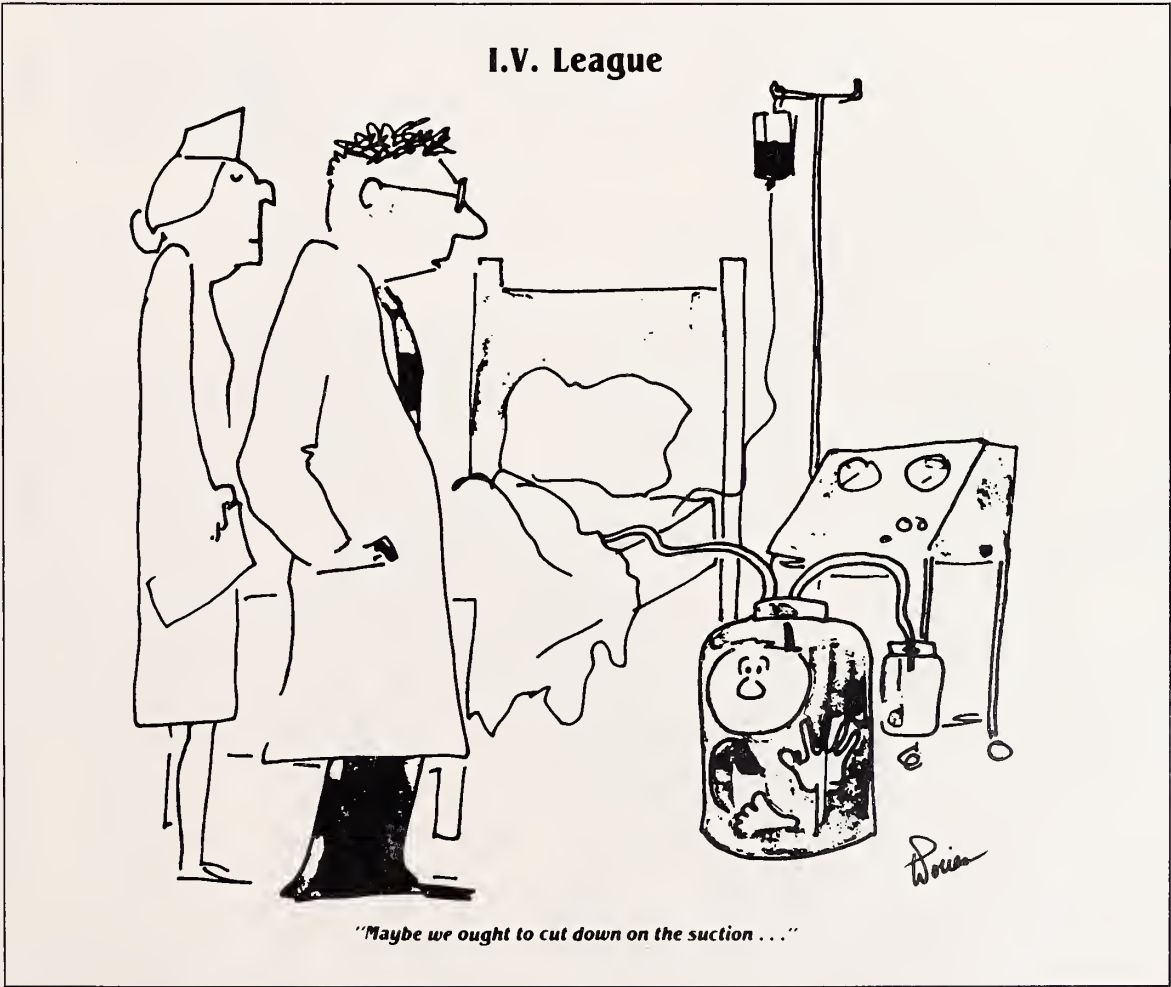
It is not uncommon to find "cotton wool" exudates in evaluation of a person with AIDS, especially those who have had or have PCP. These are generally asymptomatic, nonprogressive and may be due to HIV infection of the retina itself. Some patients may complain of mild visual defects which tend to remain stable.

A much more virulent retinitis is seen secondary to CMV. It presents initially with symptoms which may be indistinguishable from "floaters." This may rapidly progress to dark spots in the visual field, and if left untreated, may rapidly progress to blindness. Ophthalmologic examination on dilated pupils is in order. If this opportunistic retinitis is confirmed, cultures of throat, blood and urine for CMV are indicated for confirmation (not just CMV antibodies, which are frequently elevated in HIV infected individuals). The experimental drug ganciclovir (DHPG) in doses of 5 mg/kg IV every 12 hours has been quite effective. This drug can be obtained directly from one pharmaceutical company (Syntex) and through clinical investigators, including this author. The major and most frequent problem with its use in patients with AIDS is neutropenia which is dose-limiting. Interestingly enough,

thrombocytopenia is more often seen in other immunocompromised hosts, such as patients with renal transplants; nevertheless, platelet counts should also be carefully monitored. One must also include the possibilities of toxoplasmosis and syphilis in the differential diagnosis of this retinitis. ■

**Glossary of Abbreviations
Used in This Primer**

ABG	Arterial Blood Gasses	DHPG	Ganciclovir
AFB	Acid-fast Bacillus	DMSO	Dimethylsulfoxide
AZT	Azidothymidine (Retrovir)	FUO	Fever of Unknown Origin
C&S	Culture and Sensitivity	G6PD	Glucose-6 Phosphatase Deficiency
CMV	Cytomegalovirus	HIV	Human Immunodeficiency Virus (formerly known as HTLV-III, LAV-1)
CNS	Central Nervous System	HSV	Herpes Simplex Virus
CT	Computerized Tomography	KS	Kaposi's Sarcoma
CXR	Chest X-ray	MAI	<i>Mycobacterium avium intracellulare</i>
		MRI	Magnetic Resonance Imaging
		MTB	<i>Mycobacterium tuberculosis</i>
		OI	Opportunistic Infection
		PCP	<i>Pneumocystis carinii</i> Pneumonia
		PML	Progressive Multifocal Leukoencephalopathy
		TEN	Toxic Epidermal Necrolysis
		TMP/SMX	Trimethoprim/sulfamethoxazole (Septra DS, Bactrim DS)
		TOXO	<i>Toxoplasma gondii</i>



This cartoon, by Walter J. Pories, M.D., is the first of several that the *Journal* is fortunate to publish. Dr. Pories is from the Department of Surgery, East Carolina University School of Medicine, Greenville 27858-4354.

The Number Of Blue Cross and Blue Shield Subscribers Is Reaching Epidemic Proportions.

More and more people are signing up for Blue Cross and Blue Shield coverage at a faster and faster rate. Today we have over a million subscribers in North Carolina. And when you include subscribers' family members, the number is closer to two million. There are a lot of reasons for that success. But a large part of it is attributable to the variety of plans we offer. We provide a greater choice of group plans than any other carrier in the state. And we're giving



employers the opportunity to let each employee pick a plan that suits him or her best. We also offer coverage to people who don't qualify for group.


So next time you peek into your waiting room, chances are you'll be looking at a room full of our subscribers. Subscribers who have come to us for quality coverage and to you for quality care.



**Blue Cross[®]
Blue Shield[®]**
of North Carolina

The Choice Of Nearly
Two Million North Carolinians.
©1988 Blue Cross and Blue Shield of North Carolina





"Living in the city
is lonely enough...
with herpes it's like
solitary confinement."

ZOVIRAX[®]
(acyclovir)
CAPSULES

**Prevent genital herpes
recurrences
month after month with
daily therapy.**

(In controlled studies, recurrences were
totally prevented for 4 to 6 months in up to
75% of patients.)

*Please see last page of this advertisement for
brief summary of prescribing information.*

ZOVIRAX[®] (acyclovir) CAPSULES

**Help free your
patients from
recurrences.**

Daily therapy

Coping with genital herpes is rarely easy. For some, the worst part is the pain and discomfort of frequent attacks — month after month, year after year. For others, the emotional burden presents a more difficult problem, leading to social isolation, anxiety, and diminished self-esteem.

Prevent or reduce recurrences

Although your patients have to live with herpes, they shouldn't have to suffer. Daily therapy with ZOVIRAX CAPSULES can help free them from the cycle of recurrent genital herpes. For many, one capsule three times a day can suppress recurrences completely while on therapy.

Generally well tolerated

Daily therapy with ZOVIRAX CAPSULES is generally well tolerated. The most frequent adverse reactions reported during clinical trials were headache, diarrhea, nausea/vomiting, vertigo, and arthralgia.

The physical and emotional difficulties posed by genital herpes are unique for each patient. The frequency and severity of recurrent episodes, as well as the emotional impact of the disease, should be considered when selecting daily therapy with ZOVIRAX CAPSULES.

*Please see brief summary of
prescribing information on next page.*



Prevent recurrences month after month*

ZOVIRAX®

(acyclovir)

CAPSULES

Brief Summary

INDICATIONS AND USAGE: Zovirax Capsules are indicated for the treatment of initial episodes and the management of recurrent episodes of genital herpes in certain patients.

The severity of disease is variable depending upon the immune status of the patient, the frequency and duration of episodes, and the degree of cutaneous or systemic involvement. These factors should determine patient management, which may include symptomatic support and counseling only, or the institution of specific therapy. The physical, emotional and psycho-social difficulties posed by herpes infections as well as the degree of debilitation, particularly in immunocompromised patients, are unique for each patient, and the physician should determine therapeutic alternatives based on his or her understanding of the individual patient's needs. Thus Zovirax Capsules are not appropriate in treating all genital herpes infections. The following guidelines may be useful in weighing the benefit/risk considerations in specific disease categories:

First Episodes (primary and nonprimary infections — commonly known as initial genital herpes):

Double-blind, placebo-controlled studies have demonstrated that orally administered Zovirax significantly reduced the duration of acute infection (detection of virus in lesions by tissue culture) and lesion healing. The duration of pain and new lesion formation was decreased in some patient groups. The promptness of initiation of therapy and/or the patient's prior exposure to Herpes simplex virus may influence the degree of benefit from therapy. Patients with mild disease may derive less benefit than those with more severe episodes. In patients with extremely severe episodes, in which prostration, central nervous system involvement, urinary retention or inability to take oral medication require hospitalization and more aggressive management, therapy may be best initiated with intravenous Zovirax.

Recurrent Episodes:

Double-blind, placebo-controlled studies in patients with frequent recurrences (6 or more episodes per year) have shown that Zovirax Capsules given for 4 to 6 months prevented or reduced the frequency and/or severity of recurrences in greater than 95% of patients. Clinical recurrences were prevented in 40 to 75% of patients. Some patients experienced increased severity of the first episode following cessation of therapy; the severity of subsequent episodes and the effect on the natural history of the disease are still under study.

The safety and efficacy of orally administered acyclovir in the suppression of frequent episodes of genital herpes have been established only for up to 6 months. Chronic suppressive therapy is most appropriate when, in the judgement of the physician, the benefits of such a regimen outweigh known or potential adverse effects. In general, Zovirax Capsules should not be used for the suppression of recurrent disease in mildly affected patients. Unanswered questions concerning the human relevance of *in vitro* mutagenicity studies and reproductive toxicity studies in animals given very high doses of acyclovir for short periods (see Carcinogenesis, Mutagenesis, Impairment of Fertility) should be borne in mind when designing long-term management for individual patients. Discussion of these issues with patients will provide them the opportunity to weigh the potential for toxicity against the severity of their disease. Thus, this regimen should be considered only for appropriate patients and only for six months until the results of ongoing studies allow a more precise evaluation of the benefit/risk assessment of prolonged therapy.

Limited studies have shown that there are certain patients for whom intermittent short-term treatment of recurrent episodes is effective. This approach may be more appropriate than a suppressive regimen in patients with infrequent recurrences.

Immunocompromised patients with recurrent herpes infections can be treated with either intermittent or chronic suppressive therapy. Clinically significant resistance, although rare, is more likely to be seen with prolonged or repeated therapy in severely immunocompromised patients with active lesions.

CONTRAINDICATIONS: Zovirax Capsules are contraindicated for patients who develop hypersensitivity or intolerance to the components of the formulation.

WARNINGS: Zovirax Capsules are intended for oral ingestion only.

PRECAUTIONS: General: Zovirax has caused decreased spermatogenesis at high doses in some animals and mutagenesis in some acute studies at high concentrations of drug (see PRECAUTIONS — Carcinogenesis, Mutagenesis, Impairment of Fertility). The recommended dosage and length of treatment should not be exceeded (see DOSAGE AND ADMINISTRATION).

Exposure of Herpes simplex isolates to acyclovir *in vitro* can lead to the emergence of less sensitive viruses. The possibility of the appearance of less sensitive viruses in man must be borne in mind when treating patients. The relationship between the *in vitro* sensitivity of Herpes simplex virus to acyclovir and clinical response to therapy has yet to be established.

Because of the possibility that less sensitive virus may be selected in patients who are receiving acyclovir, all patients should be advised to take particular care to avoid potential transmission of virus if active lesions are present while they are on therapy. In severely immunocompromised patients, the physician should be aware that prolonged or repeated courses of acyclovir may result in selection of resistant viruses which may not fully respond to continued acyclovir therapy.

Drug Interactions: Co-administration of probenecid with intravenous acyclovir has been shown to increase the mean half-life and the area under the concentration-time curve. Urinary excretion and renal clearance were correspondingly reduced.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Acyclovir was tested in lifetime bioassays in rats and mice at single daily doses of 50, 150 and 450 mg/kg given by gavage. There was no statistically significant difference in the incidence of tumors between treated and control animals, nor did acyclovir shorten the latency of tumors. In 2 *in vitro* cell transformation assays, used to provide preliminary assessment of potential oncogenicity in advance of these more definitive life-time bioassays in rodents, conflicting results were obtained. Acyclovir was positive at the highest dose used in one system and the resulting morphologically transformed cells formed tumors when inoculated into immunosuppressed, syngeneic, weanling mice. Acyclovir was negative in another transformation system considered less sensitive.

In acute studies, there was an increase, not statistically significant, in the incidence of chromosomal damage at maximum tolerated parenteral doses of 100 mg/kg acyclovir in rats but not Chinese hamsters; higher doses of 500 and 1000 mg/kg were clastogenic in Chinese hamsters. In addition, no activity was found after 5 days dosing in a dominant lethal study in mice. In 6 of 11 microbial and mammalian cell assays, no evidence of mutagenicity was observed. At 3 loci in a Chinese hamster ovary cell line, the results were inconclusive. In 2 mammalian cell assays (human lymphocytes and L5178Y mouse lymphoma cells *in vitro*), positive responses for mutagenicity and chromosomal damage occurred, but only at concentrations at least 400 times the acyclovir plasma levels achieved in man.

Acyclovir has not been shown to impair fertility or reproduction in mice (450 mg/kg/day, p.o.) or in rats (25 mg/kg/day, s.c.). At 50 mg/kg/day s.c. in the rat, there was a statistically significant increase in post-implantation loss, but no concomitant decrease in litter size. In female rabbits treated subcutaneously with acyclovir subsequent to mating, there was a statistically significant decrease in implantation efficiency but no concomitant decrease in litter size at a dose of 50 mg/kg/day. No effect upon implantation efficiency was observed when the same dose was administered intravenously. In a rat peri- and postnatal study at 50 mg/kg/day s.c., there was a statistically significant decrease in the group mean numbers of corpora lutea, total implantation sites and live fetuses in the F₁ generation. Although not statistically significant, there was also a dose related decrease in group mean numbers of live fetuses and implantation sites at 12.5 mg/kg/day and 25 mg/kg/day, s.c. The intravenous administration of 100 mg/kg/day, a dose known to cause obstructive nephropathy in rabbits, caused a significant increase in fetal resorptions and a corresponding decrease in litter size. However, at a

maximum tolerated intravenous dose of 50 mg/kg/day in rabbits, there were no drug-related reproductive effects.

Intraperitoneal doses of 320 or 80 mg/kg/day acyclovir given to rats for 1 and 6 months, respectively, caused testicular atrophy. Testicular atrophy was persistent through the 4-week postdose recovery phase after 320 mg/kg/day; some evidence of recovery of sperm production was evident 30 days post-dose. Intravenous doses of 100 and 200 mg/kg/day acyclovir given to dogs for 31 days caused aspermatogenesis. Testicles were normal in dogs given 50 mg/kg/day, i.v. for one month.

Pregnancy: Teratogenic Effects: Pregnancy Category C. Acyclovir was not teratogenic in the mouse (450 mg/kg/day, p.o.), rat (50 mg/kg/day, s.c.) or rabbit (50 mg/kg/day, s.c. and i.v.). There are no adequate and well-controlled studies in pregnant women. Acyclovir should not be used during pregnancy unless the potential benefit justifies the potential risk to the fetus. Although acyclovir was not teratogenic in animal studies, the drug's potential for causing chromosome breaks at high concentration should be taken into consideration in making this determination.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Zovirax is administered to a nursing woman. In nursing mothers, consideration should be given to not using acyclovir treatment or discontinuing breastfeeding.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS — Short-Term Administration: The most frequent adverse reactions reported during clinical trials were nausea and/or vomiting in 8 of 298 patient treatments (2.7%) and headache in 2 of 298 (0.6%). Less frequent adverse reactions, each of which occurred in 1 of 298 patient treatments (0.3%), included diarrhea, dizziness, anorexia, fatigue, edema, skin rash, leg pain, inguinal adenopathy, medication taste and sore throat.

Long-Term Administration: The most frequent adverse reactions reported in studies of daily therapy for 3 to 6 months were headache in 33 of 251 patients (13.1%), diarrhea in 22 of 251 (8.8%), nausea and/or vomiting in 20 of 251 (8.0%), vertigo in 9 of 251 (3.6%), and arthralgia in 9 of 251 (3.6%). Less frequent adverse reactions, each of which occurred in less than 3% of the 251 patients (see number of patients in parentheses), included skin rash (7), insomnia (4), fatigue (7), fever (4), palpitations (1), sore throat (2), superficial thrombophlebitis (1), muscle cramps (2), pars planitis (1), menstrual abnormality (4), acne (3), lymphadenopathy (2), irritability (1), accelerated hair loss (1), and depression (1).

DOSAGE AND ADMINISTRATION: Treatment of initial genital herpes: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 10 days (total 50 capsules).

Chronic suppressive therapy for recurrent disease: One 200 mg capsule 3 times daily for up to 6 months. Some patients may require more drug, up to one 200 mg capsule 5 times daily for up to 6 months.

Intermittent Therapy: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 5 days (total 25 capsules). Therapy should be initiated at the earliest sign or symptom (prodrome) of recurrence.

Patients With Acute or Chronic Renal Impairment: One 200 mg capsule every 12 hours is recommended for patients with creatinine clearance ≤ 10 ml/min/1.73 m².

HOW SUPPLIED: Zovirax Capsules (blue, opaque) containing 200 mg acyclovir and printed with "Wellcome ZOVIRAX 200" - Bottles of 100 (NDC-0081-0991-55) and unit dose pack of 100 (NDC-0081-0991-56).

Store at 15°-30°C (59°-86°F) and protect from light.

*In controlled studies, recurrences were totally prevented for 4 to 6 months in up to 75% of patients.

Burroughs Wellcome Co., Research Triangle Park, North Carolina 27709



Interstitial Irradiation in the Management of Recurrent Carcinoma of the Cervix

After Previous Radiation Therapy

Marcus E. Randall, M.D., and Rolland J. Barrett, M.D.

Early carcinomas of the cervix are treated with either surgery or radiotherapy with good results.¹ More advanced disease is best treated with radiotherapy alone or on a treatment protocol including radiotherapy.² Even with optimal surgical or radiotherapeutic treatment, some patients experience local recurrences, and these present difficult management problems for the clinician. Although localized, such recurrences usually produce considerable morbidity and ultimately result in death if left untreated.

Interstitial radiotherapy is the use of ionizing radiation sources implanted directly into a tumor to achieve local cancerocidal effects. Since the surrounding tissues receive very little radiation with this technique, and radiation tolerance of the cervix and vagina is quite high, interstitial radiotherapy is an option for treating locally recurrent cervical carcinomas, even after previous radiotherapy.

This report communicates our early experience with interstitial radiotherapy at North Carolina Baptist Hospital/Bowman Gray School of Medicine by reviewing our initial two cases.

Case Histories

Patient One

A 40-year-old woman (gravida 0, para 0) was treated with definitive radiotherapy in 1971 for a FIGO Stage IB squamous carcinoma of the cervix. She received 3500 cGy (1 cGy = 1 rad) to the pelvis followed by two Manchester intracavitary applications of 3000 cGy each. She did well until early 1985, when she developed postcoital bleeding,

and a Pap test obtained at that time proved abnormal. She underwent hysterectomy, but her Pap tests continued to be abnormal, with biopsies revealing carcinoma in situ. Laser vaporizations carried out on several occasions failed to normalize the Pap test. In mid-1986, biopsy of a visible lesion at the vaginal cuff was positive for invasive squamous cell carcinoma. Physical examination was significant for a 2.5 cm friable area of erythema, apparently superficial, at the vaginal cuff. Although pelvic fibrosis secondary to previous radiotherapy and surgery was noted on exam, the vaginal tissues appeared quite healthy. A thorough work-up revealed no other evidence of disease.

Treatment options included pelvic exenteration and interstitial radiotherapy. After being apprised of the potential morbidities with each approach, the patient accepted the recommendation of permanent interstitial implantation of the local recurrence at the vaginal cuff. Therefore, a planar gold-198 seed implant was carried out delivering 5500 cGy to an approximate volume of 3.7 x 3.1 x 1.2 cm, with the dose rapidly decreasing with increasing distance from this volume. Twenty-two months after interstitial implantation, the patient is without clinical or pathologic evidence of disease.

Patient Two

A 71-year-old woman (gravida 3, para 3) first presented in April, 1976, with squamous carcinoma in situ of the cervix and endometrial hyperplasia, found during cervical conization and fractional dilation and curettage. The patient again presented in April, 1978, for evaluation of postmenopausal bleeding and a Class IV Pap test. Endocervical curettage revealed invasive, well-differentiated squamous cell carcinoma of the cervix. Pelvic examination showed the cervix to be normal in size and appearance, with an estimated diameter of 3.5 cm. Invasive carcinoma was diagnosed, and the patient underwent external irradiation administered by a 6-meV linear accelerator using anterior and

From the Department of Radiology, Section on Radiation Therapy (MER), and the Department of Obstetrics and Gynecologic Oncology (RJB), Bowman Gray School of Medicine, 300 S. Hawthorne Rd., Winston-Salem 27103. Reprint requests to Marcus E. Randall, M.D.

posterior fields. A midplane dose of 3500 cGy was delivered in 25 fractions. This treatment was followed by two Manchester intracavitary cesium insertions, each delivering 3000 cGy to point A.

Follow-up continued on a regular basis. In August, 1986, the patient presented with a six-week history of watery vaginal discharge but was otherwise asymptomatic. Examination revealed an ulcerated lesion 2 cm in diameter at the right vaginal apex with no palpable extension into the paravaginal tissue. Biopsy of this lesion revealed invasive, moderately differentiated squamous cell carcinoma. Chest x-ray and cystoscopic examination were normal. On a computed tomography scan of the pelvis, the cervix appeared to be enlarged, but there was no evidence of paracervical abnormalities, adenopathy, or distant metastatic disease.

The patient underwent interstitial implantation of seven hollow needles using the Syed-Neblett Interstitial Template (Rad/Irid Inc., Capitol Heights, MD). The implant was then after loaded with seven iridium-192 ribbons containing six seeds per ribbon (5-cm active length), and a volume dose of 5500 cGy was delivered over a period of six and a half days.

The patient has been examined on a regular basis since her interstitial therapy. Post-treatment changes have included some erythema and induration of the right vaginal apex and vaginal sidewall with no clinical, cytologic, or histologic evidence of recurrent neoplasm. The patient is without evidence of recurrence or complications 21 months after re-irradiation.

Discussion

Cervical carcinoma is the second most common malignancy of the female genital tract. Currently available treatments result in high cure rates, particularly in early-stage disease. Local recurrences in early disease are uncommon with adequate initial therapy^{3,4} but become progressively more common with increasing stage. Additionally, some patients with cervical cancer develop new vaginal primary malignancies after treatment of their earlier cancer. A likely explanation is the "field effect" of carcinogens on the squamous epithelium of the lower female reproductive tract, as described by Marcus.⁵

When local recurrences or new primary carcinomas are diagnosed, it is important to rule out metastatic disease to the extent possible if aggressive treatment measures are to be considered. Since cervical carcinomas usually demonstrate local spread in advance of distant spread, a substantial number of patients with central recurrences have truly localized disease and are candidates for additional treatment with curative intent.

"Salvage" treatment in such patients is complicated by the effects of the previous therapy, either surgical or radiotherapeutic. The consensus treatment of choice in patients failing primary surgical therapy is radiotherapy. In

those patients failing primary radiotherapy, pelvic exenteration offers an 18% to 60% chance of salvage in selected patients.⁶⁻¹⁰ Unfortunately, pelvic exenteration is associated with significant morbidity risks, including genitourinary complications, small bowel obstruction, rectovaginal fistulae, small bowel fistulae, and infectious complications.^{7,11} An overall treatment-related mortality of 9.6% has been reported, with risks increasing in older patients and in patients requiring total exenterations.⁷

Radiation therapy given with curative intent in patients failing initial radiotherapy has produced varying results. Murphy and Schmitz,¹² reporting a five-year survival of 20% in a population with advanced recurrences, concluded that re-irradiation for recurrent cancer of the cervix is an "indicated and hopeful procedure." However, five of nine survivors developed radiation-related complications.

Jones and colleagues¹³ found that four of 31 patients (13%) with recurrences were five-year survivors after re-irradiation. Interestingly, patients developing a recurrence more than five years after initial treatment demonstrated a 40% five-year survival rate. Excellent results were obtained when brachytherapy could be used. Nevertheless, the authors were discouraged by the large numbers of complications and the low overall salvage rate.

Evans and colleagues¹⁴ obtained a 6.2% five-year survival rate after re-irradiation in unresectable recurrent cancer of the cervix. The authors noted palliative responses in some patients and found that treated patients had a better survival rate than patients receiving no radiotherapy. All survivors developed the recurrence one year or more after initial treatment.

Nori and colleagues¹⁵ used interstitial radiotherapy to treat 75 patients with recurrent cervical carcinoma. Forty-seven had been treated with radiotherapy initially, and many had advanced disease with sidewall involvement or positive para-aortic nodes. Thirty-four of 75 patients (45%) had no evidence of disease at one year, with 10% having no evidence of disease at five years. Symptoms such as pain, bleeding, and lower extremity edema were frequently palliated. Patients with recurrences limited to the vagina, cervix, or periurethral area had a five-year survival rate of 31%. Late complications, including partial small bowel obstruction, rectovaginal fistulae, and radiation proctitis, were observed in five patients.

Fourteen patients with recurrent cervical carcinomas were treated with interstitial radiotherapy by Puthawala and colleagues.¹⁶ All had received previous radiotherapy. Half obtained local control and four were alive with local control at a minimum follow-up time of two years.

Prempre and colleagues¹⁷ re-irradiated 10 patients with recurrent cervical carcinoma; six patients had no evidence of disease two and a half to 11 years after re-treatment. Palliation of symptoms was achieved in all patients. Only one patient developed a serious complication requiring surgical intervention. Re-irradiation techniques were individualized for specific clinical situations, with three patients

treated with brachytherapy only.

Russell and colleagues¹⁸ treated 25 women with a second course of irradiation for either recurrent carcinoma or a second primary pelvic malignancy. Fourteen patients (56%) had no evidence of disease at follow-up times ranging from 10 to 61 months after treatment. Of nine patients treated only with brachytherapy, six (67%) obtained local control and none of these six developed complications. This result contrasts markedly with the 16 patients who received additional external beam radiotherapy, eight of whom obtained local control. Of these eight, seven developed pelvic complications requiring surgery.

The use of additional external beam radiation in patients previously treated adequately with this modality is hazardous and should be undertaken only after consideration of all other treatment options and risks involved. However, interstitial radiotherapy is an attractive option because it is tailored to the specific lesion. The dose decreases as a function of the square of the distance (inverse square law), and the surrounding uninvolved areas receive little additional radiation. Furthermore, it is a well-recognized phenomenon that tolerance to radiotherapy increases as treatment volumes decrease, and treatment volumes are substantially lower with interstitial radiotherapy than with external beam radiotherapy.

We recommend interstitial radiotherapy for selected patients with localized, small-volume, centrally recurrent carcinomas of the cervix, even after previous definitive radiotherapy. This modality may also be appropriate for selected patients with second primary carcinomas arising in the vagina after previous radiotherapy. We base this judgment on the significant curative potential of interstitial radiotherapy, considering the clinical situation, and its relatively low risk of morbidity when compared to exenterative surgery. However, improper selection of patients, poor performance of procedures, and inadequate follow-up are destined to give poor results. Therefore, interstitial radiotherapy requires close cooperation between the radiation oncologist and gynecologic oncologist, proper technical support (medical physicists, dosimetrists, computer technology, radiation safety procedures, and personnel), and significant experience with interstitial brachytherapy. ■

References

- 1 Brady LW. Surgery or radiation therapy for Stage I and IIA carcinoma of the cervix. *Int J Radiat Oncol Biol Phys* 1979;5:1877-9.
- 2 Krochak R. Strategies in late stage cervix carcinoma. *Gynecol Oncol* 1986;23:336-45.
- 3 Perez CA, Breaux S, Madoc-Jones H, et al. Radiation therapy alone in the treatment of carcinoma of uterine cervix: I. Analysis of tumor recurrence. *Cancer* 1983;51:1393-402.
- 4 Adcock LL, Potish RA, Julian TM, et al. Carcinoma of the cervix, FIGO Stage IB: treatment failures. *Gynecol Oncol* 1984;18:218-25.

- 5 Marcus SL. Multiple squamous cell carcinomas involving the cervix, vagina, and vulva: the theory of multicentric origin. *Am J Obstet Gynecol* 1960;80:802-12.
- 6 Morley GW, Lindenauer SM. Pelvic exenterative therapy for gynecologic malignancy. An analysis of 70 cases. *Cancer* 1976;38:581-6.
- 7 Orr JW Jr., Shingleton HM, Hatch KD, et al. Gastrointestinal complications associated with pelvic exenteration. *Am J Obstet Gynecol* 1983;145:325-32.
- 8 Barber HRK. Management of failures and complications of cancer of the cervix. *Int J Radiat Oncol Biol Phys* 1979;5:2143-5.
- 9 Symmonds RE, Pratt JH, Webb MJ. Exenterative operations: experience with 198 patients. *Am J Obstet Gynecol* 1975;121:907-18.
- 10 Rutledge FN, Smith JP, Wharton JT, O'Quinn AG. Pelvic exenteration: analysis of 296 patients. *Am J Obstet Gynecol* 1977;129:881-92.
- 11 Roberts WS, Cavanagh D, Bryson SC, et al. Major morbidity after pelvic exenteration: a seven-year experience. *Obstet Gynecol* 1987;69:617-21.
- 12 Murphy WT, Schmitz A. The results of re-irradiation in cancer of the cervix. *Radiology* 1956;67:378-85.
- 13 Jones TK Jr., Levitt SH, King ER. Retreatment of persistent and recurrent carcinoma of the cervix with irradiation. *Radiology* 1970;95:167-74.
- 14 Evans SR Jr, Hilaris BS, Barber HRK. External vs. interstitial irradiation in unresectable recurrent cancer of the cervix. *Cancer* 1971;28:1284-8.
- 15 Nori D, Hilaris BS, Kim HS, et al. Interstitial irradiation in recurrent gynecological cancer. *Int J Radiat Oncol Biol Phys* 1981;7:1513-7.
- 16 Puthawala AA, Syed AMN, Fleming PA, DiDaia PJ. Re-irradiation with interstitial implant for recurrent pelvic malignancies. *Cancer* 1982;50:2810-4.
- 17 Prempre T, Amornmarn R, Villasanta U, et al. Retreatment of very late recurrent invasive squamous cell carcinoma of the cervix with irradiation. *Cancer* 1984;54:1950-5.
- 18 Russell AH, Koh W-J, Markette K, et al. Radical re-irradiation for recurrent or second primary carcinoma of the female reproductive tract. *Gynecol Oncol* 1987;27:226-32.

ō·mō·hūn'·drō communications

Writing and editing for the medical and health sciences

"He writes nothing whose writings are not read."

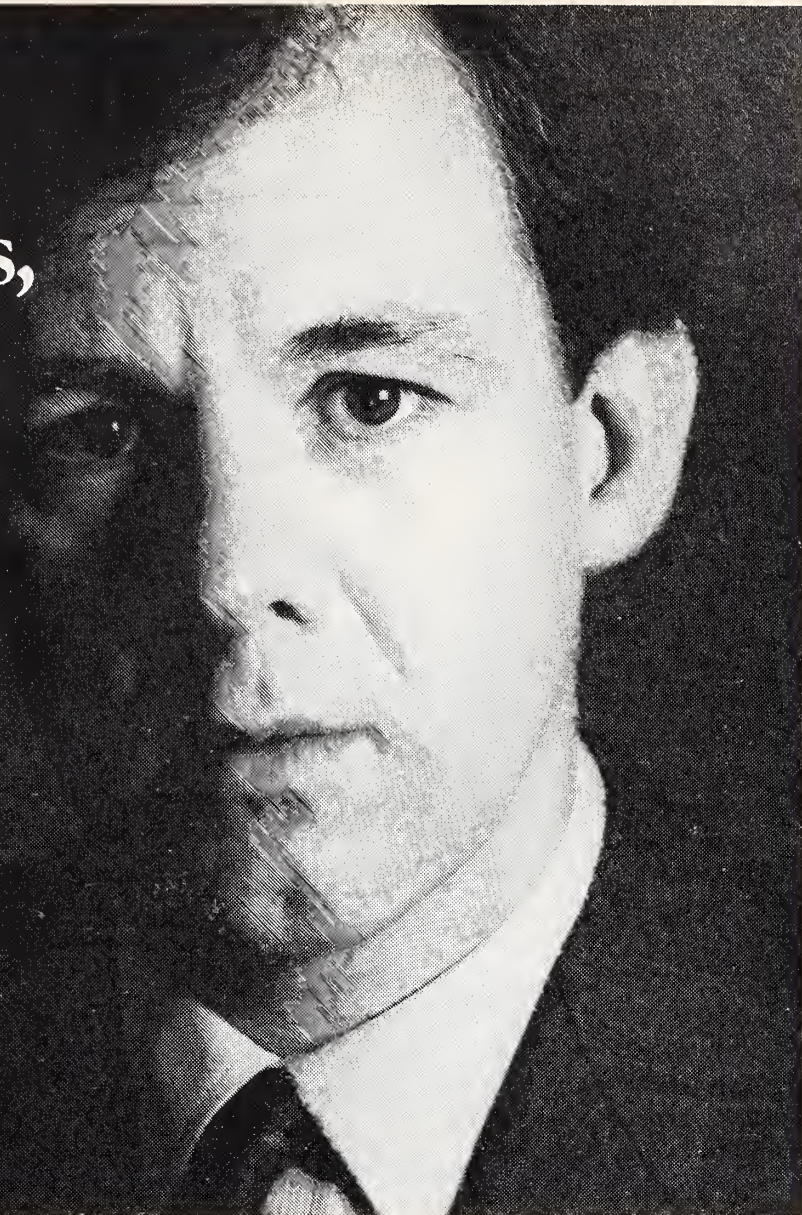
Marcus Valerius Martialis

For further information about
our capabilities and experience: (919) 493-2060

1412 Vickers Avenue

Durham North Carolina 27707

**"I've gone
through a bypass,
6 months of
physical therapy
and now
I'm supposed
to come up
with a \$150,000
malpractice
tail premium."**



This could be a real situation. Worse, it could happen to you because of a "loop-hole" in your malpractice coverage.

Even though Claims Made malpractice insurance extends protection if you face a lawsuit after retirement or death, most policies provide no protection if you return to work during a disability, even if you return to your occupational specialty.

So you may be forced to pay a whopping premium—the tail premium—in order to maintain your malpractice tail coverage.

If your malpractice insurance company doesn't waive this tail premium, there's only one policy in the marketplace designed to cover it: MONY's new Distinction Disability Insurance Series.

DISTINCTION™

The Intelligent Choice In Disability Income

MONY
FINANCIAL SERVICES

Sue Anne Schoonderwoerd
P.O. Box 95161, Raleigh 27625
(919) 872-8666

The Mutual Life Insurance Company of New York, NY, NY.

Malpractice protection is only part of the story.

Malpractice Tail Premium Coverage is only one of the reasons MONY's Distinction is a different approach to disability insurance. It meets your needs.

- ☐ Your coverage cannot be canceled. No restrictions can ever be added.
- ☐ We're a mutual company and any dividends we pay can actually reduce the cost of your policy.

Please send me more information on MONY's
Malpractice **Tail** Rider.

Name: _____

Address: _____

Phone: () - _____ Age: _____ Tail
Amount: _____

Sue Ann Schoonderwoerd
(919/872-8666)

MONY
FINANCIAL SERVICES

P.O. Box 95161
Raleigh, North Carolina 27625

THE ARMY RESERVE OFFERS NEW FINANCIAL INCENTIVES FOR RESIDENTS.



If you are a resident in Anesthesiology or Surgery*, the Army Reserve has a new and exciting opportunity for you. The new Specialized Training Assistance Program will provide you with financial incentives while you're training in one of these specialties.

Here's how the program can work for you. If you qualify, you may be selected to participate in the Specialized Training Program. You'll serve in a local Army Reserve medical unit with flexible scheduling so it won't interfere with your residency

training, and in addition to your regular monthly Reserve pay, you'll receive a stipend of \$644 a month.

You'll also have the opportunity to practice your specialty for two weeks a year at one of the Army's prestigious Medical Centers.

Find out more about the Army Reserve's new Specialized Training Assistance Program.

Call or write your US Army Medical Department Reserve Personnel Counselor:

**Army Reserve Health Care Team
2634 Chapel Hill Blvd.
Suite 205
Durham, NC 27707-2875
(919) 493-1364 Collect**

* General, Orthopaedic, Neuro, Colon/Rectal, Cardio/Thoracic, Pediatric, Peripheral/Vascular, or Plastic Surgery.

ARMY RESERVE MEDICINE. BE ALL YOU CAN BE.

Now America's oldest professional liability insurer has come to North Carolina.

The newest professional liability insurer in North Carolina is the oldest in the nation. The Medical Protective Company pioneered the concept of professional protection before the turn of the century and has been serving doctors exclusively ever since. Through good times and bad.

With the current liability crisis escalating, you need to take a close look at your coverage and the company that stands behind it. Then take a close look at us. You'll see we carry the highest

rating from A.M. Best, the firm that tracks the financial stability of insurance companies nationwide. Beyond that, you'll find complete protection at premium rates that are likely lower than you're currently paying. Plus the personal attention and claims prevention assistance you deserve.

Contact Stu Mitchelson today at 704/541-8020. He's the oldest company's representative in its newest state. And he's here to serve you.

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

Stuart Mitchelson, P.O. Box 13489
Charlotte, North Carolina 28211, (704) 541-8020

Freestanding Outpatient Surgical Center

License Number One

Lewis F. Brinton, M.D.

Approximately 15 years ago I took a month off from my surgical practice to do some medical-missionary work in Zimbabwe (then known as Rhodesia). I practiced in an African hospital setting where few of the local population could afford to stay, and would often return home after surgery to be cared for by their families. In evaluating post-operative status I noted that those patients who were taken care of at home after their surgery often did much better than other patients who stayed in the hospital after surgery. I left the missionary field with new perspectives and felt the long-range goal in surgery should be toward outpatient surgery.

In 1973 I began to think about instituting outpatient surgery in the town in which I was practicing. I approached the local hospital board about the possibility of building an outpatient surgery facility adjacent to the hospital, but my ideas were voted down. Meanwhile, I had visited a freestanding outpatient surgical facility in Arizona and found that indeed the facility seemed to be serving the community efficiently and economically. Why not build my own freestanding facility on the property adjacent to my office? After several years of politicking in North Carolina and going before various committees, including the governor's committee, I finally obtained a certificate of need to build my facility.

Brinton Outpatient Surgical facility was completed and became operational in 1976. However, no insurance company would reimburse for surgery done in an outpatient setting as our society was so oriented toward lengthy inpatient stays. I was restricted to performing surgery on cases that were considered cosmetic, with the requirement that patients pay in advance of the surgical procedure. I continued to pursue third-party coverage and was finally told that if a statute were passed by the North Carolina Department of Human Resources addressing outpatient surgery with directing guidelines for the standard of care, then my facility would be recognized for third-party reimbursement. I worked closely with my local representative, and such a statute was

passed in Raleigh. Brinton Surgical Center proudly became the holder of Freestanding Outpatient Surgical Center license number ONE in North Carolina.

The dream for an outpatient facility had become a struggle and had finally become a reality. My facility had now come into its own; it was recognized by legislation and in turn recognized for third-party reimbursement. I had paved the way for other facilities like mine to come into being and to offer a safe and economical alternative to hospital surgery care.

Procedures in the Outpatient Surgical Setting

Major operative procedures can be performed safely in an outpatient surgery setting. Patients undergoing major procedures generally have a better postoperative course. When I opened my center more than ten years ago, I performed minor surgeries which required little preoperative and post-operative care. With the progression of time, my surgical procedures have increased in variety and complexity. Now I perform major operative procedures such as cholecystectomies, total abdominal hysterectomies, salpingoplasties, herniorrhaphies and modified radical mastectomies at Brinton Outpatient Surgical Center.

Proper selection of patients for outpatient surgery is of utmost importance. The surgeon needs to be familiar with every aspect of the patient. A thorough history and physical examination is imperative. Adequate laboratory tests are necessary including a type and cross-match if there is a chance of excessive blood loss. A large chest x-ray and ECG should be done on all patients undergoing major surgery, especially those over age 35. If there is a chance of a contaminated field, the use of antibiotics is recommended.

In evaluating the patient I make the following observations and considerations. A very obese patient is a poor risk and is not recommended for major outpatient procedures. Vital capacity studies must be done on a patient who is a heavy smoker or who has evidence of chronic obstructive

From Outpatient Surgical Center, Brinton Surgical Center, P.A., 603 East Center Ave., Mooresville 28115.

pulmonary disease. If the studies indicate severe respiratory disease, the patient ought to be referred for hospital care. Candidates for hysterectomies should be examined and questioned carefully for any previous pelvic surgery. Determine if any possible injury to the ureters has ever occurred so the best operative course can be planned. An ultrasound study of the common duct is recommended in the workup of a cholecystectomy patient.

At Brinton Surgical Center we mandate preoperative and postoperative home visitation for patients undergoing major outpatient surgery. An office nurse reviews home conditions, including the physical aspects of the setting, as well as the availability of supportive care. At the same time, the patient and family are given the opportunity to ask questions in the familiarity of their home. If the environment or supportive care are found unsuitable, then hospitalization will be suggested.

The patients are seen on their first postoperative day in my office. Furthermore, home visitations are made by the nurse to assess the level of postoperative adaptation.

Patient attitude is of primary importance. Patients who prefer to have surgery on an outpatient basis are obviously the most favorable candidates for major procedures. Patients who hesitate or state a strong preference for hospital care should be referred for surgery in the hospital. A positive attitude about outpatient surgery is an important key to favorable surgical outcome and to a successful postoperative course.

In undertaking major cases such as the cholecystectomy and hysterectomy, it is necessary to have well educated and trained assistants. Surgical technicians and/or registered nurses trained in the concept of outpatient surgery should assist. The surgeon should have experience and confidence in the outpatient surgical setting. If the surgeon only has hospital experience with major cases, he or she should become more experienced before considering doing major outpatient surgery.

The surgeon in an outpatient surgery setting must bear in mind that the patient will be returning home after the procedure and must operate so as to minimize postoperative complications. He or she must be able to recognize and correct mistakes. If the common duct or the ureter is injured, the surgeon should be experienced in recognizing and repairing the injury. As the surgery progresses the bleeding should be controlled; a "bloodless" technique should be used. I would recommend using the electrocautery and frequent ties. If there is any question regarding the use of a drain, use it. Use a hemo-vac if there is concern of "ooze" following cases such as mastectomies. Use a urovac or foley catheter if there is a possibility of urinary retention or trauma to the bladder. Explain the possible use of drains and catheters prior to surgery and instruct the patient and family in the appropriate postoperative care. The surgeon should try to be conservative. If there is a questionable bleeder, apply a tie. If the blood vessel is large, apply a double tie. The surgeon will "sleep better."

Anesthesia

An important factor in successful major outpatient surgery at Brinton Surgical Center is the use of reliable and well-trained anesthetists. The anesthetist should be one who is trained and experienced in giving anesthesia in major outpatient cases. Anesthesia should be sufficient to carry the patient through surgery while reducing recovery time. Modern technology has given us the use of sophisticated monitors for operative patient care. Brinton Outpatient Surgical Center uses four monitors during each surgery. The first is the conventional ECG monitor. The second is the dinamap-blood pressure computer, which measures the heart rate and the systolic, diastolic, and mean arterial pressures. The third is the pulse oximeter, which measures the amount of oxygen in the blood. The fourth monitor in use is the oxygen analyzer. Patients are informed of these monitors beforehand to allay their anxiety about anesthesia care.

Proper patient selection, thorough patient physical examination, appropriate history evaluation, and the use of the correct surgical procedure all are important when performing major surgical cases in the outpatient setting. If the surgeon adheres to these guidelines then I do not see why cholecystectomies, hysterectomies, and modified radical mastectomies cannot be performed in an outpatient surgical center. The medical profession will be pleased to find that carefully selected patients will probably experience a better postoperative course than those patients having surgery in a hospital setting.

The Status of Outpatient Surgery in North Carolina

North Carolina now has approximately 30 freestanding outpatient surgical facilities, with new ones being added regularly. I was fortunate to help found the Association of Ambulatory Surgical Centers of North Carolina, the first such state organized society in the country. We became chartered in 1985, and 90% of the outpatient facilities in North Carolina are members. The association is used as a problem-sharing group as well as an educational resource.

Outpatient surgery in North Carolina is an accepted practice now, with many hospitals having outpatient surgery departments (including the hospital that rejected my original outpatient surgery plans for their facility). Most insurance companies offer 100% reimbursement for surgical procedures done in these facilities, while offering only 80% reimbursement for those done in an inpatient setting. This reimbursement policy of third-party payers is a complete about-face from their denial of outpatient surgery claims just over ten years ago.

With the new acceptance by third-party reimbursers and the growing expertise of surgeons in the outpatient surgery field, we find that we can do more and more complex cases safely and efficiently in the outpatient surgery setting. ■

Nature's Prescription For Relaxation!

A new oceanfront home! This 5 brm, 3½ bath, luxury home has super amenities and location. Choose colors and carpet. Call for details.	A custom oceanfront home built with an eye for detail! Ceramic baths, Jacuzzi tub, marble hearth, full-size bar, wrap around decking and much, much more. \$295,000.	An oceanfront home at a price you won't believe! This 3 brm, 2 bath cottage has a super rental history. New roof, paint, carpet, flooring, and heat pump last year. A super view of the Atlantic and lots of decking. \$169,000.	Watch the sun rise for \$20,000 less than to see it set! A steal at \$137,500 for this 4 brm, 2 bath oceanfront duplex half. Furnished and ready for occupancy!
Oceanfront Amenities! This duplex half was created for comfort. The 4 brm, 3 bath floor plan is very functional, the amenities are excellent. Custom stained glass windows, cedar ceilings, covered cabana, sprinkler system, landscaped, Anderson windows and doors.	What a location for a vacation! This oceanfront duplex sports 3 brms and 2 baths per side. Strong rental unit. Being sold with designer furnishings. From "soup to nuts". \$360,000.	Superbly crafted oceanfront home with incredible gourmet kitchen. This is one you must see! For quite possibly the best-built home on the island, call for details.	1607 Emerald Drive. This 4 brm, 2 bath Hattaras plan sits on a high 3rd row lot. Enclosed garage and storage below. Only 2 years old! REDUCED FOR QUICK SALE: \$108,900.
At last, an affordable waterfront bungalow! This 3 brm, 1 bath packs plenty including an incredible view of the ICW, a large deck, and dock. Only \$110,000.	Catch a wave to see this incredible deal at the Point! Large 5 brm, 4 bath home with a view of the ocean. Price includes appliances and furnishings. \$110,000.	Spacious County living at it's finest! This 3 brm, 2 bath custom beauty has formal dining and living rooms ceramic baths, and screened porch. Located in a sound front community with marina!	Contemporary home with 150' of sandy beach on Core Sound! Plenty of room inside and a guest house for Mom and Dad. Price reduced! Call office for more details.
A quiet contemporary beauty. This custom 3 brm, 2 bath home is located in a beautiful soundfront community. Deeded boat access and recreation facilities. \$99,500.	Did you say you can't afford a place at the beach! Here's your answer! This 12 x 60' mobile home has 3 brm, and 2 baths. Comes with it's own lot for only \$60,000.	Pebble Beach Condominium Unit A-307 - furnished, tastefully decorated oceanfront unit! Excellent rental history. \$160,000.	Pebble Beach Condominium Unit D-202, 2nd floor unit with 3 brm, 2 baths - Good ocean view. \$145,000.
Pebble Beach Condominium Unit D-102, close to beach and pool - furnished. Tennis courts & club house. \$140,000.	Pebble Beach Condominium Unit D-105. Oceanside unit with balcony overlooking pool and clubhouse. Furnished with good rental history. \$140,000.	Point Emerald Villas, Unit 306-C. Good rental history on this ocean view condo - tennis, pools & beach. \$110,000.	We have several good commercial properties available. Please call and let us know what you are looking for.

● CHOICE BUILDING SITES ●

WATERFRONT

- Try to find an oceanfront lot for less. Duplex lot, ready to build on. \$148,500.
- A gorgeous, **large** soundfront lot with great privacy. \$150,000.
- Soundfront lot with good ocean access. Quite, private neighborhood. \$100,000.
- The least expensive soundfront lot on the beach! Private subdivision. \$81,990.

INTERIOR

- Beacon's Reach subdivision, Pine Knoll Shores. Lot 10. A super lot overlooking the lagoon. Amenities include pools, tennis courts, private beach, marinas. A beautiful development. \$65,000.
- a super high 3rd row with great views of ocean. Plenty of trees. \$65,000.
- Good 4th row lot on Pinewood Drive. Good beach access. \$45,000.

- We have over 30 lots from \$12,000 - \$212,000. Please call for a complete list.

Coast Realty and Construction Company has quality investments ranging from \$10,000 - \$10,000,000.
For further information about these and other fine properties,
please contact:

COAST REALTY AND CONSTRUCTION COMPANY

7703 Emerald Drive
Emerald Isle, NC 28594
(919) 354-3700

NORTH CAROLINA MEDICAL JOURNAL

For Patients

VOLUME 49 / NUMBER 6 / JUNE 1988

Insect Sting

Why We Need a Lay Program for Dealing with the Emergency of a Severe Allergic Reaction

CLAUDE A. FRAZIER, M.D.

Allergy to insect stings is a very real medical problem. Hypersensitivity to the venom of Hymenoptera — bees, wasps, hornets, yellow jackets and ants — can present some surprises to both physician and patient, for symptoms of a generalized systemic reaction can occur out of the blue. A patient who has been stung many times without untoward results can have a severe reaction to a sting, or such a reaction may occur in a patient who has had only one prior sting, a long-forgotten one, usually one that occurred in childhood; for contrary to common belief a person does not have to have a prior reaction to suffer a fatal reaction.

Several other factors make allergy to insect venom hazardous. One is the swiftness with which an allergic reaction can become potentially fatal, frequently within half an hour of a sting, often within ten to fifteen minutes, and sometimes within three to five. A second factor is that encounters with Hymenoptera are apt to occur a good distance from a physician's office or a hospital emergency room. A third factor, suggested in a recent study by Dr. John H. Toogood, is that beta-blockers prescribed for allergic patients who have angina or hypertension may increase the severity and possibly the incidence of severe

anaphylaxis upon exposure to allergens such as insect venom. Dr. Toogood has stated that prompt administration of epinephrine followed by other necessary measures may be necessary to save a person's life. Therefore, considering the number of individuals at risk of a sudden and fulminating anaphylactic reaction to insect venom (and foods and drugs), I believe there is a vital need for a more comprehensive program of emergency medical care.

Before outlining such a program, perhaps it would be wise to discuss the various possible reactions to insect venom.

Reactions: Normal, Local, Toxic, and Systemic

A *normal* reaction generally consists of a little redness at the sting site, momentary pain, perhaps some slight swelling, and usually a bit of intense itching after the pain subsides. No real treatment is needed other than a good wash with soap and water to prevent infection, except in the case of a bee sting when the stinger and attached venom sac should be scraped out immediately (squeezing only forces more venom into the wound).

A *local* reaction may be a little more alarming, for considerable swelling may occur contiguous to the sting

From Doctor's Park, Building 4c, Asheville 28801

site; but even so such a reaction presents no real problem unless infection is involved. Ice application often resolves the swelling quickly.

A *toxic* reaction following multiple stings resembles that of an allergic reaction and is equally life-threatening. It, too, requires immediate treatment to save the person's life.

An *allergic* or *generalized systemic* reaction differs from a normal or local reaction in that a number of body systems such as the respiratory, skin and cardiovascular become involved. A mild allergic reaction may consist of no more than itching of the eyes, mouth, and ears, flushing of the skin, widespread urticaria and perhaps a dry cough. A moderate reaction would consist of several of these symptoms plus, perhaps, abdominal pain, nausea, wheezing and a sense of constriction in the throat and chest. A severe reaction may present some or all of the above symptoms with the addition of anxiety, confusion, dyspnea, marked weakness, and the shock signs of plummeting blood pressure, cyanosis, collapse and unconsciousness. Immediate intervention is called for even when symptoms of a mild allergic reaction occur, since the reaction can progress from mild to anaphylactic shock in a matter of minutes.

Epinephrine

The drug of choice, of course, is injectable epinephrine 1:1000 administered subcutaneously in dosages of 0.3 to 0.5 cc for adults, 0.2 to 0.3 cc for children. Epinephrine is short-acting, and a second dose may be administered after ten minutes. Epinephrine's action as a vasoconstrictor stabilizes blood pressure, and as it acts to relax the bronchioles it relieves respiratory distress. When administered early, it can stave off rapidly escalating symptoms of shock long enough to transport the patient to a physician or hospital for further necessary medical care.

Epinephrine does have contraindications for those who suffer from severe hypertension, narrow-angle glaucoma, or coronary insufficiency, and must also be employed with care for those who suffer diabetes or hyperthyroidism and for pregnant women. The elderly, too, may require caution. However, the dosages necessary to abate a severe systemic reaction to insect venom are small enough to carry little risk for patients suffering the above conditions. There is no contraindication to epinephrine if a person is suffering an anaphylactic reaction.

A Program for Laypersons

The speed with which a generalized systemic reaction to insect venom can become life-threatening, the inconsis-

tency of this allergy, which makes prediction of who will suffer such a reaction exceedingly difficult, and the fact that the majority of patients stung are some distance from medical aid, prompted me to initiate a program that would make it allowable for trained lay individuals, in positions of responsibility for public safety, to possess and to administer premeasured epinephrine in emergency situations when no physician is immediately available. Such people would be forest rangers, registered nurses, emergency medical technicians and paramedics, and school teachers and administrators, especially in rural areas. I myself would include such individuals as golf pros, lifeguards and summer camp operators.

Such a program, of course, has required changes in state medical practice and liability laws. Presently, close to a dozen states, including North Carolina, have enacted enabling legislation, and several other states have the appropriate legislation under consideration. Physicians conduct the training program and certify applicants, who must then attend an annual retraining and recertification program under the guidance of the state's Board of Medical Examiners. Certified individuals can carry syringes of premeasured epinephrine in their first-aid supplies, and are authorized to administer it subcutaneously for emergency on-the-spot treatment of allergic reactions, with or without the specific authorization of a physician and when a physician is not immediately available.

This program received the following endorsement from the Executive Committee of the American Academy of Allergy: "It is reasonable, appropriate and important that properly instructed laypersons and paramedical personnel be allowed to administer epinephrine as recommended by a physician to insect-allergic patients in the event of severe allergic reactions."

The American Medical Association has provided a model bill, approved by their Board of Trustees, to medical societies in the various states. It reads in part:

It is the purpose of this Act to provide a means of authorizing certain individuals when a physician is not immediately available to administer life-saving treatment to those persons who have severe adverse reactions to insect stings" (Section 2).

"Educational training programs required by this Act shall be conducted by a physician licensed to practice medicine in this state. The Curriculum shall minimally include the following subjects:

- (a) recognition of the symptoms of systemic reactions to insect stings;
- (b) the proper administration of a subcutaneous injection of epinephrine" (Section 4).

"No cause of action shall arise against a certificate holder authorized by this Act, for any act or omission of such certificate holder when acting in good faith while rendering emergency treatment pursuant to

the authority granted by this Act, except where such conduct amounts to gross negligence" (Section 8).

The AMA model bill calls for recertification of authorized non-physicians annually, as does the North Carolina Board of Medical Examiners pursuant to House Bill 1233, passed by the General Assembly of the state in 1981, to:

" . . . promote a means of training individuals to administer life-saving treatment to persons who suffer a severe adverse reaction to insect stings. Individuals, upon successful completion of this training program, may be approved by the Board of Medical Examiners to administer epinephrine to these persons, in the absence of the availability of physicians or other practitioners who are authorized to administer the treatment. This training may also be offered as part of the emergency medical training program."

I would like to add that conducting a training program for non-physicians who are responsible for public safety would not be time-consuming for the physician-teacher,

nor would it incur expense. It is my hope that all physicians will become involved in such training programs of these laypersons, who may be the instruments for saving lives when none of us can be reached in time. I have copies of the training program I have used in my district and will be happy to share them with any interested colleague. I also have a collection of slides that I can have reproduced for anyone who desires to use them. Surely one life so needlessly lost for lack of a small amount of epinephrine is worth the small amount of time each of us needs to devote to this program. ■

References

- 1 Frazier CA. Insect allergy: allergic and toxic reactions to insects and other arthropods. (Revised). Warren H. Green, Inc., 1985.
- 2 Frazier CA. Insects and allergy: and what to do about them. University of Oklahoma Press, 1980.



Keeping Lice at Bay

Useful Tips for Patients

ELLEN RUDY CLORE, R.N.

About three million Americans are affected by head lice infestation each year, and most public health officials concur that the incidence is increasing. Head lice infestation may be traumatic, but the little pests can be dispatched with a minimum of fuss. These tips will help parents and children.

There are many myths surrounding transmission of head lice. One of the most prevalent is that good hygiene and hair cleanliness will prevent infestation. This is not true. Lice are indiscriminate. They like clean hair as well as dirty, short as well as long. Interpersonal contact is the key to transmission.

Prevention

Fortunately, there are some preventive measures parents can take to reduce the chance that their children will be infested:

- Discourage sharing of hair brushes, combs, headgear, radio headphones. These are some of the easiest ways for lice to be transmitted from one child to another.
- Encourage your children's school to establish a policy of assigning individual coathooks or lockers. The incidence of lice infestation tends to be higher in classrooms where more than one child shares the same storage space for clothing and personal belongings.
- Try to keep children in their own beds. Statistics show that more than half of children with head lice have family members who are also infested. Sharing beds and personal belongings puts children at risk of infestation.

Family Nurse Practitioner and Assistant Professor, University of Florida Graduate College of Nursing at Orlando. Reprint requests: Burroughs Wellcome Co., 3030 Cornwallis Road, Research Triangle Park 27709.

Identification

Head lice are sometimes difficult to identify. They are tiny insects approximately one to two millimeters long. Lice nits (eggs) can be mistaken for dandruff. However, unlike dandruff, nits cannot be easily combed out. A tell-tale sign of lice infestation is itching of the scalp, ears and neck. A definitive diagnosis is based on the observation of live adults, nymphs or nits. To identify lice, here are some things parents can do:

- Perform head checks regularly, and institute weekly head checks during "lice season" — the peak months are August through November.
- Search for lice and nits in the following areas: behind the ears, at the crown of the head and at the nape of the neck. A magnifying glass may be helpful in spotting the tiny lice and nits.
- Check towels, after towel drying a child's head, for signs of lice. Although it is impossible to drown lice, they tend to seek a calmer haven if they have been roughed up during towel drying.
- Examine your child's closet to see if lice have made the journey from garment to garment, particularly hats or caps.

Treatment

Effective treatment of head lice includes three steps: use of a pediculicide (delousing medication); removal of nits; and cleaning of personal items and the environment (i.e., pillows, furniture). Such measures can help kill live lice and prevent eggs from hatching, thereby avoiding a reinfection. Here are some specifics:

- Consult your doctor if you believe your child has head lice. While lice infestation is not normally serious, it can lead to infection brought on by intense scratching. To treat the problem your doctor can prescribe an effective pediculicide and phone this in to a pharmacy for you.

- Ask your doctor about the newest treatment, which has "single application" effectiveness. Most lice shampoos and rinses are not effective with the first application and must be reapplied several days later. However, permethrin (Nix) 1% creme rinse is both pediculicidal (kills lice) and ovicidal (kills eggs) with one application. It is available by prescription only.

- Carefully clean clothing and personal belongings that could be carrying lice. Infested clothing should be washed in very hot water and put through a dryer cycle on high heat for at least 20 minutes. Clothing that cannot take high temperatures should be dry cleaned.

- An alternative to dry cleaning is to put items in *sealed* plastic bags for 14 days. Don't forget stuffed animals when cleaning the environment.

- Don't forget to "nit pick." Many schools will not permit children to return to the classroom unless they are "nit free." Nit picking can be made easier by using a specially designed comb, such as one provided with many pediculicides.

- Don't suspect your pets are lice carriers. Pets may drag in a lot of little critters but a head louse is not one of them. Pets do not need to be treated or observed for human head lice.

- Check your child regularly for lice and nits.

- On the subject of blame, the by-word is: don't. Lice infestation can be traumatic to both the parent and child. Educate children to treat grooming aids such as combs and brushes as they would a tooth brush — a personal item not for sharing. ■

CHILD'S PLAY IS NOT ENOUGH.



Surveys indicate that many parents overestimate the physical fitness of their children because they appear so active. The fact is, to be physically fit, children need one to two *hours* of vigorous exercise each day.

With the right amount of daily exercise, teenagers and children of all ages will get the most from school . . . and play.

For more information, write to:
Fitness, Dept. 84, Washington,
DC 20001.

*Fitness is
feeling GREAT!*



**The President's Council on
Physical Fitness and Sports**

Causes and Prevention of Cancer

Studies suggest that up to 80% of all cancer cases are due to environmental causes such as diet, lifestyle, and specific habits — such as smoking. All of these involve exposure to cancer-causing agents called carcinogens. Heredity and genetic makeup of an individual — things we can do nothing about — are considered primary causes of only a small percentage of cancer cases.

According to the North Carolina Medical Society, of environmental risk factors — the things we can do something about — smoking definitely tops the list. People who smoke have a ten times greater chance of getting cancer than people who don't smoke. Overexposure to the ultraviolet rays of the sun, too much fat in the diet, excessive alcohol consumption, and some chemicals such as asbestos are other risk factors that should be avoided.

Many cancers are thought to be caused by a two-stage process involving exposure to initiators, substances that "pave the way" for cancer, and subsequent exposure to promoters, substances that actually cause cancer. For example, people who both drink alcoholic beverages and smoke multiply their chances of developing cancer tremendously.

On the other hand, foods high in fiber, low in fat, and low enough in calories to keep you trim and fit may help you avoid cancer. Include fresh fruits and vegetables, whole grains and cereals in your diet. In addition, there is some evidence that foods rich in vitamin A, such as carrots and cabbage, may help protect against cancer.

Even though you may be at greater risk for developing cancer because of factors over which you literally have no control — your inherited genetic makeup, for example — you can reduce your chances of developing cancer. Maintain a healthy diet, give up smoking and heavy drinking, and avoid too much sunlight, particularly if you are fair-skinned. Simply put, the more damage you allow environmental factors to do to you during your life, and the less you do to protect yourself, the greater your chance of developing cancer.

AUTHORS

INSTRUCTIONS FOR SUBMITTING PAPERS

Copyright of an article published in the *North Carolina Medical Journal* is retained by the author, but the copyright to each entire issue is the property of The North Carolina Medical Society, and permission to reprint all or any part of a published article must be negotiated with the author and the editor jointly. The reprinted material must carry a credit line signifying that it appeared in the *North Carolina Medical Journal*.

Medical articles, editorials, patient oriented articles, letters to the editor and all other text submitted for publication must be double-spaced throughout, including references and legends. The material should be typed on one side of the paper with 1¼ inch margins all around. Do not use an all-caps or a script typeface. Submit one original and one copy. Please be sure to include your phone number.

The author is responsible for the accuracy of all statements and references. Acronyms and other abbreviations should be kept to a minimum; *any acronym used should be fully translated in the text*. Refer to pharmaceutical products by their generic names; brand names may follow in parentheses. Units of measure should appear in the metric system. References, typed double-spaced, should be listed in the order of their citation in the text, not alphabetically. They should follow the style used in the *Journal*.

Illustrations should be black and white glossy prints or color or black and white slides, with legends typed in double-space on a separate sheet of paper. Since the *Journal* has a limited budget for color, it may be a factor in publishing color illustrations.

Attach to the two copies of the manuscript a cover letter giving the address and telephone number of the person who will correspond about it, and address the completed communication to the Editor, Box 3910, Duke University Medical Center, Durham, NC 27710.

All manuscripts are subject to editorial changes. If extensive revision is necessary, the author may be sent a draft of the edited article for approval before publication. The author will be sent galley proofs if the paper is published.

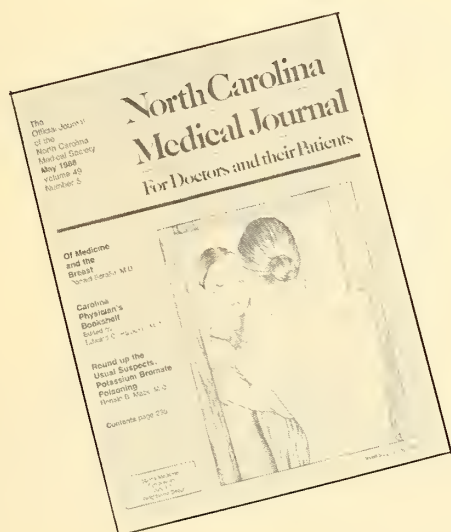
Authors interested in more effective writing may find *The Elements of Style* by Strunk and White and *How to Write and Publish a Scientific Paper* by Day helpful.

Extracted, with permission, from *Virginia Medical* with thanks.

What better gift for a student, intern or resident?

North Carolina Medical Journal

Subscribe for yourself or a friend



Please enclose a check or money order for:

☐ \$12.60 (NC Residents; this includes 5% sales tax)

☐ \$12.00 (out of state subscribers)

☐ New ☐ Renewal

Send to NCMJ, Box 3910 DUMC
Durham 27710. (919/684-5728)

Please start my 1-year subscription:

My Name _____

Address _____

City/State/Zip _____

Please send a 1-year gift subscription to:

Name _____

Address _____

City/State/Zip _____

You're The Experts In Medicine.

We're The Experts At Preventing Problems In Your Practice.

Medical Mutual is the physician-owned and physician-directed company committed to preventing problems in your practice *before* they occur. Through formal programs and day-to-day assistance, we help you identify areas of risk, reduce potential problems, and enhance your practice.

For example, our Medical Practice Survey brings specially trained staff to your office to audit the peripheral areas we've learned can create problems. The survey—which includes everything from documentation of patient drug

allergies to length of waiting time—offers practical suggestions for reducing your exposure.

Just as important, Medical Mutual provides ongoing assistance to respond promptly to your calls and questions. With 12 years of experience in professional liability coverage, we are the source of information for North Carolina. And if we don't have the answer, we'll find it for you.



Medical Mutual
Medical Insurance Agency, Inc.

Medical Mutual. We'll be there when you need us.

Medical Mutual Insurance Company of North Carolina and its subsidiary, Medical Insurance Agency, Inc., are located at 222 North Person Street, Raleigh, NC 27611 919/828-9334 800/662-7917

In North Carolina, when you decide to prescribe Librium,

To protect your prescription...



**You sign
on the right.**

Librium[®]

brand of

chlordiazepoxide HCl/Roche [Ⓢ]

5-mg, 10-mg, 25-mg capsules

ROCHE[®]

Copyright © 1987 by Roche Products Inc., Manati, Puerto Rico 00701. All rights reserved.

Liver Transplantation

Initiation of the First Program in North Carolina

Richard McCann, M.D., R. Randal Bollinger, M.D., Ph.D.,
William C. Meyers, M.D., Timothy J. Quill, M.D.,
and Paul G. Killenberg, M.D.

The first orthotopic liver transplantation in a human was performed by Dr. Thomas Starzl at the University of Colorado on March 1, 1963. In 1967 the first patient to enjoy extended survival was reported, also by Dr. Starzl. During the next decade the majority of liver transplantation procedures in humans were performed at just two centers, Dr. Starzl's in Denver or Dr. Calne's in Cambridge, England. In 1980 Cyclosporine became available for experimental trials in liver transplants. This and perhaps several other factors resulted in a dramatic improvement in long-term survival. In June 1983, the National Institutes of Health (NIH) convened a consensus development conference on liver transplantation.

At that time, approximately one thousand liver transplantation procedures had been performed worldwide, and these were critically reviewed by the consensus panel. It was concluded that "liver transplantation is a promising alternative to current therapy in the management of the late phase of several forms of serious liver disease. Candidates include children and adults suffering from irreversible liver injury who have exhausted alternative medical and surgical treatments and are approaching the terminal phase of their illness."¹

It was at this time that liver transplantation passed from the experimental into the therapeutic realm, and a much larger number of institutions began offering the procedure.

Duke University Medical Center has had an active renal transplantation program since 1964. Research programs in chronic liver disease, surgical aspects of hepatic and biliary disease, immunobiology of tissue transplantation, and experimental transplantation of a number of solid organs were all in place and active. From this base arose an interest in providing liver transplantation to North Carolina patients. Representatives from the Division of Surgical Transplantation attended the NIH Consensus Development Confer-

ence and also visited Dr. Starzl's program, which was now in Pittsburgh. An experimental program in liver transplantation in animals was established in the spring of 1983. In the fall of 1984 it was felt that we had gained sufficient technical experience to begin offering the service to patients.

First Liver Transplant Procedure in North Carolina

The first candidate was referred by a Duke-trained physician who was now practicing in rural Georgia. The patient was a 32-year-old mother of two with a slow-growing but massive hepatoma involving both lobes of the liver. She had been surgically explored at another teaching hospital and was found to be unresectable. It was clear that her only hope for survival beyond a few months was successful liver transplantation. She was admitted for pre-transplant evaluation. The protocol is the same today as it was then. It includes evaluation by members of the transplant team including a hepatologist, surgeons, and anesthesiologists; consultations with psychiatry, radiology, hematology and others as appropriate; appropriate studies, including evaluation of liver vascular, biliary, and histological anatomy; and determination of the ability of other organ systems, including pulmonary, cardiac and renal, to withstand the surgical procedure. The primary transplant team of surgeons and hepatologists then re-appraises the patient's candidacy for transplantation. Next a donor is needed. In this case, three weeks following our patient's acceptance as a candidate, a donor became available in a nearby community hospital. On November 13, 1984, the first human liver transplant procedure in North Carolina was performed.

The procedure required nine hours, which is still the average. Only 10 units of blood transfusion were required, which is well below the average, probably because of the absence of portal hypertension. The new liver functioned immediately, and the patient made a prompt and uneventful

From the Departments of Surgery, Anesthesiology, and Medicine, Duke University Medical Center, Durham 27710.

recovery. She was discharged from the hospital three weeks postoperatively. This initial success spawned encouragement and enthusiasm which have continued.

Patient Characteristics

Since the first procedure was performed, 24 more liver transplant procedures have been performed in 23 patients at Duke University Medical Center through December 1987. These include a total of 13 females and 10 males. Fourteen of the 23 patients were North Carolina residents. The remaining patients were residents of neighboring states, including Virginia, South Carolina, and West Virginia. The geographic distribution of the recipients is indicated in figure 1.

Of the 25 harvesting procedures, only eight donor organs originated from North Carolina. The remainder were obtained from hospitals in the Eastern United States as far north as Michigan and as far south as Florida. The distant organs were obtained through the United Network for Organ Sharing, which is the national computer center that coordinates extra-renal organ sharing throughout the country.

The mean age of recipients was 37, with a range from one to 57 years. The most common diagnosis was primary biliary cirrhosis, which was the cause of liver failure in six of the recipients. Other diagnoses included hepatoma, fibrosarcoma of the liver, biliary atresia, sclerosing cholangitis, cryptogenic cirrhosis, cystic fibrosis, hemochroma-

tosis, Budd-Chiari syndrome, alpha-1 antitrypsin deficiency, fulminant hepatic necrosis, and methotrexate-induced cirrhosis.

Recipients are matched with donors by blood type and weight (plus 10% to minus 30% of the recipient). The waiting time for a donor once a patient is listed has averaged 51 days (range, one to 351 days). Several patients have succumbed to their liver disease for lack of an appropriate donor prior to medical deterioration.

Operative Procedure

The operative procedure itself is one of the most technically complex in modern surgery. It requires not only expedient surgical technique, but also cooperation and communication among two surgical teams working at remote facilities, as well as anesthesiology. In addition, the procedure requires multiple support and technical personnel, including extracorporeal perfusion technicians, blood bank personnel, and operating room and intensive care unit nurses. Appropriate timing is essential between the surgical team assigned to donor organ harvesting and the second surgical team working on the recipient. The procedure cannot succeed if any one of these many contributions is deficient.

The procedure begins with the harvesting team, consisting of a transplant surgeon, one or more assistants, and one or more transplant coordinators from Carolina Organ Procurement Agency (physician's assistant or registered nurse), traveling to the institution that is housing the prospective donor. Travel is by automobile, helicopter, or leased jet aircraft, as appropriate. At the same time, other personnel bring the prospective patient to Duke Hospital, if he or she is not already confined there. While the surgical team may perform preliminary maneuvers, including insertion of invasive monitoring lines, no irreversible step is taken until word is received from the harvesting team that the harvesting procedure is progressing expeditiously, and that the heart-beating cadaver donor is stable, after they have opened the abdomen and inspected the donor organ. Organs harvested from donors requiring more than minimal pharmacological cardiovascular support have been shown not to function well and are not used unless it is unavoidable.

While the harvest of the donor organ proceeds in the remote location, the surgical team at Duke Hospital commences removing the diseased organ in the recipient. This is often the most technically demanding portion of the procedure because of severe portal hypertension and the frequent impediments of scars and adhesions from previous surgery. The harvesting team, meanwhile, has brought the donated organ to Duke Hospital.

During implantation of the new organ, surgeons must clamp the vena cava above the renal veins and also clamp the portal vein. If not compensated, this will result in a profound decrease in cardiac venous return, hypotension, and shock. In order to alleviate these problems, the lower

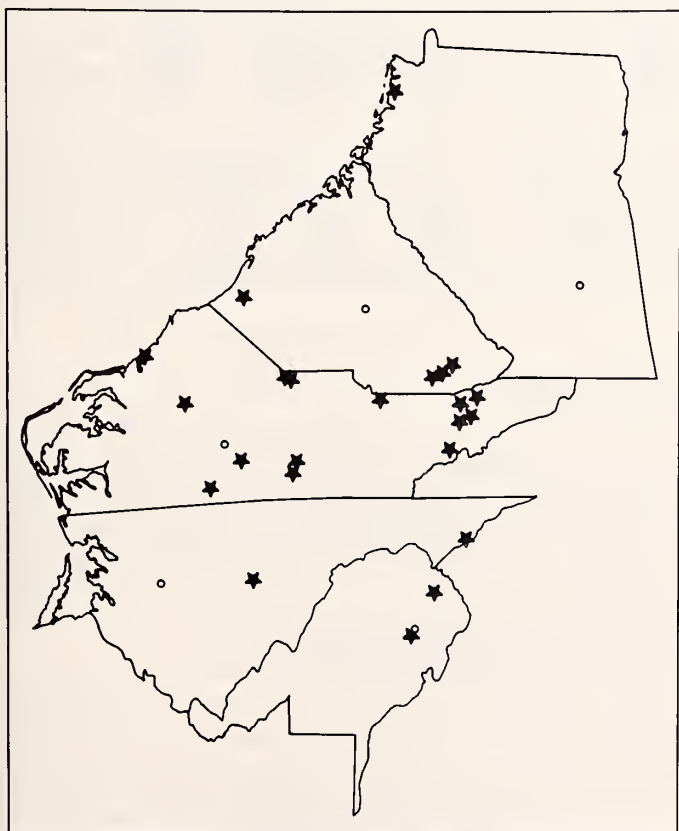


Figure 1. Distribution of liver transplant recipients, for procedures performed at Duke Hospital.

body systemic and portal venous beds are decompressed by cannulating the vena cava retrograde through the femoral vein and the portal vein directly. These cannulae are led to a centrifugal pump (Biomedicus^(R), Inc.) which then pumps the blood to the superior vena cava through a third catheter placed in the axillary vein. This venovenous bypass markedly improves renal function and decreases the incidence of postoperative renal failure requiring hemodialysis.

The anhepatic phase, during which the new liver is implanted in the space created by removal of the diseased one, is marked by physiological fragility. The suprahepatic and infrahepatic vena caval anastomosis are performed, as well as end-to-end portal vein anastomosis. The new organ is then reperfused after being flushed free of the cold Euro-Collins preservation solution in which it has been stored for a period of up to eight hours. The hepatic artery anastomosis is then completed, usually in an end-to-end fashion, and finally the bile ducts are joined, also in end-to-end fashion.

Immediate function of the transplanted organ is necessary for survival. Bile flow usually commences while the patient is on the table, and improvement in coagulopathy is rapid. The anesthesiologist monitors the coagulation properties of the blood continuously with thromboelastography. Replacement therapy is provided as appropriate. In our patients, the average requirement was 14 units (range 1 to 50) of FFP or cryoprecipitate and 16 units (range in adults 4 to 45) of packed red blood cells.

The recovery period depends on the status of the patient preoperatively. Pulmonary and renal insufficiency may occur postoperatively and prolong the convalescent phase. Among our patients, the median number of days in the hospital following transplantation was 28 (range 16 to 253 days).

Results

All patients survived the operative procedure. No patient died on the operating table or in the immediate postoperative period from a surgical complication alone. Sixteen (70%) of the patients survived for more than 30 days postoperatively. Twelve of the 23 patients are alive now, or survived more than one year. Two patients died in the late postoperative period more than one year following their transplantation. One of these patients succumbed to recurrent biliary sepsis associated with hepatic artery thrombosis. The other patient died from recurrent fibrosarcoma. Of patients eligible for two-year follow-up, five out of six were alive at one year and three have survived more than two years with their new livers. Eleven patients died from three to 56 days postoperatively. Of the early deaths, five were due to infections, two to graft failure, two to gastrointestinal hemorrhage, and two to acute rejection.

These results are comparable to those achieved in other institutions,^{2,3} with the exception that we have not had a long-term survival after re-transplant. One patient with a

Table 1

Indications for Liver Transplantation: Adults

Non-malignant Disease
Cirrhosis
Primary Biliary Cirrhosis
Sclerosing Cholangitis
Alpha-1 Antitrypsin Deficiency
Chronic Active Hepatitis
Cryptogenic Cirrhosis
Hemochromatosis
Wilson's Disease
Budd-Chiari Syndrome
Fulminant Hepatic Failure
Malignant Disease
Hepatocellular Carcinoma
Sarcoma of the Liver
Intrahepatic Cholangiocarcinoma

second graft died of infection with a functioning liver, and a child failed to survive an attempt with a segmental graft when an appropriate sized replacement for his first graft could not be found. Our efforts at re-transplantation have been dependent, of course, on scarce donors, and several patients have died while awaiting re-transplant.

Financial considerations

In the current medical climate, the allocation of relatively scarce resources is a valid and appropriate concern. For this reason, we present here the actual cost figures for our transplantation program.

The average hospital charge (exclusive of physician fees, which are billed separately) for liver transplantation is \$104,083 (range \$44,586 to \$572,290). This is not significantly different for survivors compared to non-survivors. Eighty-six percent of the total cost to date has been borne by government or private insurance carriers. Sixty-five percent of the remaining cost is due to a single patient who had a prolonged and complicated, but successful, recovery.

Discussion

Liver transplantation is a prodigiously complex undertaking. It requires a commitment from a large multidisciplinary team including surgery, gastroenterology, anesthesiology, clinical laboratory, blood bank, nursing, and administrative personnel. Commitment from each of these resources is essential in order for a program to succeed.

Liver transplantation has a reasonable likelihood of extending useful life to patients who have irreversible end-stage liver disease. However, these patients must be selected *before* their disease has resulted in multi-organ system damage, which makes the already highly complex surgical procedure excessively complicated and hazardous. Although it is difficult to suggest such a large-scale undertaking to a

Table 2

Indications for Liver Transplantation: Children

Non-malignant Disease
Biliary Atresia after Failed Kasai
Cystic Fibrosis with Liver Failure
Budd-Chiari Syndrome
Cryptogenic Cirrhosis
Neonatal Hepatitis
Intrahepatic Biliary Atresias
Byler's Disease
Alagille's Syndrome
Metabolic Diseases
Wilson's Disease
Tyrosinemia
Protoporphyrria
Glycogen Storage Disease
Crigler-Najjar Syndrome (Type 1)
Lipid Storage Diseases
Hyperlipoproteinemia
Alpha-1 Antitrypsin Deficiency
Fulminant Acute Hepatic Failure
Malignant Disease
Hepatoblastoma
Hepatocellular Carcinoma
Cholangiocarcinoma

patient who has not yet become gravely ill with the intrinsic liver disease, it is our feeling that patients must be considered for transplantation prior to the onset of overt hepatic

failure. Patients with progressive hepatic insufficiency due to the causes listed in table 1 (adults) and table 2 (children) should be referred for evaluation when they are judged to have less than a year to live, when irreversible damage to the central nervous system is inevitable, or when quality of life has deteriorated to an unacceptable level.^{4,5} A majority of these patients can be restored to a useful and productive life at a high but reasonable cost.

Finally, it is important to emphasize that, to date, the donor-recipient balance for North Carolina has been negative. We hope that the new "required request" procedures, and greater awareness of the need, will improve the status of liver transplantation in North Carolina. ■

References

- 1 NIH Consensus Development Conference Summary 1983;4 (7):June 23.
- 2 Starzl TE, Iwatsuki S, Shaw B, et al. Analysis of liver transplantation. *Hepatology* 1984;4:78-98.
- 3 Busuttil RW, Colonna JO II, Hiatt JR, et al. The first 100 liver transplants at UCLA. *Ann Surg* 1987;206:387-402.
- 4 Calne RY, Williams R, Rolles K. Liver transplantation in the adult. *World J Surg* 1986;10:422-31.
- 5 Flye MW, Jendrisak MD. Liver transplantation in the child. *World J Surg* 1986;10:432-41.

THE ULTIMATE TAX SHELTER.

- Fund Your Pension Plans At 25% Of Payroll With A Cost Of Only 5-11% For Staff Employees
- Add A Supplemental Retirement Plan For Key Employee Physicians And Spend No Additional Funds For Staff
- EQUALS: 85-95% Of All Retirement Funding Benefits Allocated To Key Employee Physicians!

For Information Call:

Baron Benefits Management, Inc.

A BARON FINANCIAL COMPANY

Executive Compensation and Employee Benefit Specialists

4110 Wake Forest Road, Suite 211
Raleigh, N.C. 27609
(919) 790-9904/(800) 222-8783

300 Wendover Avenue East, Suite 202
Greensboro, N.C. 27401
(919) 379-8207/(800) 822-1086

“Stuart Factor” (Coagulation Factor X)

A North Carolina Saga

John B. Graham, M.D.

Today's medical students are taught that blood coagulation, a major component of the hemostatic mechanism, is the result of a succession of enzymatic steps in a “coagulation cascade.” One of these enzymes — Factor X (latin ten) — was originally called “Stuart Factor,” because it was discovered (by its absence) in Rufus Stuart, a native of Ashe County, North Carolina.

The heyday of the discovery of clotting factors was roughly 1940 through the mid-1950s. Discovering a “new” clotting factor in those days had the same attention-gaining and career-enhancing effects as cloning a “new” gene has today. The race to discover “new” factors was intense, and the suspense was greatest each year as the time approached for the annual meeting of the Federation of Societies for Experimental Biology. Who would be the next to pull a rabbit out of the hat?

Fibrinogen had been known since the 19th Century; prothrombin had been isolated by 1930, and the existence of the antihemophilic factor, AHF (now F.VIII), had been inferred by researchers in the mid-1930s. The “coagulation cascade” of 1939 consisted of Morawitz's simple 1905 formulation: “Prothrombin yields thrombin; thrombin clots fibrinogen.”¹

In Norway during World War II a “new” type of hemophilia was observed in a woman. It was named “parahemophilia” by its discoverer, and the patient was said to lack “proaccelerin,” a factor distinguishable from AHF. This discovery opened Pandora's box. During the next decade a number of other factors were described, usually by study of a patient whose characteristics did not fit a known pattern. In each instance the discovery of a “new” type of bleeder implied that a “new” clotting factor had been detected.

Each factor was given an interesting name consonant with the idiosyncratic ideas of its discoverer: “serum prothrombin converting factor” (SPCA), “Christmas factor,” “Plasma thromboplastin antecedent” (PTA), “fibrin stabilizing factor,” “Hageman factor,” etc.

Stuart Factor was discovered by this same case-study method. The year was 1955 and a young British physician, Cecil Hougie, applied and was accepted for a position at the University of North Carolina at Chapel Hill in the Pathology Department, even then a world-class center of coagulation research. Gossip in England had led him to suspect that variants of SPCA (now Factor VII) might exist, and he enquired whether we had seen any patients with SPCA deficiency. We had in fact, and one of them, a man named Rufus Stuart, had been studied and the results published.²

Hougie suggested that it might be interesting to re-study Mr. Stuart's blood using the Thromboplastin Generation Test (TGT), a method he had learned at Oxford which had not been used by Mr. Stuart's doctors. The gossip in England, where the TGT was widely used, was that most patients had normal TGT tests, but some had abnormal tests. I went along with his enthusiasm, because it fitted my own plans. I had selected the genetics of blood coagulation as my special interest, and there had not yet been a significant genetic study of SPCA deficiency. Whatever we found out about coagulation was certain to pay off in increased knowledge of genetics.

We located Mr. Stuart in Ashe County near the junction

From the Department of Pathology, University of North Carolina, Chapel Hill 27514.

of the Virginia, Tennessee, and North Carolina boundaries, and arranged a visit.

Dr. Hougie, my 11-year-old son Barrett, and I left Chapel Hill for Ashe County early on the Friday of Thanksgiving week, 1955, in a car filled with syringes, needles, test tubes, paper and pens, and a refrigerated chest for preserving blood samples. It was very cold and windy that weekend. We found Mr. Stuart to be in his late 30s and partially crippled by repeated hemarthroses. He had dropped out of school at the eighth grade level because of his condition, was a Baptist preacher part-time, had five children and made his living by whatever work he could find. He was very cheerful and friendly. His mother was alive, but a brother had apparently died of hemorrhage several years earlier.

During the weekend he conducted us through the hills and valleys of his native heath where we visited and obtained as many blood samples from his relatives as we could. No other members of his family were affected, except possibly his deceased brother. Our tentative hypothesis of an autosomal recessive trait similar to afibrinogenemia, SPCA deficiency, and parahemophilia was supported by Mr. Stuart's disclosure that his mother and father were related as aunt and nephew (his father was the son of his mother's oldest sister). This is a mating type slightly closer than first cousins, which is not unknown in isolated communities where there are also large families.

Thirty-two years later the details of the trip are dim in my memory, but I shall never forget the bad roads, the courteous and friendly people, the clean but very modest homes, suspension foot bridges crossing small fast-moving streams, and the hunters with high-powered rifles stalking deer in the draws of the low, almost treeless mountains. Mr. Stuart did not have an overcoat, and my final action (taken very tentatively so as not to appear patronizing) was to offer him my own which I rarely needed in Chapel Hill. He accepted graciously, and we have been fast friends since.

Dr. Hougie and I made a second trip to Ashe County in the spring of 1956 to complete our collection of samples. Collection went very well, but there were two other events which I have never forgotten. Mr. Stuart's six-year-old son managed to avoid us at first by hiding under the house. At Mr. Stuart's suggestion, we hid inside the house and waited for him. "He'll come in when he gets hungry," Mr. Stuart said, and when he did we corralled him. Mr. Stuart and I have laughed many times about the capture of young Glenn.

The other event was being in the emergency room of the small local hospital when a woman in labor was brought in fully dilated. It was the lunch hour, and Dr. Hougie and I thought that we were the only M.D.s in the hospital. We were terror-stricken; neither of us had delivered a baby in almost 15 years. I recovered first and said, "You stay with her, Cecil, while I try to find Dr. Jones," and dashed off. I think we must have located a real doctor in time, because neither of us remembers delivering the baby.

When our samples were studied in the laboratory by Drs. Hougie and Barrow, they found that the abnormal trait was

transmitted as an incomplete recessive. A mild, subclinical deficiency was demonstrable in Mr. Stuart's mother, all of his children, and several of his father's siblings. But something was different about the coagulation in this presumed case of "SPCA deficiency." The TGT was grossly abnormal, unlike the results on most similar subjects described in the literature. We suspected that we had hit the jackpot, i.e., discovered a unique disorder, therefore a "new" factor. But proof lay in showing that it was different from SPCA deficiency by testing it against a prototype SPCA-deficient patient.

Dr. Benjamin Alexander of the Beth Israel Hospital in Boston had been the first to describe a patient with SPCA deficiency, so we tried to obtain a sample of his patient's plasma for the test. Blood clotters are notoriously suspicious of each other, so when we were unable to get a sample from him, we went to our fall-back position. Dr. Alexander agreed to accept a sample from us which he would study in his own laboratory.

We waited for a number of weeks without a word from Boston and finally decided to press our case, largely because Dr. Hougie had accepted a position at the University of Virginia and was to leave shortly. I shall never forget our conversation with Dr. Alexander.

"This is John Graham down in Chapel Hill, Dr. Alexander. I am calling to find out what you have learned about the plasma we sent you."

"It is most peculiar, Graham. It is like SPCA deficiency in most ways. The prothrombin time is prolonged and is not corrected by barium sulfate-absorbed plasma. It is, however, corrected by serum and barium sulfate-eluate. But a most remarkable thing happens when my SPCA plasma is mixed with your SPCA plasma. The prothrombin time is almost normal!"

I almost shouted over the telephone. Dr. Alexander had established what we had suspected, that we had discovered a new clotting factor: had the plasmas had the same defect, the mixture would have given an abnormal result! The discovery automatically admitted us into the very small and elite fellowship of clotting factor discoverers, and the results were published in a pair of papers in 1957.^{3,4} Knowledge of Stuart Factor became widely disseminated, and we shipped samples of plasma to any laboratory requesting it. There must have been a score the first year or so. Almost a decade later it became apparent that Stuart Factor was a key enzyme in the coagulation cascade. Its activation is necessary for the conversion of prothrombin to thrombin and the polymerization of fibrinogen to fibrin. The delay in recognizing its importance occurred because it was necessary first to conceive of the "coagulation cascade."⁵ One of my colleagues tells me that when the concept of the coagulation cascade was published it became a paradigm which has been fruitful in a number of similar areas. He mentioned complement, plasminogen, and rhodopsin as examples.

Stuart Factor became known as Factor X in 1959 as the result of the deliberations of an international committee of

PLASMA FACTORS in FIBRIN CLOTTING

Year of Discovery	NAME OF FACTOR	CORRESPONDING DISEASE STATE	International Nomenclature
< 1940	Fibrinogen	Afibrinogenemia	F. - I
< 1940	Prothrombin	Hypoprothrombinemia	F. - II
< 1940	Antihemophilic Factor	Classic hemophilia	F. - VIII
1942-45	Ac Globulin, proaccelerin	Parahemophilia	F. - V
1948	FSF, LLF, Fibrinase	Fibrinase (-)	F. - XIII
1949	Spca, proconvertin	Spco(-), hypoproconvertinemia	F. - VII
1952	PTC, Christmas Factor	PTC(-), Christmas disease	F. - IX
1953	PTA	PTA(-)	F. - XI
1954	4th Thromboplastic Component	Tetartohemophilia	
1955	Hageman Factor	Hogeman trait (not o disease state)	F. - XII
1956	Stuart Factor	Stuart Clotting Defect	F. - X

F. - III (Thromboplastin) F. - IV (Ca⁺⁺) F. - VI (Unassigned)

Figure 1. The canon of clotting factors. Tetartohemophilia was proposed but later withdrawn when the subject was found to have Christmas Disease (now hemophilia B) complicated by an autoantibody.

experts. The committee's charge was to provide a nomenclature for blood coagulation which would make it comprehensible to students and physicians. This was accomplished by awarding a Latin numeral to each clearly established factor (see figure 1). The ancient Romans had not worked on the clotting problem; but there were subtler reasons for the new nomenclature. The political subtlety of the Latin numerals lay in the fact that replacing the names bypassed the ego investment of each of the discoverers as well as foiling all claims for priority.

No "new" clotting factor essential for the cascade has been discovered since the Stuart Factor. The reason why Stuart Factor is known as Factor X rather than Factor VI is a long and tortuous story of coagulating politics which is not germane to this essay and must await another occasion.

Coda

Mr. Stuart still lives in the hamlet of Lansing, in Ashe County. He comes down from the mountains to Chapel Hill periodically for medical care, and has stayed for as long as 15 months on occasion. That he is alive and in reasonably good health at age 69 can be attributed entirely to the attention and devoted care given him by Drs. Harold Roberts and Philip Webster and their associates. Mr. Stuart has had a modest income from the sale of his plasma to commercial laboratories for diagnostic purposes, his plasma having been for many years the benchmark for the diagnosis of Factor X deficiency throughout the world. He still preaches when he can, and his family, now numbering six children and 10 grandchildren, have taken their places in the local culture. Figure 2 contains my most recent picture of him, with his wife, Ella.



Figure 2. Rufus and Ella Stuart in 1975.

Mr. Stuart is beginning to wear out. In addition to the bleeding disorder present from birth, he developed a persistent salmonella osteomyelitis of the pelvis in the 1960s, and, a chain smoker since youth, he had recently had a squamous carcinoma of the lung wedge-resected. On a recent visit I noticed that he had had bilateral cataracts removed. He is still cheerful, however, and has a marvelous sense of humor, as the photograph suggests. He stated recently that his only problem is weakness. "That lung operation really took the sap out of me," was the way he put it.

He has lived a full life, despite the physical pain and other disabilities which few readers of the *North Carolina Medical Journal* can appreciate from personal experience. His persistent good humor and interest in others reflect a nobility of character which is admired by all who know him. A major purpose of this essay has been to memorialize this noble and unassuming man whom I place near the top of the list of the greatest persons I have ever known.

Since leaving Chapel Hill in 1956, Dr. Hougie has had a distinguished career as a teacher and researcher in hematology at the Universities of Virginia, Washington, and California. He plans to retire next year from the University of California and, between tennis games, to devote his efforts to his real love, the study of history.

Dr. Barrow retired several years ago from her professorship in the University of North Carolina after many years of productive research, and lives in Chapel Hill where she is active in community affairs. ■

References

- 1 Morawitz P. Die chemie der blutgerinnung. Ergebnisse der Physiologie 1905;4:307-423. (Available in English, translated by Robert C. Hartman and Paul F. Guenther. Springfield: Charles C. Thomas, 1958.)
- 2 Lewis JH, Fresh JW, Ferguson JH. Congenital hypoconvertinemia. Proc Soc Exp Biol Med 1953;84:651.
- 3 Hougie C, Barrow EM, Graham JB. Stuart clotting defect. I: Segregation of an hereditary hemorrhagic state from the heterogeneous group heretofore called "Stable factor" (SPCA, proconvertin, Factor VII) deficiency. J Clin Invest 1957;36:485.
- 4 Graham JB, Barrow EM, Hougie C. Stuart clotting defect II: genetic aspects of a "new" hemorrhagic state. J Clin Invest 1957;36:497.
- 5 Macfarlane, RG. An enzyme cascade in the blood clotting mechanism, and its function as a biochemical amplifier. Nature 1964;202:495.

Their Future Is Ours

Today's children will make a brighter tomorrow. But each year, 10,000 of "today's" children are stricken with the most dreaded disease of them all - cancer. Many will never see a tomorrow.

With your help, St. Jude can save even more of these little lives. And maybe someday, one of those children will grow up to be the person who puts an end to childhood cancer forever.

For more information on how you can help, write to St. Jude, 505 N. Parkway, Memphis, TN 38105 or call 1-800-238-9100.



**ST. JUDE CHILDREN'S
RESEARCH HOSPITAL**
Danny Thomas, Founder

Richard Gatling and His Gun

William G. Porter, M.D.

Richard Jordan Gatling, inventor of the Gatling gun, was a North Carolinian and a physician. The son of a wealthy planter, Gatling was born in 1818 at Maney's Neck in Hertford County. While still a boy, he worked with his father on the invention of several farm implements.

As a young man, Gatling tried teaching school, then for a time he kept a country store. But his talents lay elsewhere. Like his father, Gatling was a gifted inventor. He devised a screw propeller in 1838, a rice-sewing machine in 1839, and later a wheat drill.

In 1845, while on an icebound river steamer between Cincinnati and Pittsburgh, Gatling contracted small pox. Two weeks passed before he could get to a doctor. This inability to get medical attention made a lasting impression; when he had recovered sufficiently, he enrolled at the Medical College of Ohio in Cincinnati, intent on learning how to care for himself and his family. Although he never set up a formal practice, he was always addressed as "Doctor."

Gatling's agricultural inventions made him financially successful in the years leading up to the Civil War. The outbreak of hostilities turned his mind from agricultural implements to guns. In 1862 he patented his most famous invention, a machine gun capable of firing 250 rounds a minute.

Although the Gatling gun saw little use in the Civil War, it was the prototype for weapons which have permanently changed the nature of military combat. Heroism and bravery have become less important than they once were. Impersonal and relentless, the machine gun mows down hero and coward with equal efficiency.

Robert Oppenheimer, when he saw his labors come to fruition with the first atomic explosion, remembered a line from the Sanskrit: "I am become death, destroyer of worlds." I wonder if Gatling had thoughts like that as he worked to perfect his gun. Did his training as physician, as healer, give him the least pause? Did he realize what awful, indiscriminate destruction his gun was going to unleash?

If so, this did not deter him from devoting most of the last three decades of his life to improving the Gatling gun and developing new weapons. Living now in Hartford, Connecticut, he invented a gunmetal alloy of steel and aluminum

which made possible the manufacture of a new kind of cannon. When he was almost 80 years old, he built yet another new gun, but this one blew up when it was test-fired.

It might have been the failure of his new gun, rather than any second thoughts about how his weapons might be used, which turned Gatling's creative energies back to agricultural implements. In 1900, at age 82, he invented a motor-driven plow. In 1903, just as the manufacture of his plow was about to begin, Gatling died, in bed, of the grippe. He was survived by his wife, two sons, and a daughter.¹

I thought about Gatling recently when I went to Raleigh to visit my son on his twentieth birthday. My son and some of his North Carolina State University classmates rent a house from one of Gatling's descendants, an old man whose house is next door to theirs. In nearby Oakwood cemetery, a large marble monument marks the Gatling family plot.

After our birthday celebration, I lay awake in my son's room, awash in memories of his infancy and boyhood, marveling at how quickly he has grown up, aware of how youthful, how unfinished he still is. I thought about all those 19-year-old boys, still innocent, still unfinished, who had been machine-gunned at places like the Somme, Gallipole, Heartbreak Ridge, Hamburger Hill. Boys just like my son, who were not lucky enough to be born at the right time to miss their generations' wars.

Gatling cannot, of course, be blamed for the wars in which machine guns have been used. He just happened along at a time when technology had "progressed" sufficiently to make such weapons possible. No doubt someone else would have invented the Gatling gun if Gatling had not. No doubt the same wars would have been fought. Still, I wonder why Dr. Gatling chose to make guns instead of practicing medicine. I wonder if, as he lay dying, he rued the impulse which turned his inventive genius from plowshare to sword, from life to death. I wonder if he thought about these things at all. ■

Reference

- 1 Mitman CW. Dictionary of American biography, vol. 7. Scribners, 1931, pp. 191-2.

From Charlotte Memorial Hospital & Medical Center, Inc., P.O. Box 32861, Charlotte 28232-2861.



(ciprofloxacin HCl/Miles)



A REVOLUTIONARY ORAL ANTIMICROBIAL WITH THE POWER OF PARENTERALS

- Highly active *in vitro* against a broad range of gram-positive and gram-negative pathogens, including methicillin-resistant *Staphylococcus aureus* and *Pseudomonas aeruginosa**
- For treatment of infections in the:
 - lower respiratory tract[†]
 - urinary tract[†]
 - skin/skin structure[†]
 - bones and joints[†]
- Convenient **B.I.D.** dosage – 250 mg, 500 mg and 750 mg tablets

**In vitro* activity does not necessarily imply a correlation with *in vivo* results.

†Due to susceptible strains of indicated pathogens. See indicated organisms in Brief Summary.

CIPRO® SHOULD NOT BE USED IN CHILDREN OR PREGNANT WOMEN.

A history of hypersensitivity to ciprofloxacin is a contraindication to its use. A history of hypersensitivity to other quinolones may also contraindicate the use of ciprofloxacin.



Miles Inc.
Pharmaceutical Division
400 Morgan Lane
West Haven, CT 06516

Please see adjacent page of this advertisement for Brief Summary of Prescribing Information.

Cipro[®] TABLETS (ciprofloxacin HCl/Miles)

■ **500 mg B.I.D. for most infections;**
750 mg B.I.D. for severe or complicated infections.

BRIEF SUMMARY CONSULT PACKAGE INSERT FOR FULL PRESCRIBING INFORMATION INDICATIONS AND USAGE

Cipro[®] is indicated for the treatment of infections caused by susceptible strains of the designated microorganisms in the conditions listed below:

Lower Respiratory Infections caused by *Escherichia coli*, *Klebsiella pneumoniae*, *Enterobacter cloacae*, *Proteus mirabilis*, *Pseudomonas aeruginosa*, *Haemophilus influenzae*, *Haemophilus parainfluenzae*, and *Streptococcus pneumoniae*.

Skin and Skin Structure Infections caused by *Escherichia coli*, *Klebsiella pneumoniae*, *Enterobacter cloacae*, *Proteus mirabilis*, *Proteus vulgaris*, *Providencia stuartii*, *Morganella morganii*, *Citrobacter freundii*, *Pseudomonas aeruginosa*, *Staphylococcus aureus* (penicillinase and nonpenicillinase-producing strains), *Staphylococcus epidermidis*, and *Streptococcus pyogenes*.

Bone and Joint Infections caused by *Enterobacter cloacae*, *Serratia marcescens*, and *Pseudomonas aeruginosa*.

Urinary Tract Infections caused by *Escherichia coli*, *Klebsiella pneumoniae*, *Enterobacter cloacae*, *Serratia marcescens*, *Proteus mirabilis*, *Providencia rettgeri*, *Morganella morganii*, *Citrobacter diversus*, *Citrobacter freundii*, *Pseudomonas aeruginosa*, *Staphylococcus epidermidis*, and *Streptococcus faecalis*.

Infectious Diarrhea caused by *Escherichia coli* (enterotoxigenic strains), *Campylobacter jejuni*, *Shigella flexneri*, and *Shigella sonnei** when antibacterial therapy is indicated.

*Efficacy for this organism in this organ system was studied in fewer than 10 infections.

Appropriate culture and susceptibility tests should be performed before treatment in order to isolate and identify organisms causing infection and to determine their susceptibility to ciprofloxacin. Therapy with Cipro[®] may be initiated before results of these tests are known; once results become available appropriate therapy should be continued. As with other drugs, some strains of *Pseudomonas aeruginosa* may develop resistance fairly rapidly during treatment with ciprofloxacin. Culture and susceptibility testing performed periodically during therapy will provide information not only on the therapeutic effect of the antimicrobial agent but also on the possible emergence of bacterial resistance.

CONTRAINDICATIONS

A history of hypersensitivity to ciprofloxacin is a contraindication to its use. A history of hypersensitivity to other quinolones may also contraindicate the use of ciprofloxacin.

WARNINGS

CIPROFLOXACIN SHOULD NOT BE USED IN CHILDREN OR PREGNANT WOMEN. The oral administration of ciprofloxacin caused lameness in immature dogs. Histopathological examination of the weight-bearing joints of these dogs revealed permanent lesions of the cartilage. Related drugs such as nalidixic acid, cinoxacin, and norfloxacin also produced erosions of cartilage of weight-bearing joints and other signs of arthropathy in immature animals of various species (SEE ANIMAL PHARMACOLOGY SECTION IN FULL PRESCRIBING INFORMATION).

PRECAUTIONS

General:

As with other quinolones, ciprofloxacin may cause central nervous system (CNS) stimulation, which may lead to tremor, restlessness, lightheadedness, confusion, and very rarely to hallucinations or convulsive seizures. Therefore, ciprofloxacin should be used with caution in patients with known or suspected CNS disorders, such as severe cerebral arteriosclerosis or epilepsy, or other factors which predispose to seizures (SEE ADVERSE REACTIONS).

Crystals of ciprofloxacin have been observed rarely in the urine of human subjects but more frequently in the urine of laboratory animals. Crystalluria related to ciprofloxacin has been reported only rarely in man, because human urine is usually acidic. Patients receiving ciprofloxacin should be well hydrated, and alkalinity of the urine should be avoided. The recommended daily dose should not be exceeded. Alteration of the dosage regimen is necessary for patients with impairment of renal function (SEE DOSAGE AND ADMINISTRATION SECTION IN FULL PRESCRIBING INFORMATION).

Drug Interactions:

Concurrent administration of ciprofloxacin with theophylline may lead to elevated plasma concentrations of theophylline and prolongation of its elimination half-life. This may result in increased risk of theophylline-related adverse reactions. If concomitant use cannot be avoided, plasma levels of theophylline should be monitored and dosage adjustments made as appropriate.

Antacids containing magnesium hydroxide or aluminum hydroxide may interfere with the absorption of ciprofloxacin, resulting in serum and urine levels lower than desired; concurrent administration of these agents with ciprofloxacin should be avoided.

Probenecid interferes with the renal tubular secretion of ciprofloxacin and produces an increase in the level of ciprofloxacin in the serum. This should be considered if patients are receiving both drugs concomitantly.

As with other broad-spectrum antibiotics, prolonged use of ciprofloxacin may result in overgrowth of nonsusceptible organisms. Repeated evaluation of the patient's condition and microbial susceptibility testing is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Information for Patients:

Patients should be advised that ciprofloxacin may be taken with or without meals. The preferred time of dosing is two hours after a meal. Patients should also be advised to drink fluids liberally and not take antacids containing magnesium or aluminum concomitantly or within two hours after dosing. Ciprofloxacin may cause dizziness or lightheadedness; therefore patients should know how they react to this drug before they operate an automobile or machinery or engage in activities requiring mental alertness or coordination.

Carcinogenesis, Mutagenesis, Impairment of Fertility:

Eight *in vitro* mutagenicity tests have been conducted with ciprofloxacin and the test results are listed below:

- Salmonella/Microsome Test (Negative)
- E. coli* DNA Repair Assay (Negative)
- Mouse Lymphoma Cell Forward Mutation Assay (Positive)
- Chinese Hamster V₇₉ Cell HGPRT Test (Negative)
- Syrian Hamster Embryo Cell Transformation Assay (Negative)
- Saccharomyces cerevisiae* Point Mutation Assay (Negative)
- Saccharomyces cerevisiae* Mitotic Crossover and Gene Conversion Assay (Negative)
- Rat Hepatocyte DNA Repair Assay (Positive)

Thus, two of the eight tests were positive, but the following three *in vivo* test systems gave negative results:

- Rat Hepatocyte DNA Repair Assay
- Micronucleus Test (Mice)
- Dominant Lethal Test (Mice)

Long-term carcinogenicity studies in animals have not yet been completed.

Pregnancy—Pregnancy Category C:

Reproduction studies have been performed in rats and mice at doses up to six times the usual daily human dose and have revealed no evidence of impaired fertility or harm to the fetus due to ciprofloxacin. In rabbits, as with most antimicrobial agents, ciprofloxacin (30 and 100 mg/kg orally) produced gastrointestinal disturbances resulting in maternal weight loss and an increased incidence of abortion. No teratogenicity was observed at either dose. After intravenous administration, at doses up to 20 mg/kg, no maternal toxicity was produced, and no embryotoxicity or teratogenicity was observed. There are, however, no adequate and well-controlled studies in

CONVENIENT B.I.D. DOSAGE

Recommended dosage schedule

Infection Site*	Severity of Infection	Dosage
Respiratory Tract*	Mild/Moderate	500 mg B.I.D.
Bone and Joint*		
Skin/Skin Structure*	Severe/Complicated	750 mg B.I.D.
Urinary Tract*	Mild/Moderate	250 mg B.I.D.
	Severe/Complicated	500 mg B.I.D.
Infectious Diarrhea*	Mild/Moderate/Severe	500 mg B.I.D.

pregnant women. SINCE CIPROFLOXACIN, LIKE OTHER DRUGS IN ITS CLASS, CAUSES ARTHROPATHY IN IMMATURE ANIMALS, IT SHOULD NOT BE USED IN PREGNANT WOMEN (SEE WARNINGS).

Nursing Mothers:

It is not known whether ciprofloxacin is excreted in human milk; however, it is known that ciprofloxacin is excreted in the milk of lactating rats and that other drugs of this class are excreted in human milk. Because of this, and because of the potential for serious adverse reactions from ciprofloxacin in nursing infants, a decision should be made to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.

Pediatric Use:

Ciprofloxacin should not be used in children because it causes arthropathy in immature animals (SEE WARNINGS).

ADVERSE REACTIONS

Ciprofloxacin is generally well tolerated. During clinical investigation, 2,799 patients received 2,868 courses of the drug. Adverse events that were considered likely to be drug related occurred in 7.3% of courses, possibly related in 9.2%, and remotely related in 3.0%. Ciprofloxacin was discontinued because of an adverse event in 3.5% of courses, primarily involving the gastrointestinal system (1.5%), skin (0.6%), and central nervous system (0.4%).

The most frequently reported events, drug related or not, were nausea (5.2%), diarrhea (2.3%), vomiting (2.0%), abdominal pain/discomfort (1.7%), headache (1.2%), restlessness (1.1%), and rash (1.1%).

Additional events that occurred in less than 1% of ciprofloxacin courses are listed below. Those typical of quinolones are italicized.

GASTROINTESTINAL: (See above), painful oral mucosa, oral candidiasis, dysphagia, intestinal perforation, gastrointestinal bleeding.

CENTRAL NERVOUS SYSTEM: (See above), dizziness, lightheadedness, insomnia, nightmares, hallucinations, manic reaction, irritability, tremor, ataxia, convulsive seizures, lethargy, drowsiness, weakness, malaise, anorexia, phobia, depersonalization, depression, paresthesia.

SKIN/HYPERSENSITIVITY: (See above), pruritus, urticaria, photosensitivity, flushing, fever, chills, angioedema, edema of the face, neck, lips, conjunctivae or hands, cutaneous candidiasis, hyperpigmentation, erythema nodosum.

SPECIAL SENSES: blurred vision, disturbed vision, (change in color perception, overbrightness of lights), decreased visual acuity, diplopia, eye pain, tinnitus, bad taste.

MUSCULOSKELETAL: joint or back pain, joint stiffness, achiness, neck or chest pain, flare-up of gout.

RENAL/UROGENITAL: interstitial nephritis, renal failure, polyuria, urinary retention, urethral bleeding, vaginitis, acidosis.

CARDIOVASCULAR: palpitations, atrial flutter, ventricular ectopy, syncope, hypertension, angina pectoris, myocardial infarction, cardiopulmonary arrest, cerebral thrombosis.

RESPIRATORY: epistaxis, laryngeal or pulmonary edema, hiccup, hemoptysis, dyspnea, bronchospasm, pulmonary embolism.

Most of these events were described as only mild or moderate in severity, abated soon after the drug was discontinued, and required no treatment.

In several instances, nausea, vomiting, tremor, restlessness, agitation, or palpitations were judged by investigators to be related to elevated plasma levels of theophylline possibly as a result of a drug interaction with ciprofloxacin.

Adverse Laboratory Changes: Changes in laboratory parameters listed as adverse events without regard to drug relationship:

Hepatic—Elevations of: ALT (SGPT) (1.9%), AST (SGOT) (1.7%), alkaline phosphatase (0.8%), LOH (0.4%), serum bilirubin (0.3%).

Hematologic—eosinophilia (0.6%), leukopenia (0.4%), decreased blood platelets (0.1%), elevated blood platelets (0.1%), pancytopenia (0.1%).

Renal—Elevations of: Serum creatinine (1.1%), BUN (0.9%).

CRYSTALLURIA, CYLINDRURIA, AND HEMATURIA HAVE BEEN REPORTED.

Other changes occurring in less than 0.1% of courses were: Elevation of serum gamma-glutamyl transferase, elevation of serum amylase, reduction in blood glucose, elevated uric acid, decrease in hemoglobin, anemia, bleeding diathesis, increase in blood monocytes, and leukocytosis.

OVERDOSAGE

Information on overdosage in humans is not available. In the event of acute overdosage, the stomach should be emptied by inducing vomiting or by gastric lavage. The patient should be carefully observed and given supportive treatment. Adequate hydration must be maintained. In the event of serious toxic reactions from overdosage, hemodialysis or peritoneal dialysis may aid in the removal of ciprofloxacin from the body, particularly if renal function is compromised.

DOSAGE AND ADMINISTRATION

The usual adult dosage for patients with urinary tract infections is 250 mg every 12 hours. For patients with complicated infections caused by organisms not highly susceptible, 500 mg may be administered every 12 hours.

Respiratory tract infections, skin and skin structure infections, and bone and joint infections may be treated with 500 mg every 12 hours. For more severe or complicated infections, a dosage of 750 mg may be given every 12 hours.

The recommended dosage for infectious diarrhea is 500 mg every 12 hours.

In patients with renal impairment, some modification of dosage is recommended (SEE DOSAGE AND ADMINISTRATION SECTION IN FULL PRESCRIBING INFORMATION).

HOW SUPPLIED

Cipro[®] (ciprofloxacin HCl/Miles) is available as tablets of 250 mg, 500 mg, and 750 mg in bottles of 50, and in Unit-Dose packages of 100 (SEE FULL PRESCRIBING INFORMATION FOR COMPLETE INFORMATION).

* Due to susceptible strains of indicated pathogens. See indicated organisms in Brief Summary.

For further information, contact the Miles Information Service:
1-800-642-4776. In VA. call collect: 703-391-7888.

COMMITTED TO THERAPEUTIC EFFICIENCY



Miles Inc.
Pharmaceutical Division
400 Morgan Lane
West Haven, CT 06516

Have you asked your patient about Sternal Dysesthesias?

Shorten Post-Cardiac Surgery Rehabilitation time with the HARDING STERNAL SHIELD

A sternal incision often produces discomforting dysesthesias. It is intensely aggravated by clothing rubbing against the healing incision during physical activity. The **HARDING STERNAL SHIELD** is designed to prevent this disabling irritation. Its arched shape "tents" clothing away from the sensitive area. This allows your patient to be more active physically and more stable psychologically, thus reducing and optimizing the rehabilitative period.



The **HARDING STERNAL SHIELD** is light-weight and easy to use. Special features include adjustable straps and an hourglass configuration allowing use by both males and females.

When the problem is dysesthesias... the solution is the Harding Sternal Shield.



Cost: \$40.50

Central Prosthetic and Orthotic Laboratories

1037 Homeland Avenue
Greensboro, North Carolina 27405

(919) 272-5155

PATENT PENDING

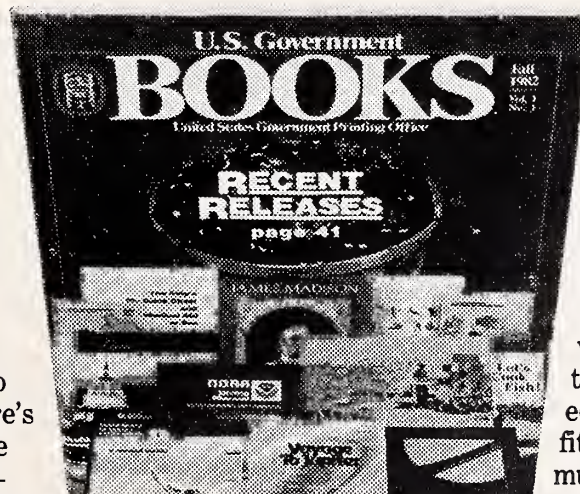
NOT FOR SALE

Because It's Free!

Every year the Government publishes thousands of books. And every year the Government Printing Office sells millions of these books to people in the know. Now there's a book that tells you about the Government's "bestsellers"—but it's not for sale . . . it's free!

It's our new catalog of almost 1,000 of GPO's most popular books. Books like *Infant Care*, *Merchandising Your Job Talents*, *The Statistical Abstract*, *Starting a Business*, *The Space Shuttle at Work*, *How to Select a Nursing Home*, *Voyager at Saturn*, and *Cutting Energy Costs*.

This catalog includes books from virtually every Government agency. So the subjects range



from agriculture, business, children, and diet to science, space, transportation, and vacations. And there are titles on military history, education, hobbies, physical fitness, gardening, and much, much more. There's even a special section for recently

published books.

Find out about the Government's bestsellers. Send today for a copy of the book we don't sell. Write—

New Catalog

Post Office Box 37000
Washington, D.C. 20013

Marketing, Malpractice, and the Value of "I Don't Know"

James P. Weaver, M.D.

After a four-day hospital stay Mr. Thompson was ready for discharge. His abdominal pain had vanished as suddenly and mysteriously as it had arrived. I couldn't fit his symptoms into any convincing diagnosis even though I had evaluated him thoroughly with the usual history, physical exam, laboratory tests, and x-rays. The major fear of the patient and his family was that this episode might be related to his previous abdominal aortic aneurysm surgery; I was certain this wasn't the case. As I entered his room that morning, and explained plans for his discharge, the inevitable question was asked:

"Well doctor, just what was it that caused this pain anyway?"

My professional demeanor had been softened by recent nighttime emergencies, and my response was more instinctive than planned: "I'm sorry to say that I really don't know."

While her jaw began to drop, Mrs. Thompson's eyes widened, and I could sense an element of disbelief welling up. I tried to bring her back to reality. "It's not like TV, is it," I said.

After further discussion the family was reassured, and Mr. Thompson was discharged. I continued, however, to reflect on this encounter, and the implications of confronting our patients with the reality that, in many situations, the physician does not have the answer.

Our training as physicians traditionally has groomed us to appear self-confident and certain. This attitude of confidence has inadvertently fostered unrealistic expectations of our knowledge and capabilities. As exemplified by the mounting number of malpractice cases, the public's level of expectation has become detrimental to the practice of medicine. If physicians are to reverse this trend, they must modify their behavior and begin to actively share the uncertainty and unknowns of medical therapy with their patients. Physicians must discover the value of "I don't know."

I remember my clinical training sessions as a surgical resident. While I sat, half asleep, in the auditorium with my colleagues, the chief of surgery would quiz us about the management of a patient. "I don't know" was not an ac-

ceptable answer to any of his questions. We were taught to present ourselves with confidence and authority even in the face of uncertainty. As a young surgeon I was trained to "know." "Knowing" was the way to be successful. The public wanted their doctor to "know." The patient needed something to hold onto, and uncertainty was not something that physicians should admit.

We cannot blame the television networks for creating the popular image of the all-knowing doctor; physicians have done that themselves. Too many times I have seen a patient invoke his hiatal hernia to explain everything from diarrhea to constipation to "nerves." No doubt he received this idea from a "knowing" doctor. We have said "I know" much too often when the evidence was meager, and we have marketed our profession under the guise of "knowing" and justified it on the grounds that "the public needs an answer."

Times have changed. The popular press fills its pages with medical debates, the law demands that the public needs and deserves the truth, and the pedestal of our professionalism has eroded. Is what we do less important or valuable if we don't have all the answers? It is time to develop a sensitivity to our doubts, become comfortable with them, and train ourselves to freely admit "I don't know."

Sharing our uncertainties with the public will make people less demanding and more appreciative. The illusion of certainty that physicians have helped to create has only fueled the current hostile legal fire as it threatens the practice of medicine. "I don't know" can have a positive influence in medical care by reinforcing the fact of Medicine's imperfections, and lessening the pressure of the public's current unrealistic demands.

Fortunately, by their exposure of medical debate and uncertainty, both law and the media have primed the public for our message of "I don't know." The media coverage of breast cancer has helped the unfortunate patient with the disease not by revealing the certainty of our therapy, but by exposing the controversies and questions that remain. Any patient who reads the women's magazines is aware of this debate and is thus more receptive to the truth that there are many sides to these issues, and that medicine does not have all of the answers.

From 1830 Hillandale Road, Durham 27705.

I am comfortable without the fairy-tale happy ending. Our patients, sophisticated through current exposure, will respect our honesty when we appropriately admit that we "just don't know." Our work may require more explanation now, and the value of "I don't know" may not be imme-

diately apparent. But if physicians begin to share the uncertainty of medicine with their patients, the expectations will become more realistic, the pressure to all "live happily ever after" will lessen, and the road ahead will certainly be smoother. ■

Winchester®

"CAROLINAS' HOUSE OF SERVICE"

Winchester Surgical Supply Company

200 South Torrence St. Charlotte, N.C. 28204

Phone No. 704/372-2240

Winchester Home Healthcare

Medical supplies and equipment for your patients at home

Charlotte, N.C.

Greensboro, N.C.

Hickory, N.C.

704/332-1217

919/275-0319

704/324-0336

704/547-0708

**Serving the MEDICAL PROFESSION of NORTH CAROLINA
and SOUTH CAROLINA since 1919.**

We equip many physicians beginning practice each year and invite your inquiries.

Our salesmen are located in all parts of North Carolina.

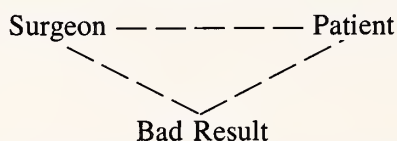
*We have DISPLAYED at every N.C. State Medical Society Meeting since 1921
and advertised CONTINUOUSLY in the N.C. Journal since January 1940 issue.*

Facing a Bad Result

Arnold G. Schuring, M.D.

Neither the patient nor the surgeon is prepared to face a bad surgical result. Although the surgeon "informs" the patient of the risks and complications, and the patient "consents" to the surgery, a bad result shocks both parties. However, to maintain a positive doctor-patient relationship, the surgeon must anticipate facing a bad result prior to the event.

When a bad result occurs, the goal is not only to maintain the existing doctor-patient relationship but to strengthen the relationship by facing the bad result together. Therefore, the event should not come between the surgeon and the patient but in juxtaposition as diagrammed.



The following suggestions may help the surgeon to reach this difficult but rewarding goal.

Compassion

The surgeon has a choice whether or not to communicate compassion. When a patient experiences a bad result, the surgeon will be judged, as empathetic, sympathetic or apathetic. While conveying sympathy recognizes both the seriousness of the event and the patient's problems, this form of compassion does not communicate the surgeon's feelings and involvement. On the other hand, empathy deepens the surgeon's role, showing emotion and caring. In other words, the surgeon must "nurse" the patient through this difficult time. Apathy must be avoided at all times.

Breaking the News

When possible, news of a bad result should come in stages. If the surgeon perceives a problem, the patient and the family should be warned about a possible bad result even

though the surgeon is unclear of the final outcome. For example, when a surgeon encounters an exposed facial nerve during an otologic procedure, the family should be warned of a possible temporary facial paralysis before the patient awakes, even if the surgeon is uncertain if the paralysis will occur. If all is well, nothing is lost. Note: If, at any point during the "staged" delivery of news of a potential problem, the patient must decide between several treatment options, the surgeon *must* provide him with complete information.

Handling Anger

The patient, and sometimes even the surgeon, must deal with anger during the onset of a bad result. When anger surfaces, the surgeon should be angry along with the patient, not against the patient. The following dialogue attempts to place a bad result alongside the doctor-patient relationship:

"I am angry about the result of the surgery."

"You should be angry, I am angry about it also; no one deserves a bad result like this, but we can do something about it together."

Thus, the surgeon tries to remain the patient's advocate as well as his physician.

Dismissing Guilt

In today's litigation crisis, the patient may display guilt and then seek the guilty. Commonly, the patient blames himself, but naturally seeking the possibility of error on the part of the surgeon.

"Doctor, I probably did something wrong."

"Neither you nor I did anything wrong; this result is from improper healing."

Commonly, the surgeon also feels guilty about a bad result. His guilt must also be resolved and not transferred to the patient.

Treatment Planning

As soon as possible, the physician should look beyond the bad result and introduce a plan to rectify the consequences

From Chairman, Professional Liability Committee, American Academy of Otolaryngology-Head and Neck Surgery. Reprinted with permission from the Academy's *Bulletin* (1988;7:9) at the suggestion of Robert P. Majors, Jr., M.D., Raleigh.

of the event. At times, the opportunity to start planning exists when explaining the circumstances of a bad result. Also, a double jeopardy exists with a bad result. Not only is the surgeon vulnerable for a suit from a bad result, but he is also at risk in treatment of the problem. Do not hesitate to seek consultation, even if you are not certain that it is necessary. Needless to say, both the circumstances of the bad result and the treatment plan must be documented.

Fees

Above all, do not allow the consideration of fees to dismantle the doctor-patient relationship. It has been argued that not charging a fee after a bad result denotes guilt on

the part of the surgeon. If a patient states, usually with some belligerence:

"How much is this going to cost me?"

You should offer an answer like this:

"This problem is neither your nor my fault, and I'll do everything I can to help you with the cost." Thereby, any thought of guilt is changed to empathy, allowing you to consider not charging for post-operative care and reducing your fee for revision surgery. If you are uneasy concerning fee reductions, record your reasons for doing so in the patient's chart.

Facing a bad result and also strengthening the doctor-patient relationship appear to be incompatible. But if the surgeon prepares for such an event, these goals can be met. ■

ARTHRITIS ANSWERS

CALL FREE

1-800-422-1492



ARTHRITIS
FOUNDATION

Edward C. Halperin, M.D., Book Review Coordinator

Emperor of the Air, by Ethan Canin, 179 pp., \$15.95, Boston, Houghton Mifflin Company, 1988.

Reviewed by Edward C. Halperin, M.D.

Ethan Canin, twenty-seven years old, is a fourth-year student at Harvard Medical School. His first book, *Emperor of the Air*, is a collection of nine short stories — some of which have been previously published in *The Atlantic*, *Esquire*, *Redbook*, and *The Best American Short Stories* 1985 and 1986. Canin is blessed with a gift for fiction as well as superb technical writing skills. His prose is clear and direct. Every few pages the reader finds a surprising allusion or intriguing aside. Canin's book is highly recommended.

These stories all turn on those moments in life when we achieve small elements of self-understanding: a marital crisis, illness, death, growing up, and growing old. We see people become a little more certain of their place in the world and a little clearer on how they got there. Canin pulls us into the title story, "Emperor of the Air," with the first paragraph.

Let me tell you who I am. I'm sixty-nine years old, live in the same house I was raised in, and have been the high school biology and astronomy teacher in this town so long that I have taught the grandson of one of my former students. I wear my father's wristwatch, which tells me it is past four-thirty in the morning, and though I have thought otherwise, I now think that hope is the essence of all good men.

The teacher proceeds to relate his tale of an elm tree in his front yard; a tree which has played a pivotal role in his life. The tree is infested with insects and a neighbor wants to cut it down. The teacher learns something about himself and about relationships as he resolves the problem.

Illness frequently appears in Canin's stories, focusing his characters' attention on their relationships with parents and spouses. In a story entitled "The Year of Getting to Know Us" a young man observes his father in a San Francisco hospital room, following a heart attack.

I was watching his heartbeat. It seemed all right to me: the blips made steady peaks and drops, moved across the screen, went out at one end, and then came back at the other. It seemed that this was all a heart could do. I'm an English teacher, though, and I don't know much about it.

"It looks strong," I'd said to my mother that afternoon over the phone. She was in Pasadena. "It's going right across, pretty steady. Big bumps. Solid."

As the story unfolds, the father's shortcomings as a parent and husband are revealed. The young man finds himself a beneficiary as well as a victim of his father's legacy.

In another story, "The Carnival Dog, the Buyer of Diamonds," we meet Myron Lufkin, a student at Albert Einstein Medical School in the Bronx. Myron has just told his father of his intention to quit school. But Abe Lufkin, Myron's father, is not the sort of man to let his son leave medical school without a fight. As the story rolls toward a brief climactic fight the reader sees Abe's life unfold — a life driven by competition, regimentation, and goals. Myron, growing up in that environment, finds he can't stomach medical school. "No, it wasn't death that bothered Myron; it was the downhill plunge of the living body . . . He hated the demise of the spirit." At the end, his father's spirit sends him back to school.

I've enjoyed Ethan Canin's stories and learned from them. English literature has a rich tradition of physician authors. I hope young Dr. Canin finds time to write during internship and residency, hone his literary skills, and fully enter that tradition. I believe he has the promise.



Ethan Canin. (Permission of Houghton Mifflin Co. and Lorin Klaris)

From the Division of Radiation Oncology, Box 3085, Duke University Medical Center, Durham 27710.

Wildlife in North Carolina, by Jim Bean and Lawrence S. Earley, \$24.95, Chapel Hill, The University of North Carolina Press, 1987.

Reviewed by W.D. Breckman, Jr., M.D., Department of Medicine, Duke University Medical Center, Durham 27710.

This splendid and elegantly published short book is a collection of 41 articles that originally appeared between 1943 and 1986 in the monthly publication of the North Carolina Wildlife Resources Commission, which bears the same title as this book. The monthly periodical has a very high standard of publication and it must have been a difficult job to select these particular articles from all of the others to collate into the book.

There is something here for everyone. The book is divided into four parts: Sporting Heritage, Flora and Fauna, Special Places, and Hunting and Fishing. Each article is approximately ten to twenty minutes worth of reading, but the high quality of authorship and the beautiful reproductions are hardly conducive to putting the book down after just "one bite."

My wife felt that the entire book was worth the relatively modest price for just the articles by Jane Rohling on Hummingbirds. Barry Ellis's article "The World of Spiders" and Doug Elliott's charming essay "Wild Orchids" were equal favorites, and beautifully illustrated.

My own interests led me naturally to Curtis Wooten's essay on the Plott Hound and the fascinating history of its development by the North Carolina family whose name the breed bears. There are numerous articles of interest, written in an informal but scholarly way, that deal with such diverse topics as the white tail deer, bass fishing, waterfowling and bear hunting — all as they relate to our North Carolina heritage.

If you are a student or admirer of the outdoors, or an amateur (or even a professional) naturalist, this book is a must. It would certainly make an excellent gift for a new-comer moving to North Carolina, and a copy should be in each doctor's waiting room. Finally, it represents a fine advertisement for the Wildlife Resources Commission's monthly publication, which is available at an extremely modest price. ■



**Most
patients
need
only one.**

K-DUR™ 20 | Microburst
Release
System™
(potassium chloride) 20mEq Sustained Release
Tablets

**A daily prophylactic dose
in a single tablet.**

Please see next page for brief summary of prescribing information.

KEY Key Pharmaceuticals, Inc.
Kenilworth, NJ 07033
World leader in drug delivery systems.

Copyright © 1987, Key Pharmaceuticals, Inc., Kenilworth, NJ 07033.
All rights reserved. KD-2055/14238603H 8/87

K-DUR™ Microburst Release System (potassium chloride) Sustained Release Tablets

INDICATIONS AND USAGE: BECAUSE OF REPORTS OF INTESTINAL AND GASTRIC ULCERATION AND BLEEDING WITH SLOW-RELEASE POTASSIUM CHLORIDE PREPARATIONS, THESE DRUGS SHOULD BE RESERVED FOR THOSE PATIENTS WHO CANNOT TOLERATE OR REFUSE TO TAKE LIQUID OR EFFERESCENT POTASSIUM PREPARATIONS OR FOR PATIENTS IN WHOM THERE IS A PROBLEM OF COMPLIANCE WITH THESE PREPARATIONS.

1. For therapeutic use in patients with hypokalemia with or without metabolic alkalosis, in digitalis intoxication and in patients with hypokalemic familial periodic paralysis.

2. For the prevention of potassium depletion when the dietary intake is inadequate in the following conditions: Patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis with ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, and with certain diarrheal states.

3. The use of potassium salts in patients receiving diuretics for uncomplicated essential hypertension is often unnecessary when such patients have a normal dietary pattern. Serum potassium should be checked periodically, however, and if hypokalemia occurs, dietary supplementation with potassium-containing foods may be adequate to control milder cases. In more severe cases supplementation with potassium salts may be indicated.

CONTRAINDICATIONS: Potassium supplements are contraindicated in patients with hyperkalemia since a further increase in serum potassium concentration in such patients can produce cardiac arrest. Hyperkalemia may complicate any of the following conditions: Chronic renal failure, systemic acidosis such as diabetic acidosis, acute dehydration, extensive tissue breakdown as in severe burns, adrenal insufficiency, or the administration of a potassium-sparing diuretic (e.g., spironolactone, triamterene).

Wax-matrix potassium chloride preparations have produced esophageal ulceration in certain cardiac patients with esophageal compression due to enlarged left atrium.

All solid dosage forms of potassium chloride supplements are contraindicated in any patient in whom there is cause for arrest or delay in tablet passage through the gastrointestinal tract. In these instances, potassium supplementation should be with a liquid preparation.

WARNINGS: Hyperkalemia—In patients with impaired mechanisms for excreting potassium, the administration of potassium salts can produce hyperkalemia and cardiac arrest. This occurs most commonly in patients given potassium by the intravenous route but may also occur in patients given potassium orally. Potentially fatal hyperkalemia can develop rapidly and be asymptomatic. The use of potassium salts in patients with chronic renal disease, or any other condition which impairs potassium excretion, requires particularly careful monitoring of the serum potassium concentration and appropriate dosage adjustment.

Interaction with Potassium-Sparing Diuretics—Hypokalemia should not be treated by the concomitant administration of potassium salts and a potassium-sparing diuretic (e.g., spironolactone or triamterene) since the simultaneous administration of these agents can produce severe hyperkalemia.

Gastrointestinal Lesions—Potassium chloride tablets have produced stenotic and/or ulcerative lesions of the small bowel and deaths. These lesions are caused by a high localized concentration of potassium ion in the region of a rapidly dissolving tablet, which injures the bowel wall and thereby produces obstruction, hemorrhage or perforation.

K-DUR tablets contain micro-crystalloids which disperse upon disintegration of the tablet. These micro-crystalloids are formulated to provide a controlled release of potassium chloride. The dispersibility of the micro-crystalloids and the controlled release of ions from them are intended to minimize the possibility of a high local concentration near the gastrointestinal mucosa and the ability of the KCl to cause stenosis or ulceration. Other means of accomplishing this (e.g., incorporation of potassium chloride into a wax matrix) have reduced the frequency of such lesions to less than one per 100,000 patient years (compared to 40–50 per 100,000 patient years with enteric-coated potassium chloride) but have not eliminated them. The frequency of GI lesions with K-DUR tablets is, at present, unknown. K-DUR tablets should be discontinued immediately and the possibility of bowel obstruction or perforation considered if severe vomiting, abdominal pain, distention, or gastrointestinal bleeding occurs.

Metabolic Acidosis—Hypokalemia in patients with metabolic acidosis should be treated with an alkalinizing potassium salt such as potassium bicarbonate, potassium citrate, potassium acetate, or potassium gluconate.

PRECAUTIONS: The diagnosis of potassium depletion is ordinarily made by demonstrating hypokalemia in a patient with a clinical history suggesting some cause for potassium depletion. In interpreting the serum potassium level, the physician should bear in mind that acute alkalosis per se can produce hypokalemia in the absence of a deficit in total body potassium while acute acidosis per se can increase the serum potassium concentration into the normal range even in the presence of a reduced total body potassium. The treatment of potassium depletion, particularly in the presence of cardiac disease, renal disease, or acidosis requires careful attention to acid-base balance and appropriate monitoring of serum electrolytes, the electrocardiogram, and the clinical status of the patient.

Laboratory Tests: Regular serum potassium determinations are recommended. In addition, during the treatment of potassium depletion, careful attention should be paid to acid-base balance, other serum electrolyte levels, the electrocardiogram, and the clinical status of the patient, particularly in the presence of cardiac disease, renal disease, or acidosis.

Drug Interactions: Potassium-sparing diuretics; see **WARNINGS**.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term carcinogenicity studies in animals have not been performed.

Pregnancy Category C: Animal reproduction studies have not been conducted with K-DUR. It is also not known whether K-DUR can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. K-DUR should be given to a pregnant woman only if clearly needed.

Nursing Mothers: The normal potassium ion content of human milk is about 13 mEq per liter. Since oral potassium becomes part of the body potassium pool, so long as body potassium is not excessive, the contribution of potassium chloride supplementation should have little or no effect on the level in human milk.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: One of the most severe adverse effects is hyperkalemia (see **CONTRAINDICATIONS**, **WARNINGS**, and **OVERDOSAGE**). There have also been reports of upper and lower gastrointestinal conditions including obstruction, bleeding, ulceration, and perforation (see **CONTRAINDICATIONS** and **WARNINGS**); other factors known to be associated with such conditions were present in many of these patients.

The most common adverse reactions to oral potassium salts are nausea, vomiting, abdominal discomfort, and diarrhea. These symptoms are due to irritation of the gastrointestinal tract and are best managed by taking the dose with meals or reducing the dose.

Skin rash has been reported rarely.

OVERDOSAGE: The administration of oral potassium salts to persons with normal excretory mechanisms for potassium rarely causes serious hyperkalemia. However, if excretory mechanisms are impaired or if potassium is administered too rapidly intravenously, potentially fatal hyperkalemia can result (see **CONTRAINDICATIONS** and **WARNINGS**). It is important to recognize that hyperkalemia is usually asymptomatic and may be manifested only by an increased serum potassium concentration and characteristic electrocardiographic changes (peaking of T-waves, loss of P-waves, depression of S-T segment, and prolongation of the QT-interval). Late manifestations include muscle-paralysis and cardiovascular collapse from cardiac arrest.

Treatment measures for hyperkalemia include the following:

1. Elimination of foods and medications containing potassium and of potassium-sparing diuretics.
2. Intravenous administration of 300 to 500 ml/hr of 10% dextrose solution containing 10–20 units of insulin per 1,000 ml.
3. Correction of acidosis, if present, with intravenous sodium bicarbonate.
4. Use of exchange resins, hemodialysis, or peritoneal dialysis.

In treating hyperkalemia, it should be recalled that in patients who have been stabilized on digitalis, too rapid a lowering of the serum potassium concentration can produce digitalis toxicity.

1002004

13944326
Rev. 4/87

KEY™ Key Pharmaceuticals, Inc.
Kenilworth, NJ 07033 (USA)
World leader in drug delivery systems.

What Every Physician's Spouse Should Know

A series of booklets on topics of special interest to medical families published by the American Medical Association Auxiliary



Professional Liability

- Scope of problem
- Legal process
- Coping

Impairment

- Causes
- Impact on family
- Getting help

Survival Tips for Resident Physician/Medical Student Spouses

- Marriage in the training years
- Stress
- Finances

Marriage

- Who players are
- Special concerns
- Stages of medical career

Retirement and Estate Planning

- Making retirement years fulfilling
- Providing for the family's future

MAIL ORDER FORM TO:
American Medical Association Auxiliary, Inc.
535 N. Dearborn St., Chicago, IL 60610

Please send me the following publications in the series on **What Every Physician's Spouse Should Know**:

- # of copies _____
 - Impairment _____
 - Professional Liability _____
 - Survival Tips for Resident Physician/Medical Student Spouses _____
 - Marriage _____
 - Retirement and Estate Planning _____
- (AVAILABLE FEB. 1, 1987)**

Each booklet is \$3 per copy for AMA Auxiliary members and \$5 per copy for non-members.

Enclosed is my check in the amount of \$_____ made payable to the AMA Auxiliary. Check must accompany order form.

NAME _____

ADDRESS _____

CITY/STATE/ZIP _____

TELEPHONE (____) _____

A NEW H_2 Antagonist

AXID[®] 300mg

nizatidine

Effective once-nightly
duodenal ulcer therapy available in a
Unique Convenience Pak
for better patient compliance



AXID[®] nizatidine capsules

Brief Summary. Consult the package insert for prescribing information.

Indications and Usage. Axid is indicated for up to eight weeks for the treatment of active duodenal ulcer. In most patients, the ulcer will heal within four weeks.

Axid is indicated for maintenance therapy for duodenal ulcer patients, at a reduced dosage of 150 mg h.s. after healing of an active duodenal ulcer. The consequences of continuous therapy with Axid for longer than one year are not known.

Contraindication. Axid is contraindicated in patients with known hypersensitivity to the drug and should be used with caution in patients with hypersensitivity to other H_2 -receptor antagonists.

Precautions: General—1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Because nizatidine is excreted primarily by the kidney, dosage should be reduced in patients with moderate to severe renal insufficiency.

3. Pharmacokinetic studies in patients with hepatorenal syndrome have not been done. Part of the dose of nizatidine is metabolized in the liver. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

Laboratory Tests—False-positive tests for urobilinogen with Multistix[®] may occur during therapy with nizatidine.

Drug Interactions—No interactions have been observed between Axid and theophylline, chloridazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system, therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

Carcinogenesis, Mutagenesis, Impairment of Fertility—A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high dose males compared to placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement

compared to concurrent controls, and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive, and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery is not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, and the mouse lymphoma assay.

In a two-generation, perinatal and postnatal, fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy—Teratogenic Effects—Pregnancy Category C—Oral reproduction studies in rats at doses up to 300 times the human dose, and in Dutch Belted rabbits at doses up to 55 times the human dose, revealed no evidence of impaired fertility or teratogenic effect, but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers—Nizatidine is secreted and concentrated in the milk of lactating rats. Pups reared by treated lactating rats had depressed growth rates. Although no studies have been conducted in lactating women, nizatidine is assumed to be secreted in human milk, and caution should be exercised when nizatidine is administered to nursing mothers.

Pediatric Use—Safety and effectiveness in children have not been established.

Use in Elderly Patients—Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations. Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo. Among the more common adverse events in the domestic placebo-controlled trials, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common in the nizatidine group. A variety of less common events were also reported; it was not possible to

determine whether these were caused by nizatidine.

Hepatic—Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients possibly or probably related to nizatidine. In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L), and in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients. All abnormalities were reversible after discontinuation of Axid.

Cardiovascular—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

Endocrine—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo. Rare reports of gynecomastia occurred.

Hematologic—Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H_2 -receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs.

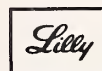
Integumental—Sweating and urticaria were reported significantly more frequently in nizatidine than in placebo patients. Rash and exfoliative dermatitis were also reported.

Other—Hyperuricemia unassociated with gout or nephrolithiasis was reported.

Overdosage: There is little clinical experience with overdosage of Axid in humans. If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance by approximately 84%.

Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal. Intravenous LD₅₀ values in the rat and mouse were 301 mg/kg and 232 mg/kg respectively. PV 2091 AMP [041288]

Axid[®] (nizatidine, Lilly)



Eli Lilly and Company
Indianapolis, Indiana
46285

NZ-2903-B-849356

© 1988, ELI LILLY AND COMPANY

Axid[®] (nizatidine, Lilly)

Letters to the Editor

In praise of Dr. Linfors's column

To the Editor:

I very much enjoyed the "Physicians' Forum" edited by Eugene Linfors, M.D., on "How Should Hospital Ethics Committees Function? Who Should Be Included?" He inquired of a lot of mature, experienced people and the answers were valuable.

Because of this, I have planned to prepare for possible publication in the *North Carolina Medical Journal* an account of the formation of the Committee on Ethics of the Bowman Gray School of Medicine/N.C. Baptist Hospital which has been in operation now almost four years. It has been a valuable experience not only for the people involved in the committee but for the institution, and we look to it as being an important asset to an academic medical center.

Eban Alexander, Jr., M.D.
Department of Surgery
Bowman Gray School of Medicine
Winston-Salem 27103

We await your manuscript with interest.

—Editor

A call for complaints against unethical and incompetent attorneys

To the Editor:

Medical Mutual Insurance Company of North Carolina has over 1,200 malpractice complaints pending against physicians in this state. According to Wayne Parker, Medical Mutual believes that less than 100 of these complaints have any merit. In other words, 1,100 of these complaints do not have any basis in fact.

If a surgeon were right only one out of 12 times, he would not be allowed to practice medicine. Why do we allow certain plaintiffs' attorneys to practice law when they are so grossly incompetent?

Last year the Grievance Committee of the North Carolina State Bar Association received 767 complaints against attorneys. It took action on only 34 of these complaints (4.4%). This is not to say that the legal profession does not have a fine code of ethical conduct. Anyone reading their Rules of Professional Conduct can tell you that attorneys are expected to maintain high professional and ethical standards, and most attorneys do just that. The problem is that *some attorneys* ignore these Rules, while the Grievance Committee of the North Carolina State Bar refuses to discipline them for anything other than the most flagrant violations of their professional and ethical standards.

I believe that more citizens in this State need to file complaints against unethical and incompetent attorneys, so

that the Grievance Committee of the North Carolina State Bar will be forced to take notice of their unethical and incompetent brethren. But do not expect an attorney to help you file this complaint, for most will refuse. As one attorney told me "It makes lawyers look bad." The address for filing a complaint is:

The Grievance Committee
The North Carolina State Bar
P.O. Box 25908
Raleigh, NC 27611

I also believe that the North Carolina State Legislature needs to investigate the inadequate supervision of attorneys in this State. The legal profession has shown itself incapable of supervising itself, and the responsibility must now go back to the People. But do not expect immediate results — the legal profession controls all of the Judiciary Committees in both the State House and Senate.

William M. Hendricks, M.D.
Asheboro Dermatology Clinic, P.A.
407 South Cox Street
Asheboro 27203-5496

Another thank-you for the tribute to Dr. Baylin

To the Editor:

One does not have to hold professional rank to appreciate Dr. George Baylin's great teaching ability and commitment to mankind. Thank all of you for this excellent tribute (NCMJ 1987;49:163-7).

Philip T. Howerton, M.D.
Blue Ridge Radiology Associates, P.A.
2203 South Sterling Street, Suite 176
Grace Hospital Professional Building
Morganton 28655

A comment on Dr. Page's article

To Dr. Page:

I read with interest your article on "North Carolina Worker's Compensation" in the April volume of the *North Carolina Medical Journal* (1988;49:185-90). Since I see a lot of patients covered by the North Carolina Worker's Compensation laws, I found your article to be both enlightening and generally accurate.

I did not find any references, however, to the seemingly interminable delay in payment of certain claims. During the last few years, we at Cleveland Orthopaedic Associates have found the compensation carriers to generally delay provider payments for longer and longer periods of time. I wonder if we as providing physicians have any recourse in this situation. I have contacted the Industrial Commission on

numerous occasions but have generally not found the Commission to be of much help to us providers.

I wonder if you might have any suggestions along these lines. I look forward to hearing from you soon.

John C. Hamrick, Jr., M.D.
Cleveland Orthopaedic Associates, P.A.
110 West Grover Street
Shelby, 28150

Dr. Page's reply:

Thank you for your letter of April 25th with regard to my paper on North Carolina Workers' Compensation.

You correctly point out that uncertain and delayed payments are a major problem with North Carolina Workers' Compensation. I don't have a good answer. Many physicians avoid the system for just this reason, which ultimately hurts the worker.

One of the thrusts of the article was that a good offense is the best defense. When the provider understands the system and can provide all necessary information at the outset, delays are minimized. But, it is in the carrier's interest to delay payments and the Commission often exercises very little leverage.

The best recourse for delayed payments may be to call the lawyer for the carrier, or better, have the worker's lawyer call the lawyer for the carrier. Even if the delay is with the Commission, the lawyer for the carrier is in the best position to expedite matters.

Ultimately, uncertainty of payments unfairly impedes the delivery of health care and works against both the providers and the workers. Legislative reform of the system may be the only solution.

TWELVE IMPECCABLE EXCUSES FOR NOT GIVING BLOOD.

1. I think I have lumbago.
2. I'm type Z negative.
3. I'm on the grapefruit diet.
4. I gave six months ago.
5. I just got back from Monaco.
6. The lines are thirteen blocks long.
7. My mother won't let me.
8. I didn't sign up.
9. I'm going out of town.
10. Asthma runs in my family.
11. I forgot to eat this morning.
12. I'm allergic to flowering magnolia.



Each one's a doozy,
but we're hoping you
won't use any of them.
Give blood through the
American Red Cross.
Please, don't chicken out.

**EXCUSES DON'T SAVE LIVES.
BLOOD DOES.**

American
Red Cross



Continuing Medical Education

Please note: The Continuing Medical Education Programs at Bowman Gray, Duke (DUMC), East Carolina (ECU) and UNC Schools of Medicine, and Dorothea Dix are accredited by the American Medical Association. Therefore CME programs sponsored or cosponsored by these schools automatically qualify for AMA Category I credit toward the AMA's Physician Recognition Award, and for North Carolina Medical Society Category A credit. Where AAFP credit has been obtained, this also is indicated.

June 13-17

Diagnostic Ultrasound (Obstetrics)

Place: Winston-Salem

Info: Registrar, Ultrasound Center, Bowman Gray School of Medicine, 300 S. Hawthorne Rd., Winston-Salem 27103. 919/748-4505

June 16-18

1988 Mountaintop Medical Assembly

Place: Waynesville

Info: R. Stuart Roberson, M.D., Director, Mountaintop Medical Assembly, 305 Grimball Dr., Hazelwood, NC 28738. 704/456-3662

June 20-24

Diagnostic Ultrasound (General)

(See June 13-17 for information)

July 1-3

18th Annual Sports Medicine Symposium

Place: Wrightsville Beach

Info: W. Alan Skipper, NCMS, P.O. Box 27167, Raleigh 27611. 919/833-3836; 800/722-1350 (NC only)

July 24-29

Southern OB-GYN Seminar

Place: Asheville

Info: W. Otis Duck, M.D., Box 729 Mars Hill, NC. 704/689-2411

August 12-14

Family Physicians Weekend

Place: Wrightsville Beach

Credit: 12 Hours AAFP

Info: Lois Voelker, Meeting Coordinator North Carolina Academy of Family Physicians, P. O. Box 18469, Raleigh 27619. 919/781-6467

August 27-28

State-of-the-Art Summer Urology Conference 1988

Place: Winston-Salem

Info: Sally Hudson Gulley, Div. of CME, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4450

New Members

Herman Benno Marx, 433 S. Main St., Winston-Salem 27101

Avery

Wade Scott Weems (U), P.O. Box 1272, Linville, 28646

Buncombe

John A. Meyer (AN), 202 Doctors Bldg., Asheville 28801

Cabarrus

Clayton Tyler Gibson (RS), 109 Country Club Dr., Concord, 28025

Cleveland

Howard Brown Weitzner (OBG), 608 W. King St. Ste. 3, Kings Mountain 28086

Craven-Pamlico-Jones

Richard Mayhew Ward (PTH), 3 Batts Hill Rd., New Bern 28562

Durham-Orange

Norman Allen Cohen (RESIDENT), 1512 Kirkwood Dr. Durham 27705

Mary Held Cornish (RESIDENT), 903 Green Street, Durham 27701

Charles Johnson Fulp, Jr., (RESIDENT), 112 Greenfield Rd., Chapel Hill 27516

William Blake Garside, Jr. (STUDENT), D-8 Village Green, Chapel Hill 27514

William Lee Hayes, 2675 Hitchcock Dr., Durham 27705

Eric Duniway Hoffman (STUDENT), Box 2747, DUMC, Durham, 27710

Frank Andrew Honkanen (RESIDENT), Box 3712, DUMC, Durham 27710

Peter Adam Margolis (RESIDENT), UNC, Cli. Scholars Program, 5034 Old Clinic Bldg., Chapel Hill 27514

Michael J. Nunez (STUDENT), 311 S. Lasalle St., Apt. 14A, Durham 27705

Marta Jean Petersen (D), NC Memorial Hosp. Room 137, Chapel Hill 27514

Robert Rutledge (GS), UNC, Dept. of Surgery, Campus Box 7050, Chapel Hill 27599

Karen Sue St. Claire (RESIDENT), Box 31172, DUMC, Durham 27713

Jon Fredric Strohmeier (RESIDENT), Duke University Medical Center, Durham 27710

David Clement Whitcomb (RESIDENT), 706 West Knox St., Durham 27701

Forsyth-Stokes-Davie

Robert Stancil Alphin (STUDENT), Box 319, 300 S. Hawthorne Rd., Winston-Salem 27103

James Matthew Harless (STUDENT), 307 Foxcroft Dr., Winston-Salem 27103

Jeffrey Dun Lewis (STUDENT), Box 514, Bowman Gray Med Sch., Winston-Salem 27103

William Campbell Little (CD), 300 S. Hawthorne Rd., Div. of Cardiology, Winston-Salem 27103

David Simms Ruch (STUDENT), 3807 Porter St. NW #303, Washington, DC 20016

John Paul White (RESIDENT), 2240 Sunderland Rd., #56-N, Winston-Salem 27103

Barry Neil Williams (P), 1328 Ashley Square, Winston-Salem 27103

Greensboro Society of Medicine

Kevin Lorne Little (FP), 603 Dolley Madison Rd., Greensboro 27410

James Laurence Ransom, 1200 N. Elm St., Greensboro 27401

Julia Sink Streets (IM), 1511 Westover Terr., Ste. 108, Greensboro 27408

High Point

Ronda Snow White (OBG), PO Box 5128, High Point 27262

Iredell

Stephen Dexter Ferguson (IM), 403 E. Statesville Ave., Mooresville 28155

Lee
Michael Alan Gordon (GS), 1816 Doctors Dr., Sanford 27330

Mecklenburg
Thomas Ellsworth Singlevich (AN), 8910 St. Pierre Lane, Matthews 28105

New Hanover-Pender
Mary Lou Courrage (D), 2308 Oleander Dr., Wilmington 28401
John Jay Fishman (AN), 5301 Wrightsville Ave., Wilmington 28401
Peter Francis Torrisi (PUD), 1202 Medical Center Dr., Wilmington 28401

Pitt
Herbert Gaston Garrison, III (RESIDENT), 114 Garner Rd., Greenville 27834
Hamid A. Hadi, ECU School of Medicine, Dept. of OB/GYN, Greenville 27858

Robeson
Michael Wayne Early (FP), PO Box 1629, Pembroke 28372

Wake
John Daniels Agayoff, Jr. (GE), 3320 Executive Dr., Ste. 119, Raleigh 27609
Donna Grey Anderson (PD), 3900 Browning PL., Raleigh 27609
Michael Gerard De Lissio (GE), 101 SW Cary Parkway, Cary 27511
Robert Alan Durr (IM), 3320 Old Wake Forest Rd., Raleigh 27609
Dale William Oller (GS), 3000 New Bern Ave., Raleigh 27610

**This Publication
is available in
Microform.**



**University Microfilms
International**

Please send additional information
for _____
Name _____
Institution _____
Street _____
City _____
State _____ Zip _____

300 North Zeeb Road
Dept. P.R.
Ann Arbor, Mi. 48106

Our **A**lumni Make Great Recoveries.


They needed our program to solve their problems, so you probably won't hear them brag about their Alma Mater. But they're proud of us and we're proud of them, because they continue to live straight and sober *after* they leave our program.

Some people call it success. We call it recovery. And it happens because of teamwork. Our staff, our client's physician, employer, and family, all working together with each patient for the same goal: freedom from drugs and alcohol one day at a time.

Guaranteed. That's right, if a patient follows our program and doesn't remain drug and alcohol free, we'll provide additional treatment at *no charge*.

Don't lose your patients to alcohol and drugs. Get them back with our help and discover what recovery can mean for your patient's life.


We offer 24 hour free confidential evaluations and case consultations 7 days a week.



**Charter
Northridge
Hospital**

400 Newton Road
Raleigh, NC 27615
1-800-447-1800

Patient costs covered by Medicaid, Medicare and most insurance companies.



**A Facility of Charter Medical Corporation
Quality Hospitals.**

Classified Ads

KEEPING LONG HOURS? Too many patients and not enough time? Have you considered employing a physician assistant to help you extend your practice without extending yourself? The North Carolina Academy of Physician Assistants can supply you with helpful information about the training and capabilities of physician assistants. For more information contact Dean Minton, PA-C, NCAPA Public Affairs Chairman, 209 Shenendoah Dr., Winston-Salem 27103. 919/748-2247 (work); 919/768-4934 (home).

PRACTICE SALES, mergers, equity associateships, or appraisals from the nation's oldest practice transition firm. Aftco Associates, Charlotte, P.O. Box 4126, Rock Hill SC 29731. 803/329-9655.

GENERAL INTERNIST desired to replace retiring member of four physician F.P. group. Busy general adult medicine practice. Pine Ridge Family Practice, P.A., 147 Columbine Dr., Winston Salem, 919/722-9535.

FAMILY PHYSICIAN BC/BE needed to replace retiring member of four physician F.P. group. OB optional. Available 7-88 or after. Pine Ridge Family Practice, PA. 147 Columbine Drive, Winston-Salem 27106.

DISCOUNT HOLTER SCANNING: starting at \$40. Spacelab Holters available at \$1275. Turn-over time is 24-48 hours. Hook up kits available at \$4.95. Stress test electrodes available at 29¢. Scanning paper available at \$18.95. One free test is offered at no obligation on trial basis. Cardio Care, Inc. For more information call us today at: 1-800/248-0153.

RADIOLOGIST: Nice, small, well located North Carolina town. Join active hospital based, service oriented practice. General DX, NM, US, CT — future arteriography. Reply with C.V. to: code 60, NCMJ, Box 3910, DUMC, Durham 27710.

INTERNIST to join established multi-specialty group. Cardiology experience preferred. Practice is based in scenic, waterfront community; hospital with three nursing homes. Near Norfolk, VA. Competitive salary/benefits. Send CV to: Box 429, Edenton, NC 27932.

OWNER MUST SELL — will take loss, magnificent newly built tri-level four-bedroom, four-bathroom, garage, gazebo dining room area, fireplace. Completely furnished with linens, drapes, wood floors, dining and cooking utensils. Located on 1.5 acres at Fairfield Mountain, Lakelure, NC. Two 18-hole golf courses, clubhouse, 26 mile lake, boating, fishing, health club, tennis courts, three pools, gourmet restaurants on premises and area. Call collect, Helen Kittay, 1-800/327-4287.

UROLOGIST — needed for private practice in progressive community in Mooresville, NC. Near beautiful Lake Norman. Guaranteed income plus benefits. Please send CV to Richard Blackburn, Executive Director, Lake Norman Regional Medical Center, PO Box 360, Mooresville, 28115. 704/663-1113.

PSYCHIATRIST — needed for inpatient medical director and solo practice, 30 minutes north of Charlotte, NC. Near beautiful Lake Norman. Excellent financial package. Please send CV to Richard Blackburn, Executive Director, Lake Norman Regional medical Center, PO Box 360, Mooresville 28115. 704/663-1113

INTERNAL MEDICINE — The Kaiser Permanente Medical Care Program of North Carolina has immediate openings for BC/BE internists to staff positions available in our Charlotte Medical Offices. Competitive salary and benefits to include full malpractice and retirement plan. CV to: Stephen A. Silbiger, M.D., Carolina Permanente Medical Group, P.A., Three Fairview Plaza, Suite 100, 5950 Fairview Rd., Charlotte 28210. Call 704/551-4200.

RESEARCH TRIANGLE AREA: Busy, well established pediatric practice for sale. Suitable for one/two pediatricians. Community near hospitals with level 2 and 3 nurseries, full time ER, pediatric teaching program. Seller will stay to introduce buyer. Please reply to Code 70, NCMJ, Box 3910, DUMC, Durham 27710.

PHYSICIANS OFFICE EQUIPMENT including Burdick treadmill, 4-channel monitor, 3-channel ECG, defibrillator, examination table, desks and filing cabinets. Call evenings, 704/251-2645.

BOARD CERTIFIED or **BOARD ELIGIBLE** Family Practice or Emergency Medicine physicians needed immediately in the Fayetteville, Lumberton and Raleigh areas. Send CV to Nancy Prehn, Post Office Box 2385, Fayetteville, NC 28302-2385.

VACATION in Blowing Rock, crown of the Blue Ridge Mountains, ski capital of the Southeast. Rentals from \$850/month to \$2,500. Chalet sales from \$80,000. Luxurious homes and condominiums from \$135,000. Every kind of outdoor and cultural activity! Magnificent scenery! Tellekamp Real Estate, Blowing Rock, NC 28605. 704/295-7602 or 295-3796 eve.

GENERAL SURGEON needed immediately. Rural Eastern North Carolina. Pleasant community, fine people, busy practice, near beaches, good hunting and fishing. Desire BC/BE physician to join practice with opportunity for partnership in one year. Reply: R.B. Dietrick, M.D., Box 501, Kenansville, NC 28349. Tel: 919/296-0545/1006.

FOR SALE - Established practice of Urology in the Piedmont area of North Carolina. Easy access to metropolitan areas via Interstate highway. Solid opportunity in a growing area. For details, send inquiry with address and telephone number to Mr. C. David Carpenter, Professional Consulting Services, Inc. 125 E. Pennsylvania Avenue, Southern Pines, N.C. 28387.

PSYCHIATRY: Opportunity for Board Certified/Board Eligible to join established practice in the Greenville area of North Carolina, with a 550 + bed community hospital. Start with a partnership potential. Contact Judith Sallé Yongue, M.D., P.A., 107-C Commerce Street, Greenville, N.C. 27858. Phone 919/355-2768.

FAMILY MEDICINE: Busy BC F.P. group in W. N. Carolina needs BE/BC assoc. Competitive guarantee, plus productivity/fringe benefits. Buy-in provision. Paradise! Picturesque community w/cultural & recreational amenities. One hour from Asheville; 90 minutes from Charlotte. Contact Don Gustavson, Tyler & Co., 9040 Roswell Rd., Atlanta, GA 30350. Call 404/641-6411.

EMERGENCY PHYSICIANS: Positions available at 117-bed hospital in Dunn, North Carolina. Approximately 13,000 annual ED visits. ED expansion in process. Growing family-oriented community within an hour's drive of Raleigh. Excellent compensation including physician incentive plan and professional liability insurance program. Please call or submit curriculum vitae to: Physician Recruiter, Coastal Emergency Services of Durham, Inc., 3200 Croasdaile Dr., Dept. SJE, Suite 405, Durham, 27705; 800/334-3306 (US) or 800/672-1665 (NC).

PUBLIC HEALTH PHYSICIAN II position available with the Alamance County Health Department to work in the clinic. \$55,776 annual salary with competitive fringe benefits, liability insurance paid by employer. Must be a graduate from an accredited school of medicine and completion of internship in an approved hospital and three years of experience in a professional medical capacity. Licensed to practice medicine in N. C. and eligible to be insured for medical professional liability insurance coverage. Send application to Becky Perkins, Alamance County Health Department, 209 N. Graham-Hopedale Road, Burlington, NC 27215 before June 15, 1988. (919) 227-0101.

GREENSBORO: Full-time or part-time position available. Established Outpatient General Family Practice 5½ years old, growing rapidly. Wonderful opportunity in the best U.S. location to live. Very well equipped with state of the art Lab, X-ray, EKG/Defibrillator, Spirometry, Audiometry, etc. Financial reward: Excellent. Quality of life: Excellent. Opportunity for medically challenging work: Excellent. Contact: Chris W. Guest, M.D., 919-299-0000 or send CV to 102 Pomona Drive, Greensboro, NC 27407.

INTERNIST — To join established multi-specialty group. Cardiology experience preferred. Practice is based in scenic, waterfront community; hospital with 3 nursing homes. Near Norfolk, VA. Competitive salary/benefits. Send CV to: Box 429, Edenton, NC 27932.

MULTISPECIALTY GROUP of 15 physicians, located in beautiful Piedmont area of North Carolina needs recently trained B/C, B/E General Surgeon and B/C, B/E Urologist to help present doctors with busy practices. Group practice is in close proximity to two hospitals. In-house Lab, X-ray, Stress Lab and Echo. Association leads to equal shareholdership in one to two years. Full benefit package, guaranteed salary and professional management. Send CV to: Administrator, Statesville Medical Group, P.O. Box 1460, Statesville, NC 28677 or call 704/878-2011.

PHYSICIANS OFFICE supply includes examination tables, EKG machine, typewriter, file cabinets, table calculator — for sale. Call 704/253-0312 and leave message.

NCMJ Classified Ads . . .

Send your ad to:

Managing Editor
Box 3910
Duke University Medical Center
Durham 27710

Please specify the number of monthly issues in which you'd like it to appear. (Note: no issue is published in August.) Include your name, address, and phone number.

Closing date is the 25th of the second prior month.

Rates: NCMS members, \$15/25 words, plus .25 each additional word;
Others, \$25/25 words, plus .25 each additional word.

For further information, call 919/684-5728.

Index to Advertisers

Baron Financial Services, Inc.	327	Medical Protective Company	311
B & B X-Ray, Inc.	289	Miles Pharmaceuticals	332a-b
Blue Cross and Blue Shield of N.C.	304	MONY Financial Services	309
Burroughs Wellcome Co.	304a-b, 305	NCMS	348
Carolina Consultation Center	295	Omohundro Communications	308
Central Prosthetic & Orthotic Laboratories	333	Peace Corps	348b
Charter Northridge Hospital	345	Roche Laboratories	323, 348b, C3, C4
Coast Realty and Construction Co.	314	Smith Kline and French Laboratories	348a
Crompton Company	Cover 2	Southern Medical Association	290
Eli Lilly	341	U.S. Army Reserve	310
Hinrichs Financial Group	296	Winchester Surgical Supply Co.	335
Key Pharmaceuticals	339, 340	Wyeth-Ayerst Laboratories	296a-d
Medical Mutual Insurance Company of N.C.	322		

MEDICAL DIRECTOR N.C. PHYSICIANS HEALTH AND EFFECTIVENESS PROGRAM


The North Carolina Medical Society is seeking a full-time medical director for its impaired physicians program. Position may be filled as early as September.

Basic requirements are:

- ~Degree of Doctor of Medicine
- ~License to practice medicine in N.C. prior to employment
- ~Good health
- ~Successful administrative experience
- ~Demonstrable communication skills
- ~Demonstrable knowledge in addictionology
- ~Strong, verifiable recovery, if applicable

Letter of application, accompanied by detailed curriculum vitae, should be addressed to:

**Medical Director Search
N.C. Medical Society
P.O. Box 27167**



A better alternative for hypertensives who are going bananas...

Spare your patients the extra cost—
in calories, sodium and dollars.

Spare your patients the rigors of
dietary K⁺ supplementation.

DYAZIDE[®]

25mg Hydrochlorothiazide/50mg Triamterene/SKF

Effective antihypertensive*
therapy...without
the bananas

DAW
'DYAZIDE' AS WRITTEN.

* Not for initial therapy. See brief summary.

Before prescribing, see complete
prescribing information in
SK&F CO. literature or PDR.
The following is a brief summary.

WARNING

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K⁺ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K⁺ intake. Associated widened QRS complex or arrhythmia requires prompt additional therapy. Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or

without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.

Precautions: The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of triamterene and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Angiotensin-converting enzyme (ACE) inhibitors can elevate serum potassium; use with caution with 'Dyazide'. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin[ACTH]). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The

following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function. Thiazides may add to or potentiate the action of other antihypertensive drugs. Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.

Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak™ unit-of-use bottles of 100.

BRS-DZ-L45

a product of
SK&F CO.
Cidra, P.R. 00639

© SK&F Co., 1987

**We need
someone
with the
confidence
of a surgeon,
the dedication
of a
marathoner
and the
courage of
an explorer.**

We need someone to fill a unique job opening.

Someone to spend two years in another country. To live and work in another culture. To learn a new language and acquire new skills.

We need someone who wants to help improve other people's lives. Who's anxious to build lasting friendships. To gain memories and experience that will last a lifetime. And a sense of fulfillment few jobs can match.

We need a Peace Corps volunteer. Interested? The first step is easy. Call 1-800-424-8580, Ext. 93.

Peace Corps.

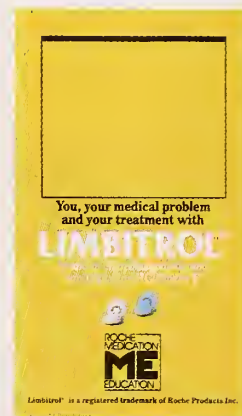
The toughest job you'll ever love.



FORGET



NOT



Roche Medication Education Booklets supplement your instructions to patients. So forget **ME** not. The Limbitrol® (chlor diazepoxide and amitriptyline HCl/Roche)™ booklet is part of The Roche Medication Education Program.

This important program helps your patients remember and understand:

- What the medication is and why they are taking it
- The importance of staying with the prescribed course of treatment
- What foods and drinks to avoid
- Possible side effects

For a free supply of Limbitrol booklets, complete the coupon below and mail it to: Professional Services Department, Roche Laboratories, a division of Hoffmann-La Roche Inc., 340 Kingsland Street, Nutley, New Jersey 07110-1199

NAME _____

STREET ADDRESS _____

CITY _____

STATE _____

ZIP _____

Roche Laboratories

a division of Hoffmann-La Roche Inc.

PLANDEX 35201

RENT
S

Journal

North Carolina
Medical Society
July 1988
Volume 49
Number 7

North Carolina Medical
Journal
UCSF LIBRARY
Received on: 07-27-88

North Carolina Medical Journal

For Doctors and their Patients

**The National Library of
Medicine: The Great
Equalizer between
Small Hospitals and
Major Medical Centers**
Eugene A. Stead, Jr., M.D.

**Reimbursement and
Diabetes Self-Care
Programs in
North Carolina**
William W. Fore, M.D.,
Sue Daughtry, R.D., M.S., C.D.E.,
Zola M. Sugg, R.N.,

**State Accompli:
Rhododendron
toxicity**
Ronald B. Mack, M.D.



The National Library of Medicine (right) is mostly underground.
On the left is the Lister Hill Institute.
Using the Library makes the information base of all doctors equal
(article, page 360).

Contents page 351

THERE IS
SOMETHING
IN OUR NAME
THAT BRINGS YOU
A FEELING OF
SECURITY.

CRUMPTON COMPANY.

Why do so many NC physicians participate in the Crumpton Plan of Disability Income Protection?

THE ANSWER is the 47 years of successful relationship and personal service at claim time!

Yes, the feeling of security as well as economic advantage in knowing the program is a plan of carefully designed benefits.

The plan is not filled with a lot of "purple duck feathers," but provides income when you are unable to produce — not promises, but performance.

Why not call us today to obtain the latest details for your group practice? We are delighted to offer our broadened portfolio of professional insurance.



Commercial Insurance Company

Crumpton Company
Box 8500 Academy Center, Durham 27707
800/672-1674 919/493-2441

NORTH CAROLINA MEDICAL JOURNAL

For Doctors and their Patients

July 1988, Volume 49, Number 7

Published Monthly as the Official Organ of the North Carolina Medical Society

(ISSN-0029-2559)

STAFF

Eugene A. Stead, Jr., M.D.
Rt. 1, Box 194, Bullock
EDITOR
919/693-4531
Francis A. Neelon, M.D.
Durham
ASSOCIATE EDITOR
F. Maxton Mauney, Jr., M.D.
Asheville
ASSOCIATE EDITOR
Eben Alexander, Jr., M.D.
Winston-Salem
ASSOCIATE EDITOR
William B. Blythe, M.D.
Chapel Hill
ASSOCIATE EDITOR
William W. Fore, M.D.
Greenville
ASSOCIATE EDITOR
Edward C. Halperin, M.D.
Durham
ASSOCIATE EDITOR
Laurel Ferejohn
Durham
MANAGING EDITOR
919/684-5728

Jane Whalen
Durham
EDITORIAL ASSISTANT
George E. Moore
Raleigh
BUSINESS MANAGER

EDITORIAL BOARD

Charles W. Styron, M.D.
Raleigh
CHAIRMAN
Edwin W. Monroe, M.D.
Greenville
Robert W. Prichard, M.D.
Winston-Salem
Louis deS. Shaffner, M.D.
Winston-Salem
Jay Arena, M.D.
Durham
Jack Hughes, M.D.
Durham
William B. Blythe, M.D.
Chapel Hill
Margaret C. Swanton, M.D.
Clinton

The appearance of an advertisement in this publication does not constitute any endorsement of the subject or claims of the advertisement.

The Society is not to be considered as endorsing the views and opinions advanced by authors of papers delivered at the Annual Meeting or published in the official publication of the Society. — *Constitution and Bylaws of the North Carolina Medical Society*, Chapter IV, Section 3, page 4.

NORTH CAROLINA MEDICAL JOURNAL

Box 3910, Duke University Medical Center, Durham, NC 27710 (919/684-5728), is owned and published by The North Carolina Medical Society under the direction of its Editorial Board. Copyright © The North Carolina Medical Society 1988. Address manuscripts and communications regarding editorial matters, advertising, subscription rates, etc., to the Managing Editor at the Durham address. All advertisements are accepted subject to the approval of a screening committee of the State Medical Journal Advertising Bureau, 711 South Blvd., Oak Park, Illinois 60302 and/or by a Committee of the Editorial Board of the North Carolina Medical Journal in respect to strictly local advertising. Instructions to authors appear in each issue (see table of contents). Annual Subscription, \$12.00 (+ tax in NC). Single copies, \$2.00. Publication office: The Ovid Bell Press, Inc., 1201-05 Bluff St., Fulton, MO 65251. *Second-class postage paid at Raleigh, North Carolina 27611 and additional mailing offices.* Postmaster: Send address changes to North Carolina Medical Society, 222 N. Person St., Raleigh, NC 27611.

Keep Your Patients Loyal to You

Giving your patients the peace of mind that will keep them loyal to you is critical to the survival of your practice. By having the best equipment, you give your patients that peace of mind. Since today's health conscious women are aware of the value of mammographic examinations, now is the time to evaluate the benefits of mammography for your practice and your patients.

Last year alone there were 41,000 breast cancer deaths and over 130,000 reported new cases of breast cancer in the United States. Call B & B X-Ray today at 1-800-447-XRAY to find out how the Bennett Micro-Fine Mammography System can help keep your patients loyal to you.

B & B X R A Y

working for the end result — optimum quality radiographs
P.O. Box 802 Matthews, NC 28105 1-800-447-XRAY
704/847-8521



THE SECRET IS OUT



“While I was attending one of Southern Medical’s Annual Meetings, I became acquainted with the Dial Access program which provides medical information through a toll-free number. It has been very useful to have access to recent taped information that is very brief and very current.”

**Marie L. Michelson, M.D.
Pathology
Chattanooga, TN**

Since 1906, the Southern Medical Association has been the best kept secret in the South. No longer! The word is out and everybody’s talking.

They’re talking about the educational benefits of belonging to the largest regional multi-specialty association in the U.S. and the diversity of the Annual Scientific Assembly.

They’re talking about a non-political association whose only mission is to provide the best educational and financial benefits available anywhere.

They’re also talking about unrivaled member benefits including the SMA Insurance Program, the Physicians’ Purchasing Program, the SMA Retirement Program, SMA Travel Services, Dial Access, the *Southern Medical Journal* and many, many more.

But most of all, they’re talking about how SMA can offer so much at such a low cost.

Call the SMA for more information and a membership application. Find out why more and more physicians are joining the SMA every day.

Join the SMA today . . . You’ll be talking about us too!

Post Office Box 190088
Birmingham, Alabama 35219



1-800-423-4992
(205) 945-1840

North Carolina Medical Journal

F O R D O C T O R S A N D T H E I R P A T I E N T S

Contents / July 1988, Volume 49, Number 7

SCIENTIFIC ARTICLES

- 352 Virilizing Adrenal Adenoma Associated with Normal Urine 17-Ketosteroid Level: A Story of an Unusual Woman *Donald L. Heine*
- 357 Concomitant Occurrence of Hyperparathyroidism and Myxedema *Philip R. Aronson and Gunnar H. Anderson, Jr.*

MODERN MEDICINE

- 360 The National Library of Medicine: The Great Equalizer between Small Hospitals and Major Medical Centers *Eugene A. Stead, Jr.*

TOXIC ENCOUNTERS

- 363 Fate Accompli: Rhododendron Toxicity *Ronald B. Mack*

EDITORIAL

- 365 Medical Licensure Application Process: Strengths and Weaknesses *Bruce R. Burger, Jerry G. Gregory and Everett C. Simmons*

SOCIOECONOMICS

- 370 Reimbursement and Diabetes Self-Care Programs in North Carolina *William W. Fore, Sue Daughtry, and Zola M. Sugg*

FOR PATIENTS

- 377 The Department of Medicine at the Bowman Gray School of Medicine of Wake Forest University: Changing Priorities in Changing Times *William R. Hazzard*

CAROLINA HISTORY

- 381 Evolution of Therapy of Myocardial Infarction *Tinsley Harrison, David E. Rogers, and Joseph C. Greenfield, Jr.*

THE NAMES AND FACES OF MEDICINE

- 389 Charcot's Joint *John R. Straznickas and Francis A. Neelon*

PHARMACOTHERAPY

- 391 Fluoxetine: A New Antidepressant *Timothy E. Poe*

CAROLINA PHYSICIAN'S BOOKSHELF

- 393 Book Reviews *Edited by Edward C. Halperin*

LETTERS TO THE EDITOR

BULLETIN BOARD

- 400 Continuing Medical Education
- 400 New Members
- 403 In Memoriam
- 404 Classified Advertisements
- 407 Instructions to Authors
- 408 Index to Advertisers

Virilizing Adrenal Adenoma Associated with Normal Urine 17-Ketosteroid Level

A Story of an Unusual Woman

Donald L. Heine, M.D.

Virilization in women is associated with excess androgen secretion. The primary sources of androgen production are the adrenal gland and the ovary. Usually disease of the adrenal cortex causes virilization through production of increased amounts of 17-ketosteroids — primarily dehydroepiandrosterone (DHEA), DHEA-sulfate, and androstenedione, which are converted peripherally to testosterone. The ovaries, on the other hand, usually cause virilization through direct secretion of testosterone. The case presented here illustrates an unusual occurrence of adrenal virilization in which an elevated testosterone level is not associated with elevated levels of 17-ketosteroids.

Our person was a 56-year-old widowed white woman who six months before presentation noticed increasing growth of long hair over her lower arms, face, chest and lower abdomen. There was frontal and temporal thinning of scalp hair and deepening of voice. She became aware of increased libido and the feeling of elevated body temperature. Her appetite was markedly increased and she had gained 20 pounds of weight. Prior to this time she was in generally good health. Past medical history was notable only for mild seasonal rhinorrhea and well controlled essential hypertension. She had menarche at age 15 and four pregnancies with normal full-term deliveries. In 1968 she had a total abdominal hysterectomy and left salpingo-oophorectomy for uterine fibroids.

She was admitted to the gynecology service for the evaluation of new masculinizing symptoms. Her temperature was 37° C, pulse was 80 per minute, and respirations were 16. The blood pressure was 140/90.

She had severe frontal and temporal alopecia. Thick hair growth was present on the sides of her face, dorsal surface of forearms, and in a male escutcheon distribution over the lower abdomen. Her thyroid gland was small and smooth

to palpation. Her breasts were pendulous and hair was present encircling well developed areola. Chest exam was normal. Pelvic exam revealed female external genitalia without clitorimegaly. Bimanual and rectovaginal examinations disclosed no masses.

Chemistry panel and peripheral blood counts were within normal limits. Serum testosterone level was 319 ng/dl (normal in reproductive female: 15-110 ng/dl), DHEA-sulfate was 1623 ng/ml (normal in reproductive female: 500-3400 ng/ml), and 17-hydroxyprogesterone level was 3.7 ng/ml (normal: less than 3.0 ng/dl). Thyroid function tests showed T3U 40.9%, T4 RIA 7.5 ug/dl, FTI 3.1 (all within normal limits).

Because an ovarian tumor is commonly the cause of virilization with elevated testosterone levels and no increase in 17-ketosteroids, a right salpingo-oophorectomy and left salpingectomy were performed. The right ovary was small and grey-tan with smooth fibrous capsule. The left ovary, cervix, and uterus had been removed in the previous operation. Adrenals were normal to palpation. No tumor cells were noted upon histological examination of the ovary.

During outpatient follow-up the patient experienced no improvement in hirsutism or baldness. Repeat testosterone level was 443 ng/dl, DHEA-sulfate was 2245 ng/ml, and 17-hydroxyprogesterone level was 0.6 ng/ml. The serum cortisol at 8 a.m. was 7.4 ug/dl after receiving 1 mg of dexamethasone the prior evening. Abdominal computerized tomogram with 1 cm slices through the adrenals showed a 4 cm diameter well-defined rounded left adrenal mass. An incidental finding was a large (8 x 12 cm) solitary hepatic mass consistent with a cavernous hemangioma. Three months later the patient was re-admitted for left adrenalectomy. A 3 cm darkly pigmented (black) adrenal adenoma was found in the left adrenal cortex.

The affected adrenal tissue was assayed for testosterone and yielded 3.2 ng of testosterone per mg wet weight. This compares to normal adjacent adrenal tissue with 0.08 ng testosterone per mg wet weight. The serum testosterone

Cardiology Section, Washington Veterans Administration Medical Center, 50 Irving St., NW, Washington, D.C. 20422.

level two days after surgery was 112 ng/dl and six days after surgery was 35 ng/dl.

Discussion

A variety of disorders can cause virilization in adult females.¹ Patients with polycystic ovarian syndrome (POS) may be effected with growth of coarse, typically male type hair in a male distribution. Other typical features of POS include oligomenorrhea or amenorrhea, obesity, and enlarged ovaries with atretic follicles. Rarely, severe manifestations of virilization (balding, voice change, clitorimegaly) are present.

Hyperstimulation of the adrenal glands by adrenocorticotrophic hormone (ACTH) in Cushing's disease results in symptoms of both glucocorticoid and androgenic steroid excess, and these patients may appear virilized. The characteristic features of cortisol excess, however, usually predominate. Congenital adrenal hyperplasia, including defective 11- and 21-hydroxylation and 3-B-dehydroxysteroid dehydrogenase deficiency, may escape diagnosis until adulthood and then present a clinical picture of hirsutism or virilization. Normal serum 17-hydroxyprogesterone levels aid in excluding an 11- or 21-hydroxylation defect.

In general, the disorders mentioned may be identified by thorough history and physical exam. The diagnostic differential is then between tumor of the ovary and adrenal gland as the cause of excessive testosterone production and virilization. The most common virilizing ovarian tumor is the Sertoli-Leydig cell tumor, or arrhenoblastoma.² Other virilizing ovarian tumors include the hilus-cell or Leydig-cell tumor which have typical crystalloids of Reinke; lipid-cell tumor; and rarely Brenner tumors, Krukenberg tumors, cystadenocarcinomas, and pseudomucinous cystadenomas. Adrenal tumors may be pure cortisol secreting, in which case they do not demonstrate evidence of virilization, but may cause increased hair growth of a downy type. They may produce both cortisol and androgen, with features very similar to Cushing's disease, or may be associated primarily with androgen production. Adrenal carcinomas may cause Cushing's syndrome and are known to frequently cause very marked virilization.

Adenomas of the adrenal are common (about 5% of some autopsy series); however, they are rarely associated with any endocrine disorder.³ If lipofuscin is present, the tumor may appear black. Black adenomas with endocrine function are rare.⁴

Androgen secreting adrenal tumors present with evidence of virilization and menstrual disturbances, with a relatively sudden onset and rapid progression over a period of weeks to months. The usual clinical features are hirsutism, acne, temporal recession of hairline and thinning of scalp hair, increased or decreased libido, deepening of voice, increased muscle mass, and clitoral enlargement. The disorder may develop at any time from childhood to old age. Levels of

circulating androgens, including testosterone, androstenedione, DHEA, DHEA-sulfate and urinary ketosteroid excretion are increased in affected patients.

Usually, as mentioned earlier, disease of the adrenal cortex causes virilization through production of increased amounts of 17-ketosteroids (primarily DHEA, DHEA-sulfate and androstenedione) which are peripherally converted to testosterone. The ovaries can cause virilization through the direct secretion of testosterone. In the past it has been stated that normal urinary 17-ketosteroids practically excluded the presence of an adrenal lesion as the cause of virilization.² However, as the present case demonstrates, there are cases of virilizing adrenal tumors associated with markedly elevated testosterone levels, but normal levels of DHEA.⁵⁻¹⁸ Various methods have been utilized in attempts to identify the source of testosterone, including ultrasonography, laparoscopy, abdominal computerized scanning,¹⁹ adrenal radio-isotope scanning (radioiodinated cholesterol scanning),²⁰ and selective sampling from adrenal and ovarian veins for measurement of androgens.^{11,21} Endocrinologic suppression and stimulation tests have been of limited value in tumor localization.²²

A review of the literature reveals 14 reported cases similar to the one presented.⁵⁻¹⁸ All of these patients have virilizing adrenal tumors associated with elevated serum testosterone levels but normal urinary excretion of 17-ketosteroids. Eleven of 15 patients (including the one presented) were older than 48. All cases had normal 24-hour urinary 17-ketosteroid levels. The DHEA-sulfate was normal in four cases, DHEA in four, androstenedione in six. Adrenal cortical adenomas were present in 11 of 15. Ganglioneuromas were noted in two cases. There was also one case of mixed cortical adenoma and ganglioneuroma, and one case had pleomorphic tumor cells with areas suggestive of primitive sex cords.¹⁸ Crystalloids of Reinke and other histologic features resembling Leydig cells were observed in three cases.

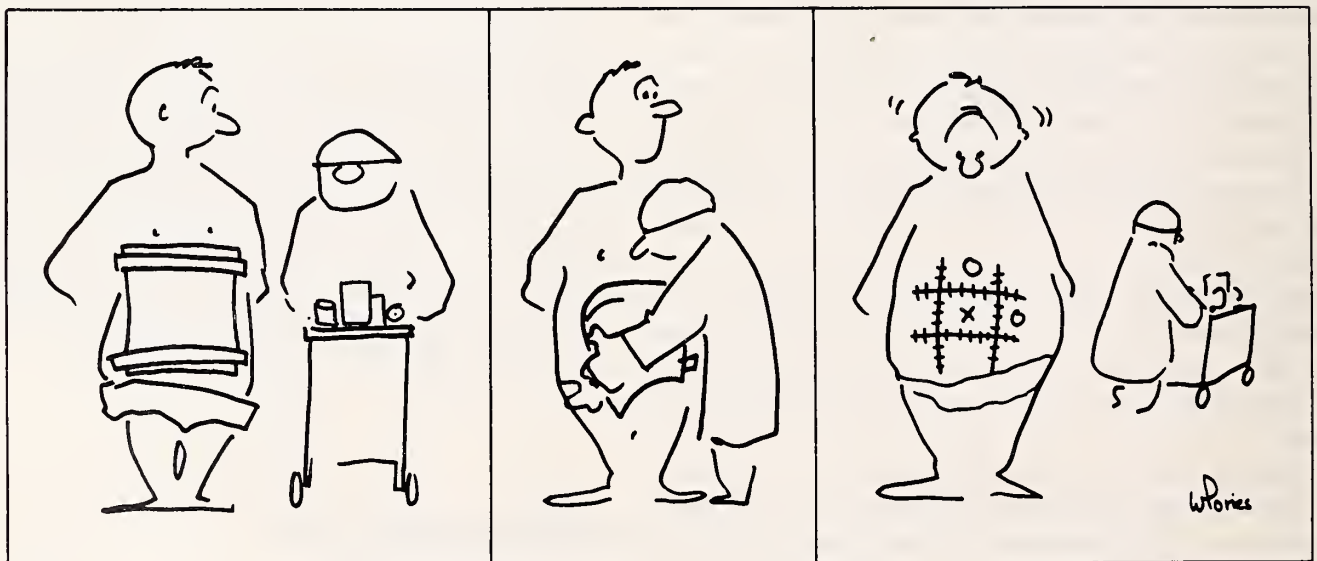
In conclusion, virilization in women is often associated with excess androgen secretion from the adrenal gland or the ovary. In the evaluation of a patient with symptoms of virilization, one may associate findings of elevated testosterone and normal 17-ketosteroids with either ovarian or adrenal tumors. Further diagnostic studies are then indicated to definitively localize the source of androgen production. Failure to search for an adrenal source of testosterone secretion may delay definitive therapy and result in unnecessary oophorectomy. ■

Acknowledgment

I would like to express my appreciation to Dr. Warner Burch of the Division of Endocrinology at Duke University Medical Center for his assistance in the review of this manuscript.

References

- 1 McKenna TJ, Cunningham SK, Loughlin T. The adrenal cortex and virilization. *Clin Endocrinol Metab* 1985;14:997-1020.
- 2 Case 8-1969, Case records of the Massachusetts General Hospital. *N Eng J Med* 1969;280:438-44.
- 3 Wilson JD, Foster DW, eds., *Williams Textbook of Endocrinology*. Philadelphia; W.B. Saunders Company, 1985, p. 866.
- 4 Visser JW, Boeijinga JK, Meer CV. A functioning black adenoma of the adrenal cortex: A clinico-pathological entity. *J Clin Pathol* 1974;27:955-9.
- 5 Trost BN, Koenig MP, Zimmermann A, et al. Virilization of a post-menopausal woman by a testosterone secreting Leydig cell type adrenal adenoma. *Acta Endocrinol* 1981;98:274-82.
- 6 Aguirre P, Scully RE. Testosterone-secreting adrenal ganglioneuroma containing Leydig cells: *Am J Surg Pathol* 1983;7:699-705.
- 7 Burr IM, Sullivan J, Graham T, et al. A testosterone-secreting tumor of the adrenal producing virilization in a female infant. *Lancet* 1973;11:643-4.
- 8 Larson BA, Vanderlaan WP, Judd HL, McCullough DL. A testosterone-producing adrenal cortical adenoma in an elderly woman. *J Clin Endocrinol Metab* 1976;43:882-7.
- 9 Smith HC, Posen S, Clifton-Bligh P, Casey J. A testosterone-secreting adrenal cortical adenoma. *Aust NZ J Med* 1978;8:171-5.
- 10 Givens JR, Anderson RN, Wiser WL, et al. A gonadotropin-responsive adrenocortical adenoma. *J Clin endocrinol Metab* 1974;38:126-33.
- 11 Kable WT, Yussman MA. Testosterone-secreting adrenal adenoma. *Fertil Steril* 1979;32:610.
- 12 Dolinar R, Burch WM. Testosterone-producing adrenal adenoma in a woman with normal 17-ketosteroid levels. *JAMA* 1983;250:2504-5.
- 13 Spaulding SW, Masuda T, Osawa Y. Increased 17B-hydroxysteroid dehydrogenase activity in a masculinizing adrenal adenoma in a patient with isolated testosterone overproduction. *J Clin Endocrinol Metab* 1980;50:537-40.
- 14 Kelly TR, Mayors DJ, Boutsicaris PS. Adrenal adenoma. Isolated testosterone secretion. *Am Surg* 1982;48:604-6.
- 15 DeLange WE, Pratt JJ, Doorenbos H. A gonadotrophin-responsive testosterone-producing adrenocortical adenoma and high gonadotrophin levels in an elderly woman. *Clin Endocrinol* 1980;12:21-8.
- 16 Mack E, Sarto GE, Crummy AB, et al. Virilizing adrenal ganglioneuroma. *JAMA* 1978;239:2273-4.
- 17 Takahashi H, Yoshizaki K, Kato H, et al. A gonadotrophin-responsive virilizing adrenal tumor identified as a mixed ganglioneuroma and adrenocortical adenoma. *Acta Endocrinol* 1978;89:701-9.
- 18 Valiloff J, Chideckel EW, Boyd CB, Foshag LJ. Testosterone-secreting adrenal adenoma containing crystalloids characteristic of Leydig cells. *Am J Med* 1985;79:772-6.
- 19 Yuen BH, Moon YS, Mincey EK, Li D. Adrenal and sex steroid hormone production by a virilizing adrenal adenoma and its diagnosis with computerized tomography. *Am J Obstet Gynecol* 1983;145:164-9.
- 20 Taylor L, Ayers JW, Gross MD, et al. Diagnostic considerations in virilization: Iodomethylnorcholesterol scanning in the localization of androgen secreting tumors. *Fertil Steril* 1986;46:1005-10.
- 21 Gabrilove JL, Seman AT, Sabet R, et al. Virilizing adrenal adenoma with studies on the steroid content of the adrenal venous effluent and a review of the literature. *Endocrine Reviews* 1981;2:462-9.
- 22 Givens JR, Anderson RN, Wiser WL, et al. A gonadotrophin-responsive adrenocortical adenoma. *J Clin Endocrinol Metab* 1974;38:126-33.



Now America's oldest professional liability insurer has come to North Carolina.

The newest professional liability insurer in North Carolina is the oldest in the nation. The Medical Protective Company pioneered the concept of professional protection before the turn of the century and has been serving doctors exclusively ever since. Through good times and bad.

With the current liability crisis escalating, you need to take a close look at your coverage and the company that stands behind it. Then take a close look at us. You'll see we carry the highest

rating from A.M. Best, the firm that tracks the financial stability of insurance companies nationwide. Beyond that, you'll find complete protection at premium rates that are likely lower than you're currently paying. Plus the personal attention and claims prevention assistance you deserve.

Contact Stu Mitchelson today at 704/541-8020. He's the oldest company's representative in its newest state. And he's here to serve you.

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

Stuart Mitchelson, P.O. Box 13489
Charlotte, North Carolina 28211, (704) 541-8020

Are You Only Smiling For The Camera?



Or do you know someone
who is?

Saint Albans Psychiatric Hospital in Radford, Virginia has been helping people deal with life since 1916. We offer comprehensive programs for adults and adolescents in chemical dependency, eating disorders, depression, out-of-control behavior and other life problems — all supervised by a skillful and compassionate staff. When you know someone in need of psychiatric help call Saint Albans.

We build real smiles.

*In Virginia: 1-800-572-3120
Outside Virginia: 1-800-368-3468
P.O. Box 3608 Radford, Va., 24143*

 **Saint Albans
Psychiatric Hospital**
Radford, Virginia

Concomitant Occurrence of Hyperparathyroidism and Myxedema

Philip R. Aronson, M.D., Gunnar H. Anderson, Jr., M.D.

Hypercalcemia associated with myxedema has been reported but is a very uncommon occurrence.¹ One case of a myxedematous adult with hypercalcemia was described by Lowe and associates;² however, in this instance, the hypercalcemia returned to normal with thyroid replacement therapy.

In our patient with primary myxedema and apparent hyperparathyroidism the treatment of the hypothyroidism resulted in temporary correction of the hypercalcemia, which subsequently returned to abnormal values. After removal of a parathyroid adenoma, once again the laboratory test results returned to the normal range.

Her Story

A 76-year-old woman presented at the emergency room with an acute exacerbation of back pain, weakness and an inability to walk from her car into her home. For four years she had experienced gradually increasing back pain and weakness. During the last few months, she had noted a husky voice timbre, a feeling of being cold, and increasing constipation.

Relevant physical findings included a blood pressure of 156/86, husky voice, diminished eyebrows and scanty pubic hair. The heart rate was 60, there was non-pitting edema of the pretibial areas and a markedly prolonged relaxation phase of the tendon reflexes. The electrocardiogram demonstrated low to flat T waves. Chest x-ray revealed cardiomegaly, hand x-rays showed osteoarthritis, and dorsal-lumbar spine films showed generalized demineralization and a compression fracture of the body of L1. Skull x-rays were normal including the sella tursica. A bone scan revealed areas of increased accumulation of radionuclide in the left knee, two left mid-anterior ribs and one right lower anterior rib.

An SMA-12 demonstrated a total cholesterol of 492. Other

pertinent laboratory data are shown in table 1 (next page). A subsequent CT scan of the neck and chest was unremarkable showing no evidence of a tumor mass.

Discussion

This patient presented with symptoms and findings that suggested hypothyroidism, osteoporosis and possible compression fractures of some of the dorsal-lumbar vertebral bodies. Laboratory data and x-ray findings confirmed these impressions, but the hypercalcemia was unexpected.

The frequency of hypercalcemia in myxedema has been a controversial issue since the serum calcium levels usually are either normal or slightly low. However, Lowe² has noted that hypercalcemia occasionally occurs. Fasting hypercalcemia is especially rare but elevated postprandial levels are more common.³ They may result from excessive gut absorption of calcium which is felt to be related to increased levels of parathyroid hormone (PTH) and calcitriol.⁴

Myxedema usually has a decreased bone turnover resulting in mild hypocalcemia and elevated parathyroid hormone and calcitriol levels. Urinary calcium is usually decreased as a result of increased levels of PTH and a decreased filtered calcium load.^{4,5}

Kram et al. found decreased urinary excretion of calcium in thyroid-deficient subjects compared with both hyperthyroid and euthyroid patients.⁶ Thyroid hormone therapy resulted in a marked urinary calcium excretion.

The interpretation of events in our patient was further complicated by laboratory studies that strongly suggested the simultaneous presence of hyperparathyroidism. This is a rare occurrence but one which has been reported.^{7,8,9} Our patient's initial hypercalcemia decreased to normal within 11 days of starting replacement therapy with L-thyroxine (see table 1). Some six months later, however, she was found once again to be hypercalcemic. However, it is important to note that the ionized fraction remained consistently normal. Many people feel this mitigates against a diagnosis of primary hyperparathyroidism.

A 24-hour urinary calcium and calcium-creatinine clearance ratio were not done initially in our patient. However,

From Department of Medicine, Chenango Memorial Hospital, Norwich, New York, and SUNY Health Science Center, Syracuse, New York. Reprint requests: Dr. Aronson, Department of Medicine, Bowman Gray School of Medicine, 300 S. Hawthorne Rd., Winston-Salem 27103.

Table 1
Laboratory data on the patient described

Parameter	Normal values	Laboratory Values													
		8/3/84	8/6	8/7	8/10	8/14	8/20	8/23	8/30	9/25	10/1	4/11/85	9/25	11/15/85	
Total Calcium	8.5-10.5 mg/dl	12.7	12.6	13.6	12.6	9.9	10.2		10.4	9.7	9.2	11.2		9.2	
Ionized Calcium	4.7-5.2 mg/dl at pH 7.4			6.5							4.9	5.1		5.2	
Parathyroid Hormone C-terminal	<50-340 pg/ml			2762							49	1019			
Intact Phosphorus	70-330 pg/ml 2.5-4.5 mg/dl			582							332	462			
24-hr Urinary Calcium	50-400 mg/ 24 hr	2.5		2.2						4.6		3.3		4.0	
Calcium-Creatinine Clearance Ratio							0.05					201		39	
Total Thyroxine	6-12 µg/dl	1.5		1.1						11.0				8.6	
Free Thyroxine	0.6-1.7 ng/dl	0.07		<0.3						1.6				1.1	
Thyroid Stimulating	0-7 µU/ml	185		112										2.8	
Magnesium				2.1						2.0		1.6	surgery rt. para- thyroid (upper) adenoma removed	2.1	
Rx without L-thyroxine	8/3/84	8/4/84	8/5/84	8/6/84 → daily											
	0.05 mgm	0.05	0.05	0.1 mgm daily											
PTH and calcium assays done by Smith-Kline Laboratories															

the results that were later obtained do not suggest hypocalciuric hypercalcemia.

There are some unique features in this patient's clinical course. The initial hypercalcemia was promptly corrected with thyroid medication. This was also partially true with the parathyroid hormone studies, especially the intact portion. However, subsequent determinations showed a return to their pre-treatment levels. These observations suggest a change in the "set point" for inhibition of release of PTH. In spite of normal ionized calcium levels, subsequent surgery resulted in removal of one large parathyroid gland. The pathology report described a classical parathyroid adenoma and both the PTH and calcium studies returned to normal. There was a steady improvement in the patient's strength and well-being. We feel that these events confirmed the concomitant occurrence of myxedema and hyperparathyroidism. ■

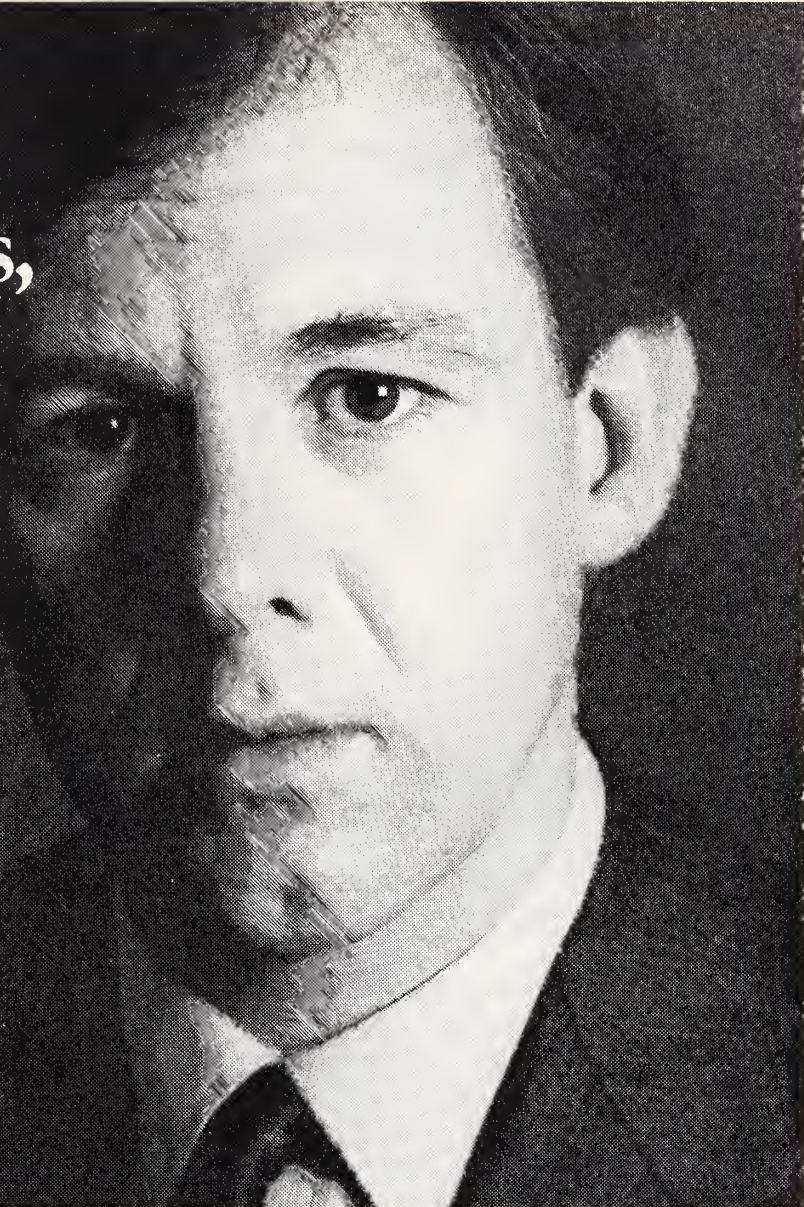
Acknowledgments

The authors thank Dr. Gary P. Zaloga and Dr. Henry S.M. Uhl for their review and helpful suggestions.

References

- 1 Pretorius PJ, Potieter MdeJ. Hypothyroidism and hypercalcemia; report of a cretin showing manifestation of idiopathic infantile hypercalcemia. *South Afr Med J* 1971;45:753-7.
- 2 Lowe CR, Bird ED, Thomas WC. Hypercalcemia in myxedema. *J Clin Endocrinol Metab* 1962;22:26.
- 3 Zaloga GP. Personal communication.
- 4 Bouillon R, Meels E, DeMoor P. Influence of thyroid function on the serum concentration of 1,25-Dihydroxy vitamin D3. *J Clin Endocrinol Metab* 1979;51:793-7.
- 5 Zaloga GP, Eil C, O'Brien DT. Reversible hypocalciuric hypercalcemia associated with hypothyroidism. *Am J Med* 1984;77:1101-4.
- 6 Kram SM, Brownell GL, Stanbury JB, et al. The effect of thyroid disease on calcium metabolism in man. *J Clin Invest* 1956;35:874.
- 7 Kissin M, Bakst H. Co-existing myxedema and hyperparathyroidism. *J Clin Endocrinol Metab* 1947;7:152-6.
- 8 Lever EG. Primary hyperparathyroidism masked by hypothyroidism. *Am J Med* 1983;74:144-7.
- 9 Jones TC, Jackson J. Hypothyroidism and hypercalcemia; report of a case with a parathyroid adenoma and a review of the literature. *South Med J* 1977;70:1373-5.

**"I've gone
through a bypass,
6 months of
physical therapy
and now
I'm supposed
to come up
with a \$150,000
malpractice
tail premium."**



This could be a real situation. Worse, it could happen to you because of a "loop-hole" in your malpractice coverage.

Even though Claims Made malpractice insurance extends protection if you face a lawsuit after retirement or death, most policies provide no protection if you return to work during a disability, even if you return to your occupational specialty.

So you may be forced to pay a whopping premium — the tail premium — in order to maintain your malpractice tail coverage.

If your malpractice insurance company doesn't waive this tail premium, there's only one policy in the marketplace designed to cover it: MONY's new Distinction Disability Insurance Series.

DISTINCTION™

The Intelligent Choice In Disability Income

MONY
FINANCIAL SERVICES

Sue Anne Schoonderwoerd
P.O. Box 95161, Raleigh 27625
(919) 872-8666

The Mutual Life Insurance Company of New York, NY, NY.

Malpractice protection is only part of the story.

Malpractice Tail Premium Coverage is only one of the reasons MONY's Distinction is a different approach to disability insurance. It meets your needs.

- ☐ Your coverage cannot be canceled. No restrictions can ever be added.
- ☐ We're a mutual company and any dividends we pay can actually reduce the cost of your policy.

Please send me more information on MONY's Malpractice **Tail Rider**.

Name: _____

Address: _____

Phone: () - Age: Tail Amount: _____

Sue Anne Schoonderwoerd
(919) 872-8666

MONY
FINANCIAL SERVICES

P.O. Box 95161
Raleigh, North Carolina 27625

The National Library of Medicine

The Great Equalizer between Small Hospitals and Major Medical Centers

Eugene A. Stead, Jr., M.D.

Physicians in outlying communities and administrators of small hospitals are worried that patients will drive by them to obtain services from doctors and hospitals in the larger cities. Today's informed patients know that smaller cities and hospitals cannot afford extensive information centers on their premises. They want to go where doctors have access to the most up-to-date information.

To answer this need, the National Library of Medicine, in Bethesda, MD, has developed its services to the point that anyone with a computer terminal (or PC) can have access to its extension files cheaply and quickly. The rural practitioner can have the same information that is used by doctors at our best medical centers.

The National Library of Medicine has made a special effort to open its data files to nonlibrarians. The library's *Grateful Med*, a name that reflects a bit of bureaucratic whimsy, is a remarkable piece of microcomputer software — remarkable not only for what it does but for its low price. It allows the staff of any hospital with access to a PC to search the library's immense Medline files. Medline, with some six million records, is a sort of online *Index Medicus*, but with abstracts.

The software itself is inexpensive.* The cost of an average search, including all communication charges, is just \$2 to \$3. This is all it takes to have access to the latest published information on any medical topic. Your hospital librarian can even use NLM's Docline service to place an online order for a copy of an article!

In North Carolina only 34 of 160 hospitals have joined the National Library of Medicine's online network. By con-

trast 178 persons in our state — doctors, laboratories, businesses and students — have codes and are users of the world's most extensive store of medical information.

I suggest that each institution, regardless of size, place a terminal or PC where doctors congregate. If the *Grateful Med* software is used, the doctors should be encouraged to do their own searching. I would train a member of the hospital staff to assist the computerphobes. Thus, your staff will be on the same footing as the doctors at Duke, Carolina, East Carolina, Bowman Gray and our other major medical centers.

Once my "computerized window" to the world of medical information was up and running, I'd turn to the public relations department and make sure the community knew about it. I'd have spots on local radio and television showing live patients and their doctors using up-to-date information to help with their care. I'd make it clear that patients would need to go to major medical centers only for major procedures; they would no longer need to go because their doctors were unsure of the latest medical information.

Finally, I'd let them know that their taxes paid for amassing this information, and that the few dollars spent on having access to it was money well spent for high-quality care. ■

Acknowledgment

I wish to thank the staff of the National Library of Medicine for the information on costs and software.

*\$29.95 (plus \$3 per order shipping) from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161. Questions about the software, the databases, or any other aspect of the computerized information services, may be directed to the National Library of Medicine (1-800/638-8480).

Dr. Stead is Editor of the *North Carolina Medical Journal* and Professor Emeritus, Department of Medicine, Duke University Medical Center, Durham 27710.

BARON CREATES TAX LEVERAGE.

Fund Your Retirement Plans At Up To 25% Of Payroll
For Key Employees At A Cost For Staff Of Only 11%—

THAT'S LEVERAGE!

For More Information Call:


Baron Benefits Management, Inc.

A BARON FINANCIAL COMPANY

Executive Compensation and Employee Benefit Specialists

4110 Wake Forest Road, Suite 211
Raleigh, N.C. 27609
(919) 790-9904/(800) 222-8783

300 Wendover Avenue East, Suite 202
Greensboro, N.C. 27401
(919) 379-8207/(800) 822-1086



WHEN YOUR PATIENT NEEDS PHYSICAL REHABILITATION, YOU WANT HIM IN THE BEST OF HANDS. YOURS AND OURS.

When your patients need physical rehabilitation, you want them to be treated by a comprehensive system that is structured to meet their needs at each stage of recovery.

That means Lakeshore System Services, with almost 20 years experience in rehabilitation. We can give your patients the advantages of an experienced team of rehabilitation professionals, state-of-the-art facilities, and proven programs that help each patient reach his potential.

Importantly, when your patients are under our care, we always remember they're under your care, too. We encourage your involvement in the treatment process and keep you updated on your patient's progress.

One way you can assure that a Lakeshore facility is always available to your patients is to be our partner.

We can tailor a partnership to fit the situation, perhaps with you, a hospital in your community, and other physicians. If the potential is there, we have the managing and marketing expertise to make it succeed in every way.

Please call us for information, at (205) 868-2005. It could be one of the best things you can do for your patients. And for you.



3800 Ridgeway Drive,
Birmingham, AL 35209.

*Financial services that will get
you in shape for the future.
That's Blue Chip.*

We have a variety of insurance and investment options to make sure your future is financially strong. For example:

- Tax shelters, to keep more of your money working for you;
- Annuities, to make money available at retirement or whenever you need it;
- Insurance, to protect your family, your business and your income.

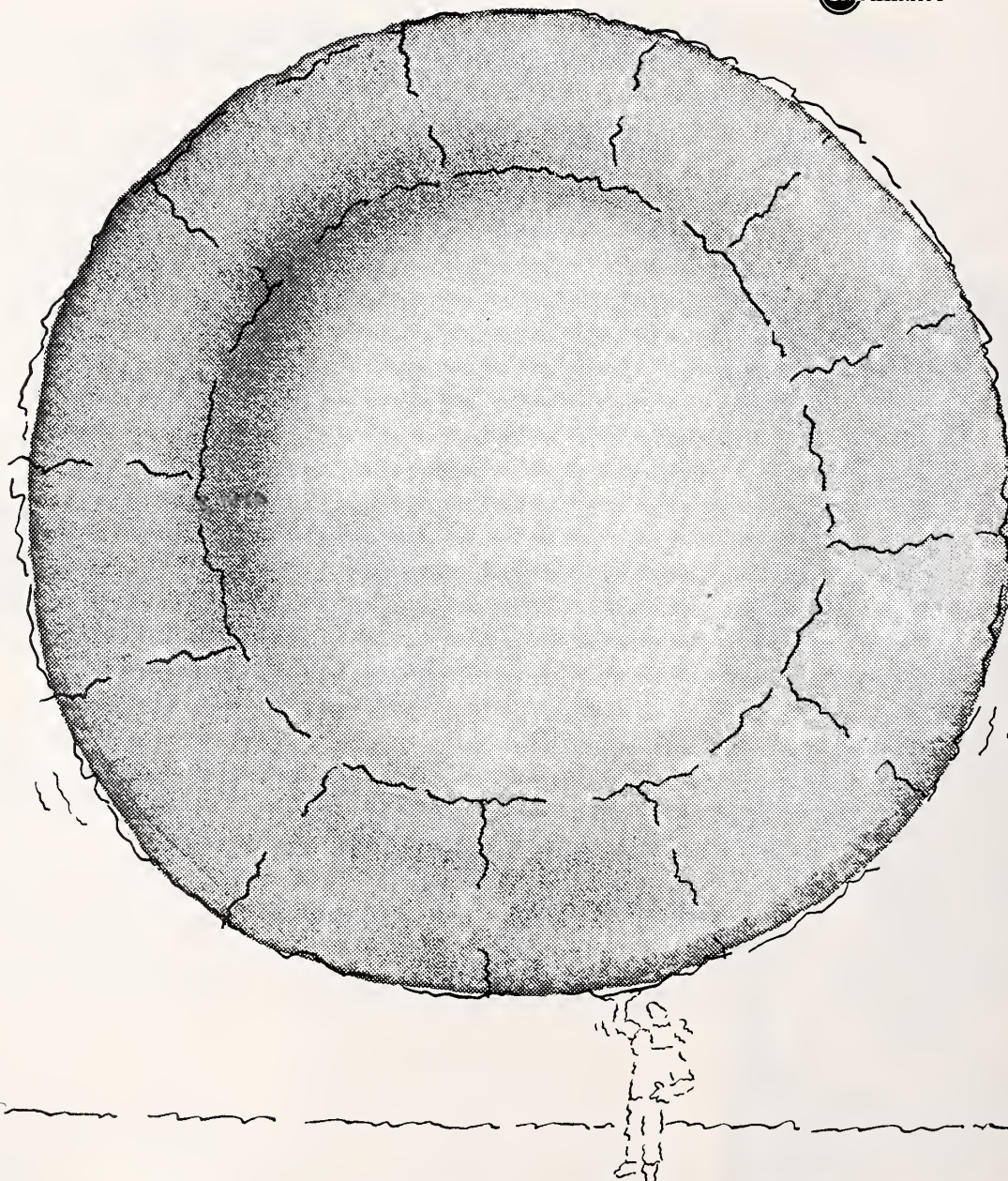
Our specialists will help you identify your needs and develop a program that's right for you.

Start shaping your future today.
Call or write us for details.

The Hinrichs Financial Group

1600 Charlotte Plaza Charlotte, NC 28244
(704) 371-8600

An affiliate of the  **CM Alliance**



Connecticut Mutual Life Insurance Co. (Hartford CT) • Connecticut Mutual Financial Services, Inc. • CM Life Insurance Company • Diversified Insurance Services of America, Inc. and its affiliates.

Fate Accompli

Rhododendron Toxicity

Ronald B. Mack, M.D.

Two of the best things about the various gods and lesser beings in Greek mythology were their job descriptions and their places in the Universe; e.g., Zeus was the Chief of the Service and lived on Mt. Olympus, Poseidon ruled the sea and lived there in a palace, Hades lived in the nether-world and, of course, ruled over the dead. My personal favorites were the Fates, lesser goddesses, but very important, who had no permanent residence in heaven or earth. They had the power to make humans, at birth, evil or good. (Which did you get?) The Fates were three in number: *Lotho*, the spinner who spun the thread of life; *Lachesis*, the disposer of lots and measurer of the thread, who assigned to each mortal his or her destiny; and *Atropos*, who carried the "abhorred" shears and cut the thread at death.¹ How about them three, sports fans, better than Moe, Larry and Curly.

Zeus was considered the father of the Fates, who are usually depicted as three old women responsible for the destiny of every individual. On very rare occasions the Fates could be persuaded to alter the fate they had produced, but usually the course of the destiny they had spun was irrevocable.² The next time you have a patient who ingested parts of the rhododendron plant you better pray to Zeus that Atropos is not reaching for her scissors.

The identification of plants has never been easy for me; you could say that I have FDD — Floral Deficit Disease — with Hyperactivity, according to the DSM-II (R). This deficiency comes from too early introduction of pasta in the diet; apparently the semolina flour clogs the reticular system in the central nervous system resulting in flower dyslexia. The genus *Rhododendron* (which also contains azaleas) has more than 800 species. The family to which these shrubs belong is called the Ericaceae (AKA Heath).³ There are so many rhododendrons available in our state that it is somewhat puzzling why we do not get more suffering from the effects of ingesting these beauties. The general description of the shrub is that of an evergreen or semi-evergreen, or deciduous plant, standing five to six feet high. The leaves can be four to 10 inches long, oblong in shape with smooth margins, bell-shaped flowers and a small, dry capsular fruit. In the spring of the year, rhododendrons burst forth with

eye-pleasing clusters of bright orange, yellow, pink, purple or white flowers. After the flowering, the shrubs present a pleasant array of large dark green leaves clustered at the ends of long twigs.⁴

The toxic substances found in this family have been known by several names over the years, and reading the literature concerning the biochemistry of these chemicals can be very frustrating. Furthermore, not all of the family members are dangerous. The term *grayanotoxin* is the one now used to designate the toxic principle of this group of plants. This toxin apparently mediates sodium metabolism in the cell and maintains the sodium channel in the open position. The grayanotoxins bind to sodium channels in cell membranes thereby preventing voltage-dependent inactivation in the cell.^{5,6} When this happens excitable cells in the nerves and muscles are maintained in a state of depolarization at which time the entry of calcium into the cell is made easier. Apparently the abnormal clinical features observed in muscle tissues and nervous system tissues are the result of these changes in the cell membranes. The entire plant — leaves, twigs, and pollen grains (in those species that are potentially toxic) — contains the grayanotoxins. Of special interest is the toxic potential of the honey⁶⁻⁸ made from those species the ingestion of which is best avoided. It is important to point out that not all the rhododendron species produce a poisonous nectar, but it is difficult to predict which ones can cause trouble and which ones you can safely put on your biscuits. In ancient times, apparently, foraging troops got into big trouble eating wild honey collected from bees that had been munching on the nectar of a toxic genus of rhododendron. Xenophon, a great author and mercenary soldier (died in 355 B.C.), tells of his experiences in the Greek Army in his famous treatise *Anabasis*. He describes a large outbreak of poisonings among his troops who had consumed honey obtained from rhododendron flowers. (And to think that I used to complain that Navy chow aboard ship was less than edible.) It is not a good idea to drink tea made from the leaves or twigs of this shrub, to chew on the leaves, nor to suck the nectar from the flowers.

The grayanotoxins contained in these plants have the potential to cause clinical adversities in the gastrointestinal,

cardiovascular, and central nervous systems. The initial unhappiness can be a transitory burning of the oral mucosa; often this is followed by vomiting, diarrhea, and abdominal pain. In severe intoxications the victim may complain of headache, marked weakness of the arms and legs, and visual difficulties. Clinical examination could reveal bradycardia, hypotension and a variety of cardiac arrhythmias.^{5,6} Respiratory depression, coma, convulsions and death are possibilities as well. It should be emphasized that cardiovascular abnormalities are a prominent and frightening event, and should be looked for whenever there is a history of rhododendron ingestion. It is difficult to say how much of the rhododendron leaf, twig, honey, etc., is required to produce toxicity; the clinical data are simply not available.

It is fairly well known that many common plants contain products injurious to the cardiovascular system in humans, and these flora interface. Plants that contain cardiac glycosides and that can exhibit digitalis-like effects include the foxglove (lest we forget), oleander, lily of the valley, and squill. Other cardiac-depressing plants include the *veratrum* species, such as the false hellebore and the white hellebore, and *taxus* species, e.g., yew, ground hemlock, and some members of the *mistletoe* family.⁹ These cardiac glycosides, as a group, have the potential to produce very adverse clinical sequelae which typically include marked bradycardia (caused by first-, second-, or third-degree heart block), hyperkalemia, and prolonged emesis. When death does occur from involvement with cardiac-glycoside-containing plants, the cause is usually cardiac arrest. In monitoring a patient with a history of ingestion of these products it is of course necessary to use cardiac monitors, but careful measurement of serum potassium may be the most important laboratory value to follow.¹⁰

Apparently in an effort to confuse people like me who have flower dyslexia, the azalea species are now classified in the *Rhododendron* genus. This delightful foliage is very popular in our part of the country, and it is surprising that more of us are not confronted by people, large and small, who end up in emergency facilities after eating parts of these beautiful and attractive natural wonders. Reported cases of azalea encounters include ingestion of the flowers, leaves, or stems, or sucking the neck from the flower. (You mean people actually do that? On purpose? Probably these same people eat chipped beef on toast and enjoy it.) In a recent report concerning a series of azalea ingestions,¹¹ nine of 152 patients experienced symptoms. These were mild in eight of the patients, e.g., some vomiting for short periods; and

one patient developed protracted emesis and hypertension. The authors of the report feel that moderate azalea toxicity is no big deal, and they recommend omitting emesis, lavage, or activated charcoal in patients who ingest up to three azalea leaves or flowers. They feel that treatment for patients sucking up to four flowers should *not* include gastric decontamination.

Now back to the rhododendron ingester. The treatment of a patient who is symptomatic from a grayanotoxin is symptomatic — no magic antidote is available. Such victims should be observed for four to six hours with monitoring of the vital signs. If emesis has not already occurred, from the flora itself, then gastric decontamination is indicated in the safest manner, depending on the patient's condition. Intravenous fluids may be necessary, and intravenous atropine has been the time-honored therapy for bradycardia if cardiac output is compromised.

Maybe you do not believe in the Fates, if you choose not to remember what Plutarch said: "Fate leads him who follows it, and drags him who resists." Apparently the Ancients believed that women were not controlled by the Fates; possibly because the Fates were women. Please Atropos, do not reach for the scissors!! ■

References

- 1 Hamilton E. Mythology. New York: New American Library, 1942, pp. 43, 27-9.
- 2 Morford MPO, Lanardon RJ. Classical mythology. 3rd Ed., London: Longman, 1985, pp. 71, 83, 259-60.
- 3 Levy CK, Primack RB. Field guide to poisonous plants and mushrooms. Brattleboro, VT: Steven Greene Press (Boston University), 1984, pp. 86-7.
- 4 Lampe KF. Common poisonous and injurious plants. Washington, D.C.: U.S. Department of Health and Human Services, 1981.
- 5 Ellenhorn MJ, Barceloux DG. Medical toxicology. New York: Elsevier, 1988, pp. 1246-50.
- 6 Grossinger H, Hruby K, et al. Vet Hum Toxicol 1983;25:328.
- 7 Lampe KF. Rhododendrons, mountain laurel and mad honey. JAMA 1988;259:2009.
- 8 Biberoglu S, et al. JAMA 1988;259:1943.
- 9 Kunkel DB, Spoerke DG. Evaluating exposure to plants. Emergency clinics of North America 1984;2:136.
- 10 Poisindex, Micromedex Inc. Plants — Cardiac Glycosides, Vol 56, 1988.
- 11 Klein-Schwartz W, Litovitz T. Azalea toxicity: an overrated problem. Clinical Toxicity 1985;23:91.



ALLAN J. HAMILTON, M.D.

Neurosurgical Resident and Research Fellow,
Massachusetts General Hospital, Boston, Massachusetts.
Captain, U.S. Army Reserve.

EDUCATION Ithaca College, B.A. (Magna Cum Laude);
Hamilton College (Pre-med); Harvard Medical School.

RESIDENCY General Surgical Internship. Neurosurgical
Residency, Massachusetts General Hospital.

CONTINUING EDUCATION Neurology and Neuro-
surgery Research Fellowship Training, National Institutes
of Health.

OUTSTANDING ACHIEVEMENTS Olsen Memorial
Fellowship, National Masonic Medical Research Foundation;
Albert Schweitzer Fellowship, International Albert Schweitzer
Foundation; Harvard Medical School Cabot Prize for Best
Senior Thesis; recently published article, "Who Shall Live
and Who Shall Die" in Newsweek Magazine.

“The work I’m doing in the Army Reserve fits perfectly with my academic research interests in civilian life. The Army is very concerned with the effects of high-altitude cerebral edema, which is a mirror model of cerebral hypoxia, something I deal with every day in our neurosurgical intensive care unit. I couldn’t ask for a smoother transition. And that’s true for a lot of Reserve physicians. All we really do is change our clothes, not our mindset.

“Some of the projects the Army is undertaking are on the cutting edge of research. For example, I’m currently involved in developing for the Army a prototype of a non-invasive intracranial pressure-monitoring device that we hope will allow us to measure pressure changes as the brain swells—without drilling holes in the skull. If we can get our design to work, such a device could revolutionize high-altitude medicine as well as civilian neurosurgical care.

“The quality of medicine and the caliber of people I’ve been associated with in the Army Reserve are, without question, equal to civilian hospitals. In fact, I’m giving serious consideration to applying for an active duty academic position in Army Medicine when my residency ends at Massachusetts General.”

Find out more about the medical opportunities in the Army Reserve. Call toll free 1-800-USA-ARMY.



Soldier being examined for effects of high-altitude cerebral edema

**ARMY RESERVE MEDICINE.
BE ALL YOU CAN BE.**

A better alternative for hypertensives who are going bananas...

Spare your patients the extra cost—
in calories, sodium and dollars.

Spare your patients the rigors of
dietary K⁺ supplementation.

DYAZIDE[®]

25mg Hydrochlorothiazide/50mg Triamterene/SKF

Effective antihypertensive^{*}
therapy...without
the bananas

DAW
'DYAZIDE' AS WRITTEN.

* Not for initial therapy. See brief summary

Before prescribing, see complete
prescribing information in
SK&F CO. literature or PDR.
The following is a brief summary.

* WARNING

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K⁺ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K⁺ intake. Associated widened QRS complex or arrhythmia requires prompt additional therapy. Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or

without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.

Precautions: The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of triamterene and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Angiotensin-converting enzyme (ACE) inhibitors can elevate serum potassium; use with caution with 'Dyazide'. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin [ACTH]). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondespoling muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The

following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function. Thiazides may add to or potentiate the action of other antihypertensive drugs. Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth, anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.

Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak[™] unit-of-use bottles of 100.

BRS-DZ-L45

a product of
SK&F CO.
Citra, P.R. 00639

© SK&F Co., 1987

Medical Licensure Application Process

Strengths and Weaknesses

Bruce R. Berger, M.D., Jerry G. Gregory, M.D., and Everett C. Simmons, M.D.

The current medical licensure application process in North Carolina has the potential to help the Board members, the applicants, and the medical community at large in sorting out and dealing with the difficult issue of impaired physicians.¹

We wrote this paper for several reasons. First, the application in question is for medical licensure, which places the issue squarely within the medical community of which we are a part. Second, discussion with our medical colleagues reveals no clear-cut consensus on what advice one should give physician-patients about honestly answering the application's questions on psychiatric treatment. Third, there is some doubt as to whether questions about psychiatric or medical treatment are appropriate and/or valuable as a screening device for medical licensure.

Overview of the Application Process

There are four general areas of information sought by most licensure boards: (1) academic credentials; (2) credentials documenting the type of clinical training and postgraduate experience in the field of medicine; (3) negative performance, documented primarily in the form of legal difficulties, past or present, denial of privileges and/or licensure, or past scholastic probation or expulsion; and (4) potential impairment indicators, such as psychiatric treatment and/or drug abuse history.

Figure 1 (next page) is a replica of part of the current application for licensure in North Carolina. It illustrates how the Board of Medical Examiners obtains the information it

requires to make decisions regarding licensure. In addition, the applicant must provide separate credentials validating education, citizenship, the status of licensure in other states, and letters of recommendation.

Areas of Physician Impairment

We will review four general areas of potential physician impairment. First, it should be no surprise that drug abuse is considered by most persons to have a high potential for impairing a physician's ability to perform.²

The second potential area of impairment is mental illness, but only certain types of mental illness have a high likelihood of compromising a physician's functioning. The presumption that a history of mental illness or psychiatric treatment represents a valid indicator of physician impairment is open to question. Interestingly, one large medical center had a psychiatric services utilization rate of 23.7% among house staff over a three-year period.³ Of what value is a question that may get an affirmative response so often?

The third general area of impairment is behavior that is not caused by mental illness but that compromises a physician's ability to provide adequate care. Such behaviors include failure to remain current in medical information, antisocial behavior that exploits patients, and failure to maintain high treatment standards.

A fourth area of impairment is organic disability. This could certainly include prescribed drugs that have primary or secondary psychoactive properties. This category encom-

From the Department of Psychiatric Medicine, East Carolina University School of Medicine, Greenville 27858-4354. Reprint requests: Dr. Berger.

Circle the answer to the following questions "yes" or "no." If you answer "yes" to any of the questions, attach a detailed explanation.

- | | | |
|-----|----|--|
| YES | NO | 7. Have you ever been investigated by any governmental agency or been charged with violation of a federal, state or local law other than minor traffic violations? |
| YES | NO | 8. Have you ever been denied a license by or the privilege of taking an examination before any medical examining board or licensing agency? |
| YES | NO | 9. Has a license of any type issued to you by any medical licensing board been revoked, suspended, surrendered or had probationary terms placed against it? |
| YES | NO | 10. Have you ever been notified by or requested to appear before any medical board, disciplinary agency or medical society in regard to any complaints filed against you? |
| YES | NO | 11. Have you ever been warned, censured, disciplined, had admissions monitored, had privileges limited, had privileges suspended, been put on probation, or been requested to withdraw from or been denied staff membership by any licensed hospital, nursing home, clinic, health maintenance organization, or other hospital care facility with an organized medical staff, in which you have trained, been a staff member, or held hospital privileges? |
| YES | NO | 12. Have you ever been warned by the Drug Enforcement Administration (U.S. or State), or has any portion of your controlled substances registration certificate been denied, revoked or surrendered? |
| YES | NO | 13. Have you ever been requested to seek treatment, been treated by, consulted with, or been under the care of a physician/psychiatrist for the treatment of drug addiction or inebriety? |
| YES | NO | 14. Have you ever been requested to seek psychiatric evaluation, consultation or treatment; have you ever consulted a psychiatrist; or have you ever been under the care of a physician for the treatment of a mental or emotional illness? |
| YES | NO | 15. Have you ever used to excess or been dependent upon alcohol? |
| YES | NO | 16. Are you now using or have you ever used or been dependent upon controlled substances, drugs affecting the central nervous system, or other drugs which may cause physical or psychological dependence? |
| YES | NO | 17. Have you ever been associated with, practiced, or held a license in any other healing art? |
| YES | NO | 18. Have you ever been a defendant in a legal action involving professional liability (malpractice); have you ever been named in a malpractice suit, had a professional liability claim paid on your behalf, or paid such a claim on yourself? |
| YES | NO | 19. Have you ever been separated or discharged other than honorably from U.S., foreign military, or public health service? |

Figure 1. Questions asked on the medical license application form of the Board of Medical Examiners of the State of North Carolina.

passes a large number of medications ranging from beta blockers and endocrine supplements to psychotropic drugs. Other organic difficulties are physical limitations on a person's ability to perform particular tasks, and organic brain disorders that limit an individual's cognitive abilities.

Concerns about the Application Process

We will address five main areas of concern about the application process in North Carolina: (1) potential conflict of interest of members of the Board, and attendant concerns about the confidentiality of the process; (2) the pairing of mental illness and legal issues; (3) information not obtained which would be helpful in screening for organic impairments; (4) questions which are not easily verifiable and are open to false answers; and (5) the fact that some questions only indirectly attempt to gain information about impairment.

1. Conflict of interest. We do note that the Board of Medical Examiners will not release information about an applicant without specific, written permission. However, we are unaware of any process by which the applicant can be assured that no one on the Board who might have a conflict of interest can be appropriately excluded from the licensure process. This would certainly cause concern because of the private and confidential material asked for in the application and the possible conflict of interest of an employer and/or supervisor having access to this information. It seems likely that less than candid answers about any difficulty or impairment could result. Indirectly, this would work against helping impaired applicants.

2. Pairing of mental illness and legal issues. We have noticed that the question regarding mental illness and treat-

ment (question 14 in figure 1) disregards the reason it was asked. Additionally, it occurs among a list of questions which ask about legal difficulties. This pairing suggests a negative value on psychiatric treatment. In fact, it suggests that being examined psychiatrically or being under psychiatric treatment is a negative reflection on the physician's clinical competence. This is not necessarily true.

3. Missing information. In reviewing the current application form for North Carolina we note that there are limited questions on medical/organic difficulties. This has been documented as a valuable and an important area of inquiry into physician impairment. If questions of impairment are appropriate to be raised in the application process, they should be aimed at the full range of potential impairments rather than only selected areas.⁴

4. Verifiability. For several of the questions asked, the elicited information seems to be unverifiable should the Board wish to check. For example, questions 13, 14, and 15 rely upon the physician's candor. With the obvious current stigma attached to psychiatric treatment, the physician may feel uncomfortable in answering this question, and may be tempted to give self-serving false answers. This is not the sort of application strategy to encourage, even indirectly.

5. The value of particular questions in eliciting important information. An example is question 14 regarding any history of psychiatric treatment. Superficially, an affirmative answer suggests the physician may be impaired. On closer inspection, however, it may indicate the physician is able to recognize problems and seek help for them appropriately.

Suggested Changes

We propose the following changes to the application process. These changes would increase the accuracy and value

of the information obtained by the Board of Medical Examiners. They would assist the Board in the tasks of deciding who will have the privilege of practicing medicine, who may require sanctions, and who needs intervention, assistance, and rehabilitation.

The first area of change involves concerns about ethical issues, conflict of interest, and confidentiality. The Board should spell out clearly how the information they obtain will be used, how it will be guarded, and to whom it will be revealed.

The second change would be to separate the application questionnaire into three distinct sections. The first section would include questions relating to all medical training, asking where and how these experiences were obtained and making appropriate demands for documentation. The second section would include questions regarding legal difficulty and/or disciplinary issues. The third section would be a questionnaire about the applicant's current medical status, including organic and psychiatric areas. To be complete, this should include current medications, current care, and a past medical history as appropriate to screen for potential organic/psychiatric conditions.⁵ The Board would need to decide whether this could be done by self-report, by a physician chosen by the applicant, or by a physician chosen by the Board.

Summary

Increasingly, the Board of Medical Examiners of North

Carolina is being challenged to identify impaired physicians and to make appropriate interventions both in licensure and in medical rehabilitation. We have attempted to review the present application and reapplication process and to identify areas of concern. Our suggestions are general in nature rather than specific. Our goal has been to stimulate discussion regarding the licensure process. ■

References

- 1 American Psychiatric Association Ethics Committee. Unethical behavior, incompetence and impairment in the ethical decision process. *Ethics Newsletter* 1986;2(Jan/Feb).
- 2 Green RC, Carroll GJ, Buxton WD. The care and management of the sick and incompetent physician. Springfield, Ill.: Charles C. Thomas, 1978, p. 20.
- 3 Borenstein DB. Should physician training centers offer formal psychiatric assistance to house officers? A report on the major findings of a prototype program. *Am J Psychiatry* 1985;142:1053-7.
- 4 Steindler EM. The role of professional organizations in developing support. In Scott CD, Hawk, J (eds), *Heal thyself: the health of health care professionals*. New York: Brunner/Mazel, 1986, pp. 225-6.
- 5 General Statutes of North Carolina, Paragraph 90-14. Revocation, suspension, annulment or denial of license, 1983, Cumulative Supplement.



Unique Boutique

"Pamper Your Femininity"

After Breast Surgery Consultants

We would like to acquaint you with the shop that specializes in servicing all of the needs of the mastectomee. We carry a variety of breast forms and bras that enable us to provide a custom fit specifically for each individual. We also have accessory items helpful during stages of reconstruction or after lumpectomy surgery. In a cozy intimate shop with a relaxed environment, our customers will receive service and understanding from women who have shared their experience.

FOR BETTER SERVICE AND FIT VISIT
UNIQUE BOUTIQUE

1819 E. SEVENTH STREET
CHARLOTTE, NC 28204
(704) 377-4356

(Appointments welcome)

HOURS:
MON-THURS 10 AM-4 PM
FRIDAY 10 AM-2 PM
2nd & 4th SAT 10 AM-2 PM

You're The Experts In Medicine.

We're The Experts At Preventing Problems In Your Practice.

Medical Mutual is the physician-owned and physician-directed company committed to preventing problems in your practice *before* they occur. Through formal programs and day-to-day assistance, we help you identify areas of risk, reduce potential problems, and enhance your practice.

For example, our Medical Practice Survey brings specially trained staff to your office to audit the peripheral areas we've learned can create problems. The survey—which includes everything from documentation of patient drug

allergies to length of waiting time—offers practical suggestions for reducing your exposure.

Just as important, Medical Mutual provides ongoing assistance to respond promptly to your calls and questions. With 12 years of experience in professional liability coverage, we are the source of information for North Carolina. And if we don't have the answer, we'll find it for you.



Medical Mutual
Medical Insurance Agency, Inc.

Medical Mutual. We'll be there when you need us.

Medical Mutual Insurance Company of North Carolina and its subsidiary, Medical Insurance Agency, Inc., are located at 222 North Person Street, Raleigh, NC 27611 919/828-9334 800/662-7917

In North Carolina, when you decide to prescribe Librium,

To protect your prescription...



You sign on the right.

Librium[®]

brand of
chlordiazepoxide HCl/Roche[®] 5-mg, 10-mg, 25-mg capsules

ROCHE[®]

Copyright © 1987 by Roche Products Inc., Manati, Puerto Rico 00701. All rights reserved.

Reimbursement and Diabetes Self-Care Programs in North Carolina

William W. Fore, M.D., Sue Daughtry, R.D., M.S., C.D.E., and Zola M. Sugg, R.N., C.D.E.

Unreimbursed diabetes education programs have been available in our state since the early 1970s. In 1983, a group of physicians from the medical schools and private practice joined together to form the Ad-hoc Committee for the Reimbursement of Diabetes Self-Care Programs in North Carolina. This Committee initially worked with the assistance of Dr. Bill Demaria, then Medical Director of the North Carolina Blue Cross/Blue Shield Corporation. Conferences were held with both state legislators and personnel from the Department of Human Resources, seeking a legislative procedure to assure the quality of the state's diabetes self-care programs. The Blue Cross/Blue Shield Organization, on the eve of the introduction of legislation, agreed to reimburse physicians for the programs. It was the first time in North Carolina that a service such as this was reimbursed by a health insurance company.

Patient services provided by the self-help programs vary somewhat from site to site. Phase One includes survival skills, which are all that can be accomplished with most patients who are hospitalized initially with diabetes. Phase Two incorporates a larger body of knowledge which involves the more detailed dietary instruction, sick day rules, skin care, etc. Phase Three, a review, can be carried out at yearly intervals. The "Gold Standard" for an acceptable self-care program was set forth by the National Diabetes Advisory Board and has been accepted by the diabetes community. These guidelines are available from the American Association of Diabetes Educators and the American Diabetes Association (ADA). The ADA has a procedure in place for recognition of programs throughout the United States which meet these standards. The campaign for reimbursement especially benefitted nationally from the efforts of Pom Sinnock, Ph.D., at the Centers for Disease Control in Atlanta.

These efforts for reimbursement have been strengthened since the North Carolina affiliate of the ADA established a Public Affairs Committee in the very capable hands of Mrs. Anne Hummel of Greensboro. The Ad-hoc Committee and the Public Affairs Committee worked jointly to obtain the

legislation necessary to provide diabetes self-care programs as a benefit to state employees. With state employees and Blue Cross/Blue Shield subscribers eligible for reimbursement, this service is available to approximately 50% of the insured population in North Carolina.

Insurance companies that will reimburse for diabetes self-care programs that meet ADA criteria

North Carolina Blue Cross/Blue Shield
Prudential
Aetna
Traveler's (with contract rider only)
Banker's Life of Iowa
Provident (certain contracts)
State Health Insurance Plan of North Carolina
Guardian Life
New York Life
Durham Life

To date, all efforts to obtain this benefit from the Champus program have been unsuccessful. Hospitals in North Carolina with outpatient diabetes programs will soon receive Medicare reimbursement.

Essential Elements of a Quality Self-Care Program

The patient must have the knowledge to take the responsibility for management of his or her disease. The program is a team effort, and the members of the team are the patient, the patient's family, the physician, the nurse educator, and the nutritionist. The nutritionist is a very important member of the team, especially in non-insulin dependent diabetes (NIDDM). This list can be longer depending on individual circumstances.

The team gives the patient the knowledge and skills to assume responsibility for day-to-day care. The patient can utilize this knowledge to control blood sugars and decrease

From the Diabetes Self-Care Program, Section of Endocrinology and Metabolism, East Carolina University School of Medicine, Greenville 27858-4354.

the severity and consequences of complications of diabetes mellitus. Neither a pamphlet on the disease nor a diet sheet is adequate for the patient to implement the necessary changes in lifestyle and eating habits.

The first essential part of a quality program is the knowledge and skills assessment of the individual patient. A diabetes educator can then determine what the patient needs to learn. Goals for the patient are then set by agreement of all team members. The patient should participate. The self-care instruction is completed with individual and group instruction in seven to 90 days, depending on the program structure and organization.

Another important feature of a quality self-care program is a reassessment of the patient's knowledge and skills at six to 12 months after completion of the program. This should be done yearly thereafter. Any areas of skill and knowledge that need to be reviewed can be done in one, or perhaps two, sessions with the nurse educator or nutritionist.

Diabetes self-care programs emphasize the often overlooked care of the feet, a seemingly mundane effort which can prevent serious complications. Fifty to seventy percent of hospitalizations and amputations can be prevented by frequent foot inspections and early treatment of infections or trauma to the foot.

Studies have shown that patients who have basic knowledge about diabetes care have better compliance with the treatment program, fewer amputations, fewer episodes of acidosis, and fewer hospitalizations.

The Problems

The current problems affecting reimbursement in our state are as follows. (1) There is no intrastate method for quality control. Health insurance companies will soon require ADA recognition for the programs so that they won't be billed for services from programs that do not conform to the national standards. (2) Good programs in our state can generate only enough income to cover the cost of providing the service. This is not an effort that someone without a large number of diabetics in his or her practice could undertake. One or two quality education programs can be supported by all physicians in each community with the cooperation of a hospital. These programs should be encouraged and supported by all physicians who care for patients with diabetes.

The time investment needed for a quality program is between 12 and 20 hours. It is necessary because diabetes requires the patients to care for *themselves* with the help of the physician. It is an hour-to-hour, day-to-day job.

Diabetes self-care programs can improve control, but the major benefit is that patients who know how to care for themselves require less medical care and fewer resources for the management of their disease and its potential complications. The care of diabetes mellitus is now an outpatient

activity, and in a community with an outpatient program it is possible for patients to be started on insulin without hospitalization. This fact alone has been used by a diabetologist in the state to obtain reimbursement from reluctant third-party payors.

The Future

What do our diabetic patients need in terms of insurance benefits? I think that the first item is accessibility of affordable health insurance. The North Carolina Blue Cross/Blue Shield organization is providing insurance to high-risk patients. It is called the Special Nongroup Application Program, "SNAP." Information on SNAP can be obtained from the Blue Cross/Blue Shield representatives in each area.

A section from their brochure:

"Now you can buy Blue Cross and Blue Shield of North Carolina protection without answering health questions, without a physical examination, without paying a special enrollment fee and without joining through a group.

"Blue Cross and Blue Shield of North Carolina is offering this special coverage to anyone under 65, regardless of their health status. If you do not have adequate health care protection, or if you know someone who does not have adequate health care protection, now is the time to buy.

"Special Nongroup benefits include coverage for inpatient and outpatient care, doctors' charges, diagnostic testing, therapy, psychiatric care, private duty nursing, and skilled nursing facility care. Maternity care is available under several types of certificates."

Perhaps in the future we can obtain, through legislation or negotiation, a way for diabetic patients to be included in some form of pooled-risk health insurance programs. If reimbursement improves for diabetes care, then quality programs will become available widely and all diabetics in North Carolina will have the knowledge and the skills to care for their disease.

Diabetes Outpatient Education Programs in North Carolina

There is no official list of programs available in North Carolina. At the time of preparation of this article, no programs have achieved recognition by the ADA. Information about existing self-care programs in this state can be obtained from the North Carolina Affiliate of the ADA by calling 1-800/682-9692. ■

A NEW H₂ Antagonist

AXID[®] 300mg

nizatidine

Effective once-nightly
duodenal ulcer therapy available in a
Unique Convenience Pak
for better patient compliance



AXID[®] nizatidine capsules

Brief Summary. Consult the package insert for prescribing information.

Indications and Usage. Axid is indicated for up to eight weeks for the treatment of active duodenal ulcer. In most patients, the ulcer will heal within four weeks.

Axid is indicated for maintenance therapy for duodenal ulcer patients, at a reduced dosage of 150 mg b.i.d. after healing of an active duodenal ulcer. The consequences of continuous therapy with Axid for longer than one year are not known.

Contraindication: Axid is contraindicated in patients with known hypersensitivity to the drug and should be used with caution in patients with hypersensitivity to other H₂-receptor antagonists.

Precautions: General—1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Because nizatidine is excreted primarily by the kidney, dosage should be reduced in patients with moderate to severe renal insufficiency.

3. Pharmacokinetic studies in patients with hepatorenal syndrome have not been done. Part of the dose of nizatidine is metabolized in the liver. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

Laboratory Tests—False-positive tests for urobilinogen with Multistix[®] may occur during therapy with nizatidine.

Drug Interactions—No interactions have been observed between Axid and theophylline, chlorazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

Carcinogenesis, Mutagenesis, Impairment of Fertility—A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice; although hyperplastic nodules of the liver were increased in the high dose males compared to placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement

compared to concurrent controls, and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive, and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery is not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, and the mouse lymphoma assay.

In a two-generation, perinatal and postnatal, fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or the progeny.

Pregnancy—Fetotoxic Effects—Pregnancy Category C—Oral reproduction studies in rats at doses up to 300 times the human dose, and in Dutch 8eltd rabbits at doses up to 55 times the human dose, revealed no evidence of impaired fertility or fetotoxic effect; but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers—Nizatidine is secreted and concentrated in the milk of lactating rats. Pups reared by treated lactating rats had depressed growth rates. Although no studies have been conducted in lactating women, nizatidine is assumed to be secreted in human milk, and caution should be exercised when nizatidine is administered to nursing mothers.

Pediatric Use—Safety and effectiveness in children have not been established. Use in Elderly Patients—Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations. Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo. Among the more common adverse events in the domestic placebo-controlled trials, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common in the nizatidine group. A variety of less common events was also reported; it was not possible to

determine whether these were caused by nizatidine.

Hepatic—Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients possibly or probably related to nizatidine. In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L), and in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients. All abnormalities were reversible after discontinuation of Axid.

Cardiovascular—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

Endocrine—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo. Rare reports of gynecostasia occurred.

Hematologic—Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H₂-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs.

Integumental—Sweating and urticaria were reported significantly more frequently in nizatidine than in placebo patients. Rash and exfoliative dermatitis were also reported.

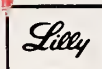
Other—Hyperuricemia unassociated with gout or nephrolithiasis was reported.

Overdosage: There is little clinical experience with overdosage of Axid in humans. If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance by approximately 84%.

Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal. Intravenous LD₅₀ values in the rat and mouse were 301 mg/kg and 232 mg/kg respectively.

PV 2091 AMP [041288]

Axid[®] (nizatidine, Lilly)

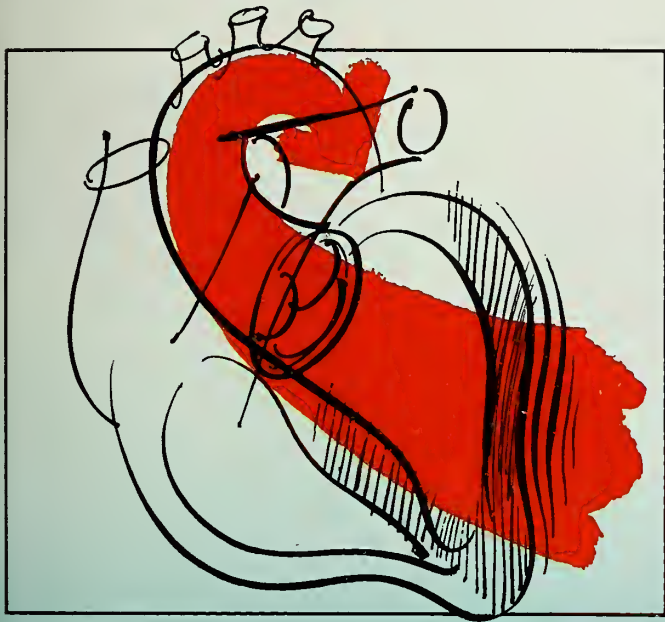


Eli Lilly and Company
Indianapolis, Indiana
46285

NZ-2903-B-849356 © 1986, ELI LILLY AND COMPANY

Axid[®] (nizatidine, Lilly)

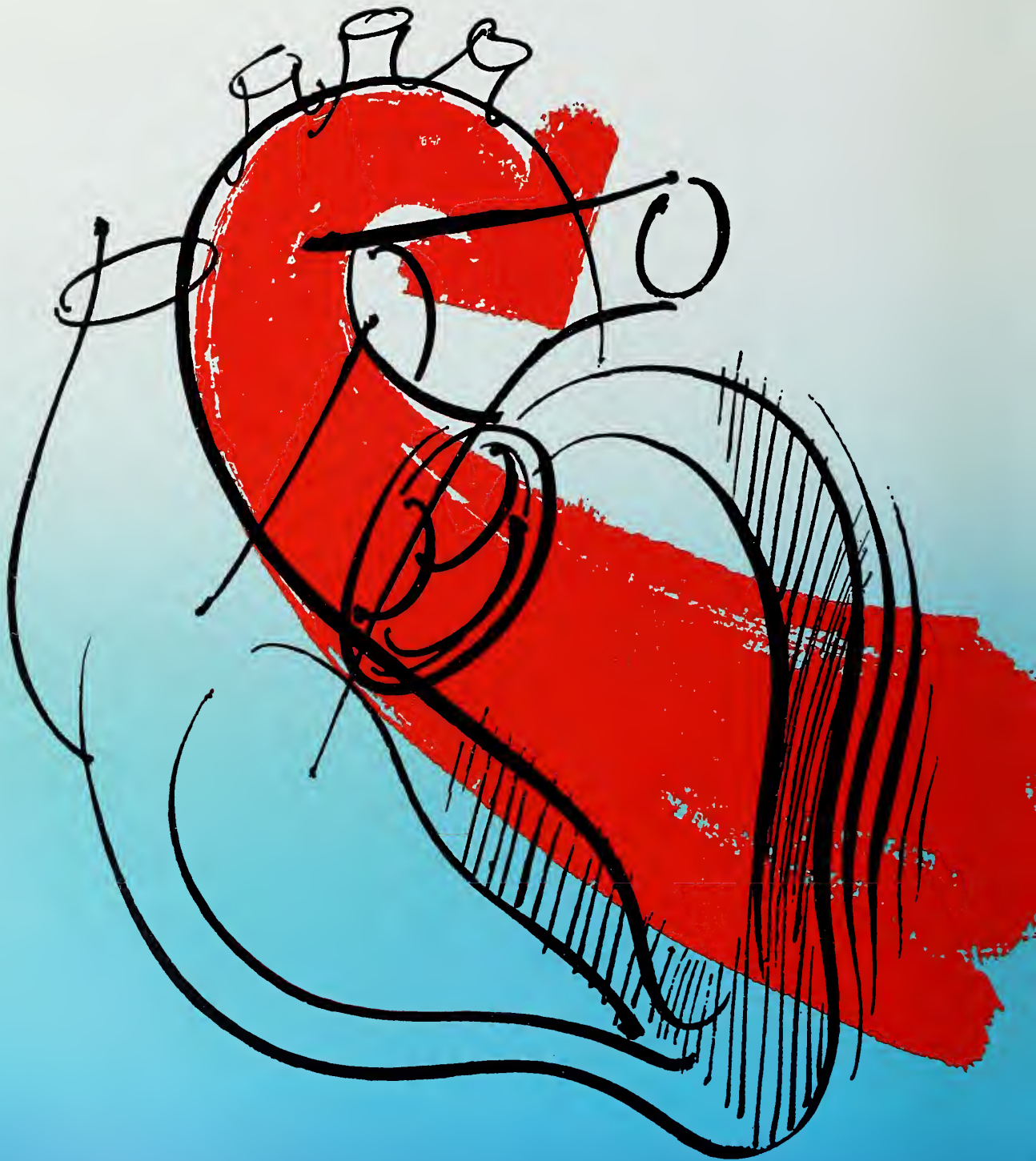
New clinical studies^{1,2} continue to confirm the essential value of digoxin in CHF and show:



In patients with normal sinus rhythm...

- **Improved ejection fraction.**
- **Improved cardiac output.**
- **Improved exercise tolerance.**

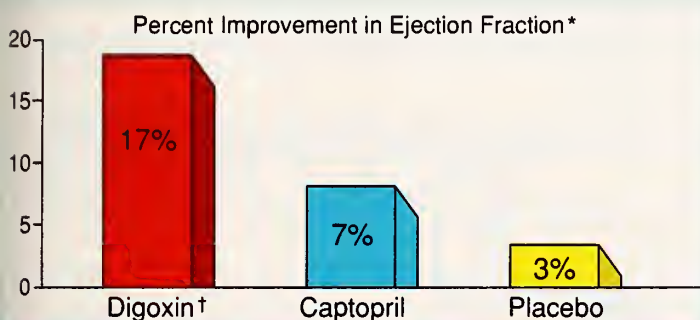
New evidence continues to
confirm the essential value of
LANOXIN[®] in CHF.^{1,2}



Improved ejection fraction

In a recent double-blind, placebo-controlled study¹ in patients with normal sinus rhythm, digoxin produced a significant increase in ejection fraction compared to captopril ($P<.05$) and placebo ($P<.01$). By contrast, there was no significant difference between captopril and placebo.

Improvement in ejection fraction represents improvement in myocardial contractile performance and better emptying of the left ventricle.



* Adapted from the Captopril-Digoxin Multicenter Research Group study.¹

† $P<.05$ compared to captopril; $P<.01$ compared to placebo.

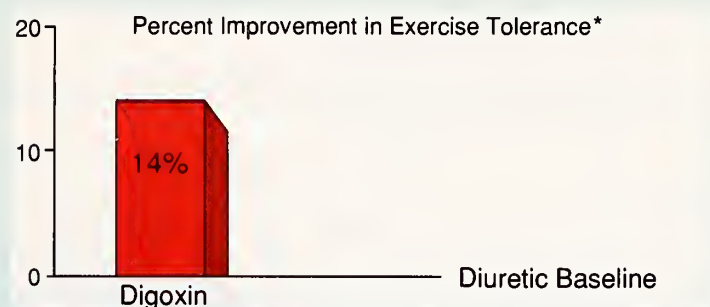
Improved cardiac output

The positive inotropic effect of digoxin (as measured in part by improved cardiac output) was associated with improved left ventricular (LV) function.³ This significant improvement in cardiac output was seen in patients at rest as well as during exercise. Long-term therapy with digoxin contributed to the maintenance of LV function as indicated by both a decrease in cardiac output when digoxin was stopped and a restoration to treatment levels with readministration of the drug.



Improved exercise tolerance

In a new placebo-controlled study² of CHF patients with normal sinus rhythm and on diuretics, exercise tolerance (treadmill) was improved 14% ($P<.05$) by digoxin. In this study, digoxin produced favorable effects on cardiac function beyond those of the diuretic alone. Another study⁴ showed that digoxin significantly improved exercise tolerance and O_2 consumption over placebo. In the latest digoxin/captopril study, there was no significant statistical difference between the two drugs with regard to effects on exercise tolerance and functional class.¹



* Adapted from DiBianco et al.²

References: 1. The Captopril-Digoxin Multicenter Research Group: Comparative effects of therapy with captopril and digoxin in patients with mild to moderate heart failure. *JAMA* 1988;259:539-544. 2. DiBianco R, Shabetai R, Kostuk W, et al: Oral milrinone and digoxin in heart failure: Results of a placebo-controlled, prospective trial of each agent and the combination, abstract. *Circulation* 1987;76(suppl 4):256. 3. Arnold SB, Byrd RC, Meister W, et al: Long-term digitalis therapy improves left ventricular function in heart failure. *N Engl J Med* 1980;303:1443-1448. 4. Alicandri C, Fariello R, Boni E, et al: Comparison of captopril and digoxin in mild to moderate heart failure. *Postgrad Med J* 1986;62(suppl 1):170-175.

IN THE EARLY TREATMENT OF CHF

LANOXIN[®]

(digoxin) Tablets

Unique inotropic support for the failing heart.

See brief summary of prescribing information on following page.

LANOXIN® (DIGOXIN) TABLETS

125 µg (0.125 mg) Scored I.D. Imprint Y3B (yellow)
250 µg (0.25 mg) Scored I.D. Imprint X3A (white)
500 µg (0.5 mg) Scored I.D. Imprint T9A (green)

Before using Lanoxin Tablets, the physician should be thoroughly familiar with the basic pharmacology of this drug as well as its drug interactions, indications, and usage.

DESCRIPTION: Lanoxin is digoxin, one of the cardiac (or digitalis) glycosides, a closely related group of drugs having in common specific effects on the myocardium.

INDICATIONS AND USAGE:

Heart Failure: The increased cardiac output resulting from the inotropic action of digoxin ameliorates the disturbances characteristic of heart failure (venous congestion, edema, dyspnea, orthopnea and cardiac asthma). Digoxin is more effective in "low output" (pump) failure than in "high output" heart failure secondary to arteriovenous fistula, anemia, infection or hyperthyroidism.

Digoxin is usually continued after failure is controlled, unless some known precipitating factor is corrected. Studies have shown, however, that even though hemodynamic effects can be demonstrated in almost all patients, corresponding improvement in the signs and symptoms of heart failure is not necessarily apparent. Therefore, in patients in whom digoxin may be difficult to regulate, or in whom the risk of toxicity may be great (e.g., patients with unstable renal function or whose potassium levels tend to fluctuate) a cautious withdrawal of digoxin may be considered. If digoxin is discontinued, the patient should be regularly monitored for clinical evidence of recurrent heart failure.

CONTRAINDICATIONS: Digitalis glycosides are contraindicated in ventricular fibrillation. In a given patient, an untoward effect requiring permanent discontinuation of other digitalis preparations usually constitutes a contraindication to digoxin. Hypersensitivity to digoxin itself is a contraindication to its use. Allergy to digoxin, though rare, does occur. It may not extend to all such preparations, and another digitalis glycoside may be tried with caution.

WARNINGS: Digitalis alone or with other drugs has been used in the treatment of obesity. This use of digoxin or other digitalis glycosides is unwarranted. Moreover, since they may cause potentially fatal arrhythmias or other adverse effects, the use of these drugs solely for the treatment of obesity is dangerous.

Anorexia, nausea, vomiting and arrhythmias may accompany heart failure or may be indications of digitalis intoxication. Clinical evaluation of the cause of these symptoms should be attempted before further digitalis administration. In such circumstances determination of the serum digoxin concentration may be an aid in deciding whether or not digitalis toxicity is likely to be present. If the possibility of digitalis intoxication cannot be excluded, cardiac glycosides should be temporarily withheld, if permitted by the clinical situation.

Patients with renal insufficiency require smaller than usual maintenance doses of digoxin (see DOSAGE AND ADMINISTRATION section in the complete prescribing information).

Heart failure accompanying acute glomerulonephritis requires extreme care in digitalization. Relatively low loading and maintenance doses and concomitant use of antihypertensive drugs may be necessary and careful monitoring is essential. Digoxin should be discontinued as soon as possible.

Patients with severe carditis, such as carditis associated with rheumatic fever or viral myocarditis, are especially sensitive to digoxin-induced disturbances of rhythm.

Newborn infants display considerable variability in their tolerance to digoxin. Premature and immature infants are particularly sensitive, and dosage must not only be reduced but must be individualized according to their degree of maturity.

Note: Digitalis glycosides are an important cause of accidental poisoning in children.

PRECAUTIONS:

General: Digoxin toxicity develops more frequently and lasts longer in patients with renal impairment because of the decreased excretion of digoxin. Therefore, it should be anticipated that dosage requirements will be decreased in patients with moderate to severe renal disease (see DOSAGE AND ADMINISTRATION section in the complete prescribing information). Because of the prolonged half-life, a longer period of time is required to achieve an initial or new steady-state concentration in patients with renal impairment than in patients with normal renal function.

In patients with hypokalemia, toxicity may occur despite serum digoxin concentrations within the "normal range", because potassium depletion sensitizes the myocardium to digoxin. Therefore, it is desirable to maintain normal serum potassium levels in patients being treated with digoxin. Hypokalemia may result from diuretic, amphotericin B or corticosteroid therapy, and from dialysis or mechanical suction of gastrointestinal secretions. It may also accompany malnutrition, diarrhea, prolonged vomiting, old age and long-standing heart failure. In general, rapid changes in serum potassium or other electrolytes should be avoided, and intravenous treatment with potassium should be reserved for special circumstances as described below (see TREATMENT OF ARRHYTHMIAS PRODUCED BY OVERDOSAGE section).

Calcium, particularly when administered rapidly by the intravenous route, may produce serious arrhythmias in digitalized patients. Hypercalcemia from any cause predisposes the patient to digitalis toxicity. On the other hand, hypocalcemia can nullify the effects of digoxin in man; thus, digoxin may be ineffective until serum calcium is restored to normal. These interactions are related to the fact that calcium affects contractility and excitability of the heart in a manner similar to digoxin.

Hypomagnesemia may predispose to digitalis toxicity. If low magnesium levels are detected in a patient on digoxin, replacement therapy should be instituted.

Quinidine, verapamil, and amiodarone cause a rise in serum digoxin concentration, with the implication that digitalis intoxication may result. This rise appears to be proportional to the dose. The effect is mediated by a reduction in the digoxin clearance and, in the case of quinidine, decreased volume of distribution as well.

Certain antibiotics may increase digoxin absorption in patients who convert digoxin to inactive metabolites in the gut (see Pharmacokinetics portion of the CLINICAL PHARMACOLOGY section in the complete prescribing information). Recent studies have shown that specific colonic bacteria in the lower gastrointestinal tract convert digoxin to cardioinactive reduction products, thereby reducing its bioavailability. Although inactivation of these bacteria by antibiotics is rapid, the serum digoxin concentration will rise at a rate consistent with the elimination half-life of digoxin. The magnitude of rise in serum digoxin concentration relates to the extent of bacterial inactivation, and may be as much as two-fold in some cases. Patients with acute myocardial infarction or severe pulmonary disease may be unusually sensitive to digoxin-induced disturbances of rhythm.

Atrial arrhythmias associated with hypermetabolic states (e.g., hyperthyroidism) are particularly resistant to digoxin treatment. Large doses of digoxin are not recommended as the only treatment of these arrhythmias and care must be taken to avoid toxicity if large doses of digoxin are required. In hypothyroidism, the digoxin requirements are reduced. Digoxin responses in patients with compensated thyroid disease are normal.

Reduction of digoxin dosage may be desirable prior to electrical cardioversion to avoid induction of ventricular arrhythmias, but the physician must consider the consequences of rapid increase in ventricular response to atrial fibrillation if digoxin is withheld 1 to 2 days prior to cardioversion. If there is a suspicion that digitalis toxicity exists, elective cardioversion should be delayed. If it is not prudent to delay cardioversion, the energy level selected should be minimal at first and carefully increased in an attempt to avoid precipitating ventricular arrhythmias.

Incomplete AV block, especially in patients with Stokes-Adams attacks, may progress to advanced or complete heart block if digoxin is given.

In some patients with sinus node disease (i.e., Sick Sinus Syndrome), digoxin may worsen sinus bradycardia or sinoatrial block.

In patients with Wolff-Parkinson-White Syndrome and atrial fibrillation, digoxin can enhance transmission of impulses through the accessory pathway. This effect may result in extremely rapid ventricular rates and even ventricular fibrillation.

Digoxin may worsen the outflow obstruction in patients with idiopathic hypertrophic subaortic stenosis (IHSS). Unless cardiac failure is severe, it is doubtful whether digoxin should be employed.

Patients with chronic constrictive pericarditis may fail to respond to digoxin. In addition, slowing of the heart rate by digoxin in some patients may further decrease cardiac output.

Patients with heart failure from amyloid heart disease or constrictive cardiomyopathies respond poorly to treatment with digoxin.

Digoxin is not indicated for the treatment of sinus tachycardia unless it is associated with heart failure.

Digoxin may produce false positive ST-T changes in the electrocardiogram during exercise testing. Intramuscular injection of digoxin is extremely painful and offers no advantages unless other routes of administration are contraindicated.

Laboratory Tests: Patients receiving digoxin should have their serum electrolytes and renal function (BUN and/or serum creatinine) assessed periodically; the frequency of assessments will depend on the clinical setting. For discussion of serum digoxin concentrations, see DOSAGE AND ADMINISTRATION section in the complete prescribing information.

Drug Interactions: Potassium-depleting corticosteroids and diuretics may be major contributing factors to digitalis toxicity. Calcium, particularly if administered rapidly by the intravenous route, may produce serious arrhythmias in digitalized patients. Quinidine, verapamil, and amiodarone cause a rise in serum digoxin concentration, with the implication that digitalis intoxication may result. Certain antibiotics increase digoxin absorption in patients who inactivate digoxin by bacterial metabolism in the lower intestine, so that digitalis intoxication may result. Propantheline and diphenoxylate, by decreasing gut motility, may increase digoxin absorption. Antacids, kaolin-pectin, sulfasalazine, neomycin, cholestyramine and certain anticancer drugs may interfere with intestinal digoxin absorption, resulting in unexpectedly low serum concentrations. There have been inconsistent reports regarding the effects of other drugs on the serum digoxin concentration. Thyroid administration to a digitalized hypothyroid patient may increase the dose requirement of digoxin. Concomitant use of digoxin and sympathomimetics increases the risk of cardiac arrhythmias because both enhance ectopic pacemaker activity. Succinylcholine may cause a sudden extrusion of potassium from muscle cells, and may thereby cause arrhythmias in digitalized patients. Although β adrenergic blockers or calcium channel blockers and digoxin may be useful in combination to control atrial fibrillation, their additive effects on AV node conduction can result in complete heart block.

Due to the considerable variability of these interactions, digoxin dosage should be carefully individualized when patients receive coadministered medications.

Carcinogenesis, Mutagenesis, Impairment of Fertility: There have been no long-term studies performed in animals to evaluate carcinogenic potential.

Pregnancy: Teratogenic Effects: Pregnancy Category C. Animal reproduction studies have not been conducted with digoxin. It is also not known whether digoxin can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Digoxin should be given to a pregnant woman only if clearly needed.

Nursing Mothers: Studies have shown that digoxin concentrations in the mother's serum and milk are similar. However, the estimated daily dose to a nursing infant will be far below the usual infant maintenance dose. Therefore, this amount should have no pharmacologic effect upon the infant. Nevertheless, caution should be exercised when digoxin is administered to a nursing woman.

ADVERSE REACTIONS: The frequency and severity of adverse reactions to digoxin depend on the dose and route of administration, as well as on the patient's underlying disease or concomitant therapies (see PRECAUTIONS section). The overall incidence of adverse reactions has been reported as 5 to 20%, with 15 to 20% of them being considered serious (one to four percent of patients receiving digoxin). Evidence suggests that the incidence of toxicity has decreased since the introduction of the serum digoxin assay and improved standardization of digoxin tablets. Cardiac toxicity accounts for about one-half, gastrointestinal disturbances for about one-fourth, and CNS and other toxicity for about one-fourth of these adverse reactions.

Adults:

Cardiac—Unifocal or multifocal ventricular premature contractions, especially in bigeminal or trigeminal patterns, are the most common arrhythmias associated with digoxin toxicity in adults with heart disease. Ventricular tachycardia may result from digitalis toxicity. Atrioventricular (AV) dissociation, accelerated junctional (nodal) rhythm and atrial tachycardia with block are also common arrhythmias caused by digoxin overdosage. Excessive slowing of the pulse is a clinical sign of digoxin overdosage. AV block (Wenckebach) of increasing degree may proceed to complete heart block.

Note: The electrocardiogram is fundamental in determining the presence and nature of these cardiac disturbances. Digoxin may also induce other changes in the ECG (e.g., PR prolongation, ST depression), which represent digoxin effect and may or may not be associated with digitalis toxicity.

Gastrointestinal—Anorexia, nausea, vomiting and less commonly diarrhea are common early symptoms of overdosage. However, uncontrolled heart failure may also produce such symptoms. Digitalis toxicity very rarely may cause abdominal pain and hemorrhagic necrosis of the intestines.

CNS—Visual disturbances (blurred or yellow vision), headache, weakness, apathy and psychosis can occur.

Other—Gynecomastia is occasionally observed.

Infants and Children: Toxicity differs from the adult in a number of respects. Anorexia, nausea, vomiting, diarrhea and CNS disturbances may be present but are rare as initial symptoms in infants. Cardiac arrhythmias are more reliable signs of toxicity. Digoxin in children may produce any arrhythmia. The most commonly encountered are conduction disturbances or supra-atrial tachycardia with or without block, and junctional (nodal) tachycardia. Ventricular arrhythmias are less common. Sinus bradycardia may also be a sign of impending digoxin intoxication, especially in infants, even in the absence of first degree heart block. Any arrhythmia or alteration in cardiac conduction that develops in a child taking digoxin should initially be assumed to be a consequence of digoxin intoxication.

TREATMENT OF ARRHYTHMIAS PRODUCED BY OVERDOSAGE: Adults: Digoxin should be discontinued until all signs of toxicity are gone. Discontinuation may be all that is necessary if toxic manifestations are not severe and appear only near the expected time for maximum effect of the drug. Potassium salts are commonly used, particularly if hypokalemia is present. Potassium chloride in divided oral doses totaling 3 to 6 grams of the salt (40 to 80 mEq K+) for adults may be given provided renal function is adequate (see below for potassium recommendations in Infants and Children).

When correction of the arrhythmia is urgent and the serum potassium concentration is low or normal, potassium should be administered intravenously in 5% dextrose injection. For adults, a total of 40 to 80 mEq (diluted to a concentration of 40 mEq per 500 ml) may be given at a rate not exceeding 20 mEq per hour, or slower if limited by pain due to local irritation. Additional amounts may be given if the arrhythmia is uncontrolled and potassium well-tolerated. ECG monitoring should be performed to watch for any evidence of potassium toxicity (e.g., peaking of T waves) and to observe the effect on the arrhythmia. The infusion may be stopped when the desired effect is achieved.

Note: Potassium should not be used and may be dangerous in heart block due to digoxin, unless primarily related to supraventricular tachycardia.

Other agents that have been used for the treatment of digoxin intoxication include lidocaine, procainamide, propranolol and phenytoin, although use of the latter must be considered experimental. In advanced heart block, temporary ventricular pacing may be beneficial. Digoxin Immune Fab (Ovine), Digibind®, can be used to reverse potentially life-threatening digoxin (or digitoxin) intoxication. Improvement in signs and symptoms of digitalis toxicity usually begins within 12 hour of Digibind administration. Each 40 mg vial of Digibind will neutralize 0.6 mg of digoxin (which is a usual body store of an adequately digitalized 70 kg patient).

Infants and Children: See Adult section for general recommendations for the treatment of arrhythmias produced by overdosage and for cautions regarding the use of potassium.

If a potassium preparation is used to treat toxicity, it may be given orally in divided doses totaling 1 to 1.5 mEq K+ per kilogram (kg) body weight (1 gram of potassium chloride contains 13.4 mEq K+).

When correction of the arrhythmia with potassium is urgent, approximately 0.5 mEq/kg of potassium per hour may be given intravenously, with careful ECG monitoring. The intravenous solution of potassium should be dilute enough to avoid local irritation; however, especially in infants, care must be taken to avoid intravenous fluid overload.

DOSAGE AND ADMINISTRATION: Recommended dosages are average values that may require considerable modification because of individual sensitivity or associated conditions. Diminished renal function is the most important factor requiring modification of recommended doses.

In deciding the dose of digoxin, several factors must be considered:

1. The disease being treated. Atrial arrhythmias may require larger doses than heart failure.
2. The body weight of the patient. Doses should be calculated based upon lean or ideal body weight.
3. The patient's renal function, preferably evaluated on the basis of creatinine clearance.
4. Age is an important factor in infants and children.
5. Concomitant disease states, drugs or other factors likely to alter the expected clinical response to digoxin (see PRECAUTIONS and Drug Interactions sections).

Consult complete product information before prescribing.

Copr. © 1988 Burroughs Wellcome Co. All rights reserved.

IN THE EARLY TREATMENT OF CHF

LANOXIN®

(digoxin) Tablets



Wellcome

Burroughs Wellcome Co.

Research Triangle Park, NC 27709

NORTH CAROLINA MEDICAL JOURNAL

For Patients

VOLUME 49 / NUMBER 7 / JULY 1988

The Department of Medicine at the Bowman Gray School of Medicine of Wake Forest University

Changing Priorities in Changing Times

WILLIAM R. HAZZARD, M.D.

The year 1991 will mark the fiftieth anniversary of the Bowman Gray School of Medicine. The school began as a two-year program of Wake Forest College in 1902 and was converted to a four-year institution with its move to Winston-Salem in 1941. The parent college was to move to Winston-Salem 15 years later. During much of that almost half-century, situated on the Hawthorne Hill Campus with its sister institution, the North Carolina Baptist Hospital, the school has become deservedly known for excellence in clinical medicine.

For the first several decades Bowman Gray was the kind of medical school where clinical instruction was delivered largely by practitioners in the course of their daily attention to the needs of patients, especially those requiring hospitalization and the skills of the tertiary care specialist. Beginning in the 1960s, several foci of special excellence began to emerge: stroke, arteriosclerosis, and cancer. These brought the medical center an increasing measure of scientific respect in national and international

circles, and academic standards at the institution for students, residents, and faculty kept pace. In the 1970s and 1980s these trends have accelerated yet further, and an explicit commitment on the part of institutional leaders to maintain this momentum was a major factor in my acceptance of the position of Chairman of the Department of Medicine at Bowman Gray in the spring of 1986.

The Commitment to Excellence

The evidence of this commitment is readily visible to any visitor to the medical center. A 130,000-square-foot, 6-story addition to the Hanes Research Tower has been completed, nearly doubling research space. A new 10-story in-patient tower is nearing completion—an addition which will increase licensed bed capacity from 701 to 806, allowing for increased critical care, specialized programs such as bone marrow transplantation, and a “hospital within a hospital,” the Brenner Children’s Hospital. At the same time, an 11-story, 300,000-square-foot clinical sciences building is under construction contiguous to the hospital and medical school. Scheduled for completion in 1989, this facility will allow the dramatic expansion of

From Professor and Chairman, Bowman Gray School of Medicine of Wake Forest University, Winston-Salem 27103.

ambulatory care services at the medical center. Less visible though equally important in the progressively academic orientation of the medical center is the growth in extramural research funding (Bowman Gray stands poised to break into the upper third of university medical centers in the national competition for NIH funds), and faculty promotions are becoming increasingly tied to research productivity. Finally, the school has recruited department chairmen, each of whom brings research as well as clinical and administrative credentials to his or her position: Madison Slusher, Ophthalmology; Joseph Jorizzo, Dermatology; Marjorie Bowman, Family Medicine; Richard Dean, Surgery; and Burton Riefler, Psychiatry and Behavioral Medicine. These factors, together with the traditional administrative strength and financial management that have characterized the institution, and the undeniable attractions of life in the Carolina Piedmont, made the position irresistible to me.

Perhaps the most effective way of communicating my optimism and enthusiasm regarding the opportunities at Bowman Gray and the North Carolina Baptist Hospital is to relate my impressions and priorities as I transmit them to applicants for our residency training program in internal medicine. To these impressionable medical school seniors seeking to select their residency, I offer the following five points to contemplate.

First, the traditional emphasis upon excellence in clinical care at Bowman Gray/North Carolina Baptist Hospital is a strength which attracted me to the institution and is also a tradition to which I am deeply committed. The environment of caring that originates in attention to the needs of patients carries over in a most important way to the lives of house officers — how they care for each other, how they relate to nurses and other staff, and how they deal with students and indeed faculty as well. This caring atmosphere makes daily life, and most importantly, learning at the medical center, both enjoyable and stimulating, and it is the foundation upon which growth and development toward greater academic excellence can proceed.

Second, this is very much a university medical center on the move. This is reflected not only in the impressive array of new buildings but also in the new programs and increasing sophistication of existing programs that are in continuing evolution on this campus. Of particular challenge and attractiveness to me is my freedom to selectively recruit additional faculty whose strengths in research (and particularly my priority, clinical investigation) are especially promising. Recruitment of such faculty will allow us to balance our traditional strengths in patient care and teaching with those in research, a balance which is the hallmark of the strongest academic health centers. Already we have had some success in this regard. This is most evident in the rapid growth in research productivity in our section of cardiology and in the new Center for Prevention Research and Biometry under Dr. Curt

Furberg. This complements our traditional research strengths in oncology, nephrology, infectious diseases (notably in the biology of inflammation), and, increasingly, gastroenterology. For prospective residents this translates into excellent post-residency subspecialty fellowship training in all of the major medical subspecialties (approximately two-thirds of our residents have historically taken subspecialty training, matching the national average).

Third, I stress our changing priorities in the Department of Medicine, changes which would affect the experience of these prospective residents. These changing priorities reflect in the first instance my own position that *general* internal medicine is the most challenging practice of our specialty. I cannot help but wince when I hear residents, fellows and practitioners say that they are interested in "just general internal medicine." "Just" indeed! From my vantage point the generalist, who is forced to have a command of the broadest range of literature and experience, to synthesize and integrate a vast array of information both at one point in time and over time, and who is committed to the care of patients indefinitely, is the consummate physician. I also share with these candidates my personal perspective, however, that many of us derive our greatest professional satisfaction from combining general internal medicine with in-depth knowledge of a subspecialty, allowing the ego gratification of being sought as a consultant by our colleagues in an area of special interest to us. In my own case this area has been disorders of lipoprotein metabolism and, to a lesser extent, diabetes mellitus — residua of my fellowship training and over a decade of academic experience at the University of Washington, where I was Director of the Northwest Lipid Research Clinic and as such involved in the Coronary Primary Prevention Trial of the Lipid Research Clinics program. Even today I derive special pleasure from sorting out the diagnostic and therapeutic problems of patients with complicated metabolic disorders. Thus the great internists of the future may be like those who were my own role models during training: general internists with a special interest in a particular area of practice.

Fourth, be they generalists, generalists with an area of special interest, or pure subspecialists, our residency graduates must be experts in ambulatory care. In this arena the judgments are subtle, the decisions are heavily based upon experience, and access to numerical data in support of clinical hypothesis is often limited. Thus, the art of medicine is most clear in the practice of ambulatory medicine, and toward that end we shall be increasingly devoting our efforts to ambulatory care training in the Department of Medicine at Bowman Gray. Currently our residency program is like most others: ambulatory care training is confined largely to a half-day-per-week longitudinal clinic throughout the three-year experience. This is clearly inadequate in the present era and especially in

certain subspecialties predominantly practiced in the ambulatory setting, notably rheumatology, endocrinology and metabolism, and increasingly, the other medical subspecialties as well. In our Primary Care Training Program track (representing 12 of the 62 total residency positions), concentrated at the Reynolds Health Center in Winston-Salem, we have been able to increase the overall ambulatory care experience to 25%, offering in addition to traditional medical subspecialties elective outpatient experiences in otolaryngology, gynecology, orthopedics, and dermatology as well as more general primary care training in the outpatient arena. It is my goal that this figure will be reached for all of our residents as more space for the teaching of ambulatory care becomes available in our clinical sciences building, and as we are able to add to that facility residency training in such sections as cardiology, nephrology, gastroenterology, and infectious diseases (we presently have a daily AIDS clinic in operation). This should serve not only to better prepare our residents for the actual practice of internal medicine, but also to overcome the stigma attached to internal medicine by the current overexposure of residents and students to gravely ill and dying patients in the inpatient critical care units.

Finally, I share my personal perspective that gerontology/geriatric medicine represents the "supra-specialty" of greatest promise as the 20th Century draws to a close. Indeed, it was the opportunity to make aging a top institutional priority from the position of Chairman of the Department of Medicine that drew me to Bowman Gray two years ago. This reflected my gradual, continuing conversion from a subspecialist to a generalist in geriatrics. I first began the switch — principally in attitude — from metabolism and endocrinology to gerontology and geriatric medicine at the University of Washington, where I became director of a division bearing that name in 1978. From there I gravitated to the Johns Hopkins Medical Institutions in 1982 to develop a second such program — one that is, I hope, comprehensive — from the position of associate director (vice chairman) of the Department of Medicine and Director of the Center on Aging at that institution. This move proceeded from my strong belief that gerontology and geriatric medicine should remain squarely in the mainstream of internal medicine rather than become a separate discipline or, in institutional terms, a separate department. The move to Bowman Gray to develop a program on aging as chairman of medicine clearly represents the culmination of that belief.

Gerontology at Bowman Gray

Here it is my goal to make gerontology — the studying of aging — and geriatric medicine — the medical care of the elderly — a central, unifying force in the department. This is being implemented in the first instance by the

creation of a new Section of Gerontology and Geriatric Medicine within the Department of Medicine, headed by Walter H. Ettinger, Jr., M.D., recruited in 1986 from Johns Hopkins where he had been the first fellow in gerontology and geriatric medicine. Dr. Ettinger brings to this position investigational and subspecialty expertise in both rheumatology and gerontology/geriatric medicine, the latter with special emphasis upon lipoprotein metabolism in those with rheumatological disorders who suffer accelerated atherosclerosis by virtue of their disease and/or their treatment (notably corticosteroids). Since his arrival last July, Dr. Ettinger has rapidly assembled the core elements of a distinguished program in his discipline: a three-year fellowship program, an in-hospital consultation team, a geriatric assessment clinic, a strong contractual relationship with the North Carolina Baptist Home for the Aged, and an impressive research program.

Simultaneously, we have begun to "gerontologize" the department through selective recruitment of new faculty interested in the relationship between their subspecialties and the aging process, and through stimulating faculty in existing subspecialties to inflect their interests in a similar fashion. As a case in point, Dr. Norman Miller, Ph.D., M.D., has been recruited to head the Section on Metabolism and Endocrinology. Dr. Miller, world-renowned for his research detailing the intriguing inverse relationship between high density lipoprotein (HDL) cholesterol and ischemic heart disease, has become fascinated with the interaction between aging and lipoprotein metabolism and, indirectly, atherosclerosis. He will be pursuing these relationships and recruiting additional faculty who share his fascination. Dr. Donald Castell and his colleagues in gastroenterology are investigating the aging of the gastrointestinal tract with its primary effect upon motility from esophagus to rectum. Similarly, faculty and fellows in other subspecialties are beginning to turn their attention to the interaction between aging and physiological regulation within the organ systems of their primary interest.

Moreover, the interest in aging and commitment to programs in gerontology and geriatric medicine are becoming evident institution-wide. Dr. Burton Reifler, an internationally acclaimed investigator and clinician in Alzheimer's disease and related disorders, has come to Bowman Gray from the University of Washington to chair the Department of Psychiatry and Behavioral Medicine. Dr. Curt Furberg and his faculty in the Center on Prevention Research and Biometry — notably, Maurice Mittelman — are studying the prevalence of cardiovascular disease in the elderly and its basis in known and unknown risk factors. Dr. James Toole is probing the relationship between cerebrovascular disease and aging in the Stroke Center. Dr. Frank Celestino and his colleagues in the Department of Family and Community Medicine are participating fully in the fellowship training program, a joint venture between the Departments of Medicine and Fam-

ily and Community Medicine. Drs. Philip Landfield, Alvin Brodish, and their colleagues in the basic sciences are pursuing fundamental physiological, anatomical, and biochemical studies of the aging process in a wide variety of tissues and organ systems. Dr. Thomas Clarkson and his colleagues in the Department of Comparative Medicine and the Specialized Center of Research in Arteriosclerosis are investigating the relationship between aging and atherosclerosis, principally in non-human primates.

These faculty have been gathered under the umbrella of the newly created J. Paul Sticht Center on Aging of Wake Forest University, in which plans are being laid for a vastly expanded array of programs and facilities which should move the university to the forefront of the rapidly growing field of gerontology and geriatrics.

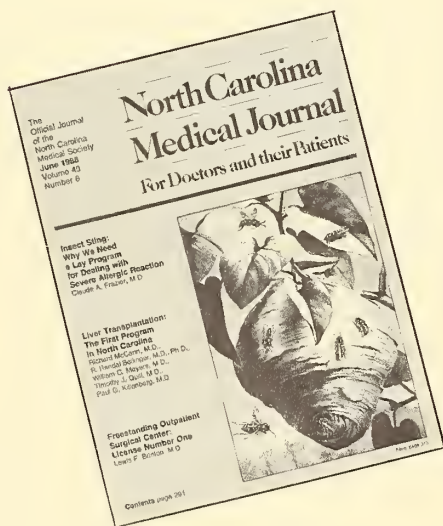
For our prospective residents this translates into a required rotation through all elements of Dr. Ettinger's

multi-level geriatric program; for our medical students, a required second-year course in gerontology and geriatrics (which will still be nearly unique among medical schools in this country); for our residents and junior faculty, the opportunity to gain additional training and experience related to aging through special fellowships and research with faculty in both the basic and clinical sciences.

Thus, continuing the tradition of clinical excellence, enriching the faculty with those skilled in research, emphasizing general internal medicine and especially ambulatory training in both subspecialty and primary care, and developing a comprehensive program of distinction in gerontology and geriatrics: these are the changing priorities of the Department of Medicine of the Bowman Gray School of Medicine in these changing times. ■

North Carolina Medical Journal

Subscribe for yourself or a friend



Please enclose a check or money order for:

☐ \$12.60 (NC Residents; this includes 5% sales tax)

☐ \$12.00 (out-of-state subscribers)

☐ New ☐ Renewal

Send to NCMJ, Box 3910 DUMC
Durham 27710. (919/684-5728)

Please start my 1-year subscription:

My Name _____

Address _____

City/State/Zip _____

Please send a 1-year gift subscription to:

Name _____

Address _____

City/State/Zip _____

Evolution of Therapy of Myocardial Infarction

The rapid pace of medicine in the latter half of the 20th century is exemplified by the change in therapy between 1966 and 1986. Tinsley Harrison, the first Professor of Medicine at the Bowman Gray School of Medicine, describes the behavior of himself and his doctors when he had a myocardial infarction in 1966. David Rogers, former Professor of Medicine at Vanderbilt and later president of the Johnson Foundation, describes his infarction in 1986 and the reactions of his doctors in an article published in *The Pharos*.

The *North Carolina Medical Journal* publishes Harrison's account, given to the editor by Dr. Carter Smith, Sr., of Atlanta. We reprint Rogers's account by permission of the editor and publisher of *The Pharos*. Dr. Joseph Greenfield, a distinguished Professor of Medicine at Duke, updates the scene since Rogers's 1986 account.

The Subjective Aspects of the Case History of TRH as related by TRH, August 1966

This 65-year-old physician has a strong family history of coronary disease, but is aware of only one incidence of sudden death in his close relatives; his grandmother was found dead in bed at age 89. She had died while reading her Bible in Greek. The patient had long anticipated the probable development of angina and had taken certain steps, such as guarding against overweight and engaging in rather vigorous physical activity, to prevent this. He had been found, at about age 60, to have a cholesterol value of 410, and has been eating much less of the ordinary meat since then. In addition, he has substituted corn oil margarine for butter, and followed his own prescription of taking his main meats in about equal proportions of seafood, fowl, and land animals. Otherwise, he has paid very little attention to his

health and has conspicuously violated his own tobacco philosophy for many years, and his alcohol philosophy for some ten years.

The patient, being interested in coronary disease and alert to the possibility of angina pectoris, has on several occasions each year pushed himself to all-out exercise, and never experienced the slightest chest discomfort. For about ten years he has been conscious of a minor degree of intermittent claudication and has done nothing about it except to continue to play golf two to three times a week, or to swim and water ski. He noted over and over again that a departure from the exercise regimen for a period as short as one week would bring back the symptoms of claudication which remained absent during his ordinary activities as long as he kept up his regular exercise.

Otherwise, the only health impairment of which he has been conscious has been a little progressive exertional dyspnea, although his vital capacity, despite a decline of some

30% from its maximal level at age 25, has remained within the normal limits for his size and age. Actually the last vital capacity measured some few months before the coronary attack was 3900 cc.

The day before the episode occurred the patient had flown to New Orleans to confer with a friend and possible future colleague at the medical school, and had partaken of two meals at French restaurants — the main meat each time being seafood. He had been under no emotional stress whatever, and was in the best of health so far as he knew, and the best of spirits.

The day on which the episode occurred, Monday, July 26, was divided between swimming, pulling children and grandchildren on water skis, with perhaps one water skiing trip by the patient, and turning out a small amount of work. There was no unusual, and indeed perhaps less than the usual, physical or emotional stress on that day.

At approximately 11 p.m., the patient went to bed feeling completely well. Before becoming sound asleep he noted a slight discomfort in the chest. This could not be described initially as a pain but as a peculiar feeling, not unlike the feeling one gets in the retrosternal area and lower neck when one has a craving for a cigarette. After observing the sensation for a couple of minutes, the patient deliberately lit a cigarette in order to eliminate the possibility that this peculiar sensation could be due to such a desire. Within a matter of two or three minutes it was quite obvious that this explanation could not account for it, because the vague discomfort had now changed to a definite pain. At that time the realization that something was going on, and that it probably was an eschismic pain, became stronger and stronger in the patient's mind. After another few minutes he asked his wife to give him a hypodermic, and she administered 100 mgm. of Demerol, by which time the pain had really become quite severe. He then had nausea before enough time had elapsed for the Demerol to have any effect, and after vomiting very small amounts he was faint for a matter of one-half minute or so, which is the only time in the entire illness that there has been any faintness whatever. The pain continued to increase despite the Demerol, and Dr. James Cameron, who had in the meantime been called, arrived in a very brief lapse of time and administered 15 mgm. of Morphine intravenously. This caused a temporary sharp reduction in the discomfort but within 10 to 15 minutes it was as severe as before.

The ambulance then arrived and transfer was made from the Lake Martin cottage to the Russell Hospital at Alexander City. During the trip the pain reached its peak intensity and could be described as severe to very severe, but at no time was considered by the patient to be excruciating. He asked Dr. Cameron whether another hypodermic was in order and Dr. Cameron quite properly replied that "perhaps we've not seen the full effect of the last one yet . . . let's wait until we get to the hospital."

The patient utilized this time to test some of his own teachings about ischemic pain. He repeatedly moved his

arms and shoulders and reached for things, and took deep breaths. None of these had any effect whatever on the pain, neither alleviating nor intensifying it. It was similarly noticed during the initial part of the trip in the ambulance that although the somewhat rocky dirt road caused considerable bumping, the bumps caused only a slight jar to the body and no increase whatever in pain.

Upon arrival at the hospital the pain had reached its maximum intensity, and a third hypodermic was administered. Within a few minutes this took effect and the subject went to sleep only to be awakened perhaps an hour later by a horde of well-meaning friends and colleagues who descended upon him. From that point onward the story is theirs rather than his.

There was during the painful period a strong attempt made to analyze the quality of the pain. Initially it was so minimal that it could only be called an uncomfortable sensation; perhaps with a feeling of a slight emptiness or possibly minimal fullness in the chest. As this sensation built up to first mild and then severe pain, an attempt was made to analyze its character. At no time was it vice-like and at no time did it feel as though one were being blown up with air. At no time was it lancinating or sharp and the best description would be that of an intense ache with a slight burning quality. The location of the pain was initially confined to the retrosternal area, but as it increased in severity it spread across the middle three-fourths of the chest on both sides, and one could not say it was more marked on the left than on the right. There was never any pain in the back, and this was searched for carefully because of the thought of the possibility of a dissecting aneurysm. There was no radiation to the shoulders or wrists or forearm, but there was definite mild pain just above the olecranon process in both arms. No pain was felt in the jaws, and none above the very lowest level of the neck. Perhaps there was some discomfort in the suprasternal notch. It is of some interest to note that there was never, at any time, the slightest shock aside from the faintness that accompanied the vomiting and that passed off within a few minutes. The patient did not have his watch available but felt his pulse frequently; he was not conscious at any time of any arrhythmia and is certain that the pulse was consistently 70 or below even at the height of the pain. There was very pronounced sweating which began as the pain became severe and which necessitated repeated changing of pajamas.

As this case history is dictated, only a few hours less than one week after the episode, the events are still quite vivid in the mind of the patient. Since being awakened for the application of electrodes for monitoring and for possible pacing, which was about an hour after arrival at the hospital, the patient has experienced no pain of any kind whatever during the subsequent week. He has watched carefully for any manifestations of the shoulder-hand or pectoral secondary skeletal syndromes, and these have been completely absent.

The interpretation by the patient of the events above is

as follows: Since he has been leading a vigorous life characterized by more than the usual amounts of exercise for a man his age, and since he has deliberately tested himself with all-out exercise at reasonably frequent intervals, he is quite certain that there had been no pre-existing angina. Likewise, since during the subsequent week there has been not the slightest indication of angina after the infarctional pain stopped, it seems to the subject that either he does not have diffuse coronary disease or, if he does, it is unusually well compensated for by collateral circulation. The probable events are some roughening of one or more coronary branches without any significant degree of narrowing in terms of impaired blood flow prior to the episode. It seems highly probable that a thrombus formed rather acutely on a spot that was rough rather than narrow, and that the myocardial infarction was truly that of a coronary thrombosis, the thrombogenic factor being more important than the atherogenic factor. This may have a therapeutic implication in terms of the possibility of long-range anticoagulant therapy.

Some Observations on Having a Coronary* David E. Rogers, M.D.

I have just spent what is for me quite an unusual ten minutes. I have been looking at flowers. Obviously, I have seen flowers all of my life. In recent years, my wife's interest in plants has led me to learn more about them. But until now, I have never really appreciated quite how vivid their coloring is, or how intricate their design, or how exquisite the shaping of their petals and stamens and foliage, or just how delicately they are put together. I had never taken the time necessary just to indulge in them. I report that I have found these minutes most pleasurable.

That is the introduction. I hope it shows that I am enjoying life — indeed savoring it. But it is also a lead to something else. As a doctor who has spent much of his professional lifetime trying to listen very carefully to patients and to treat them appropriately, and then to teach others who are becoming doctors how to do it well, I now wish to try to describe a recent personal experience — to convey what one very common disease feels like “from the inside” when it starts.

The disease is myocardial infarction, the commonplace heart attack.

This peculiarly human disease probably appeared quite suddenly on the historical scene sometime toward the end of the nineteenth or the early part of the twentieth century. After its recognition, it rapidly zoomed to the number one position on the mortality hit list in much of the Western world. In the United States it reached its apogee in 1963.

Since then, it seems to have been becoming both less common and somewhat more benign.

I know what I have to say here will not add to anyone's understanding of this number one killer of American men of middle age. Nonetheless, pedagogical instincts are hard to control, and several young doctors who quizzed me about what it feels like suggested I try to put the sensations — not the pathology — in words while the experience is still vivid. I think they made this suggestion, in part, so that they could be spared yet further verbal details from me and get about their more pressing business. I did promise them I would try, however, so here goes.

I will omit all the details about what I was doing, or the prodrome (which was classic), but will simply try to describe the episode itself, for soon after its onset I knew precisely what was happening to me, and I had quite an amount of time to think about it.

I have often told medical students that most people I have queried who were having genuine cardiac pain seemed instinctively to wish to remain very quiet, even when their pain was not particularly severe. Thus, I have generally felt that when patients told me they had to keep “wiggling about” to find a comfortable position or were “writhing with pain” and the like, their chest pain was probably non-cardiac.

My own experience would certainly confirm this. After the first fifteen to twenty minutes, when the pain was waxing and waning, and I was pretending it was esophageal and was popping a few Tums and drinking a glass of milk, the sensation certainly told me just what it seems to have told other patients. I felt I must sit down *very, very* quietly. Although I did so, the pain became a steadily expanding, deep, penetrating ache, spreading from beneath midbreastbone, around the sides of my chest, up my neck into my lower jaw, and down the inner aspect of my left arm into my fourth and fifth fingers. It cycled a bit. Sometimes it seemed most dreadful in my chest, then in my jaw and lower teeth, then in my left arm. But it conveyed one clear message. What I felt from the outset and continued to feel through about two hours of what seemed absolutely intolerable pain was that if I remained *absolutely* immobile, not moving even an eyelash, perhaps it would let go of me. I would guess it took about ten to twelve minutes to build to maximal intensity, and there it stayed. During the entire period I sat absolutely still with my eyes closed, conscious of the fact that I was sweating profusely and that I probably looked very pale and lousy. Although my wife was bustling cheerfully about in the kitchen, not fifteen feet away, I said absolutely nothing, feeling that even moving my tongue or vocal chords was simply too much. I had no inclination to groan or cry out.

There was another aspect of the pain that is frequently alluded to by others. There was absolutely no doubt in my mind that I was about to die. As the pain remained, I simply wished exodus would go ahead and happen. The emotion I can recapture regarding this certainty was not one of great

*Copyright © 1986 by ALPHA OMEGA ALPHA HONOR MEDICAL SOCIETY, reprinted by permission from THE PHAROS, Volume 49, Number 3.

fear, but rather of anger mixed with sadness. I felt angry because this goddamned thing was happening to me, and because I knew that some things I had done — smoking for years, and handling some recent episodes of stress rather poorly — had provoked it. I was sad because I was not going to be able to say goodbye to anybody — particularly my family and close friends and colleagues — or tell them what they had meant to me.

The quality of the pain is as difficult for me to describe as it seems to have been for other observers over the last seventy-plus years. It was not the bright, or burning, or well-localized pain one feels with a cut, a puncture, or a burn, from which one instinctively and swiftly retreats. A very different set of nerve endings are involved. It was a dreadful, deep, nauseating ache. If you could multiply one hundred-fold the kind of ache in your arms you experience after working too long trying to screw a recalcitrant light bulb into a ceiling socket that is a little too high over your head for you to reach decently, you would be close. The stunt I tried many years ago — putting a blood pressure cuff on my own leg above the knee and blowing it up to occlude arterial circulation to feel the kind of pain that develops in one's calf — is yet closer. (At the time, I was trying to see if I could mimic heart pain.) What was exquisitely different about that experiment was that I could release the cuff when I felt I could not stand further intensity of pain. In this real instance, there was no such let up.

As to intensity, I keep wanting to use the word *unbearable*. Obviously, this word is not really appropriate, as I did manage somehow to bear the pain. But it was an absolutely, monstrously, awful sensation, and it was totally untouched by 20 or 30 or 40 milligrams of morphine, administered to me over the next two hours in the hospital. That morphine gave me so little relief has made me empathize deeply with the hundreds of patients with the same disease whom I have treated with this drug over the years.

So that is what it felt like. Now, let me add a few other comments about my treatment, which led to the nice ending that makes this introspection possible.

First, having a cardiac catheterization via the femoral artery and vein during an infarction is a piece of cake — almost no discomfort. Further, having frequent squirts of dye into one's coronary arteries, a procedure I could watch on a monitor, is totally painless. It did not improve my morale to see absolutely no dye going into my left anterior descending coronary artery, which appeared completely blocked, but I already knew that this was probably going to be the case, and all other arteries looked splendid.

One further episode was impressive and of profound relief to me. My cardiologist catheter artisans had maneuvered their catheter into the stump-like orifice of the left anterior descending coronary and had begun dripping in streptokinase (an ancient streptococcal enzyme that I had first used in crude form in 1950 to dissolve clots in patients' pleural spaces). Quite suddenly, and after only modest amounts of enzyme, I said — and I think these were some of my first

words after onset of the episode — "I think you've dissolved it; I've lost my pain." The cardiologists were quite surprised, but they shot in some more dye, which confirmed part of what I was saying. A thin threadlike squirt of dye could be seen going through a very tight centimeter-long obstruction close to the origin of the coronary vessel. But the whole artery below the block looked fat and filled. They continued to profuse the streptokinase, but five to ten minutes later I said, "And now it's clotted off again," for my pain had just then returned, in its original intensity. More pictures showed that this indeed was true — there was no more filling beyond the stump.

Then followed the use of the latest in modern medical miracle technologies. My physicians skillfully threaded a tiny wire through the obstruction, guided a collapsed balloon over it and positioned it within the obstruction. This procedure I watched on the monitor with fascination. Then they expanded the balloon, forcing arterial wall, clot, and athleroma outwards. Again, I experienced swift and blissful relief of pain. The cardiologists measured pressures, gradients, fooled around, and inflated the balloon again a few times over the next thirty to forty minutes to make sure the gradient had been eliminated and that a clot did not form again. I have been pain-free ever since, and subsequent pictures of the coronary have looked virtually normal.

Let me add just one other thing that my physicians did for me later, for I have felt, in retrospect, that it was a vital factor in speeding my return to full function. Although I had been agitating to get home, I now confess that I did have some feelings of apprehension about being discharged. Being hooked up to all that gadgetry makes one feel surprisingly dependent and fragile and emotionally uncertain about one's ability to function adequately outside of the hospital's technologic womb. Thus, I had doubts about how I would feel walking up the stairs or up the driveway, and the like.

But the night before discharging me, my cardiologists asked if I would like them to run a modified stress test on me before I left, and I agreed with enthusiasm. Consequently, the next morning they hooked me up, stuck me on the treadmill, and proceeded to work me until I thought I would drop. My legs were crying for relief, and I was puffing like an aging bull, but my electrocardiogram remained totally unchanged, my blood pressure behaved responsibly, and I had absolutely no chest pain. Afterwards, I felt that this test was perhaps the greatest gift they could have bestowed upon me as a going-away present. Although I was intellectually sure my heart was functioning splendidly, to have objective proof that it could handle vastly more effort than I was planning for it during the next month or so made me feel totally comfortable about cutting the umbilical cord, and striking out on my own again.

So: I have had an experience unheard of until very recently — that of knowing first-hand what having a massive myocardial infarction feels like, but without having the full-blown event actually occur, and without having to live with

its crippling aftermath. The residual myocardial damage looks modest and should repair rapidly. My coronaries now all resemble good-looking garden hoses, without obstruction. Perhaps of equal long-term significance — my priorities have been abruptly, but quite appropriately, reordered. Hence, my leisurely and pleasurable contemplation of the flowers.

My last observation: As we continue to struggle to make medical care less expensive without lousing it up, I am obviously going to be thinking hard about the implications of what I have just experienced. I would guess that within a very few years it may be viewed as close to medical malpractice to hospitalize a patient with an acute evolving myocardial infarction anywhere but in a hospital with a cardiac unit with catheterization, angioplasty, and backup surgical capabilities, unless such a unit is more than two hours away. That practice surely will not reduce acute costs.

As some of my vintage colleagues and I have since said to each other, we used to care for people like me by slugging them with morphine until their blood-starved heart muscle died and their pain stopped. We would watch fairly helplessly when they developed fatal arrhythmias. We agonized about giving them digitalis when they went into congestive heart failure because of its propensity to produce fatal arrhythmias. Our patients stayed in the hospital for a minimum of six weeks (I stayed ten days), and we created a dreadful number of cardiac cripples, who never worked productively again.

One of my colleagues is fond of saying, "Sometimes the best medicine is the most expensive medicine." All I can say in this instance is, "Amen," but over the long haul, it seems pretty "cost beneficial" to me!

Comment

Joseph C. Greenfield, Jr., M.D.

The personal clinical descriptions of the symptoms during acute myocardial infarction by Drs. Harrison and Rogers are lucid, classic and require little comment. However, a word of caution is indicated regarding the avoidance of

activity as a sign of acute myocardial infarction. In spite of Dr. Rogers's experience many patients with acute myocardial infarction continue to be active. In fact, I vividly remember one patient, a long-distance runner who ran five miles with chest pain.

The 20-year-old time lapse between the treatment given to Dr. Harrison and that given to Dr. Rogers illustrates the dramatic changes which have occurred in our understanding of the pathogenesis and the therapy of acute myocardial infarction. Dr. Harrison showed considerable insight in realizing that the infarction resulted from an acute thrombus formation. At that time the role of thrombus formation was quite controversial. In Dr. Rogers's case the treatment of the thrombus with a thrombolytic agent and then angioplasty is current state-of-the-art management and undoubtedly improved his short- and long-term prognosis.

There are many questions that remain unanswered in defining the appropriate therapy of acute myocardial infarction, but the guiding principle clearly will be that reperfusion, if it can be affected in a reasonable period of time, is mandatory. At present, 60% to 70% of patients suffering acute myocardial infarction can be reperfused acutely with thrombolytic therapy. This obviously leaves a significant number in which an acute mechanical intervention must take place or reperfusion will not occur. The current research goals are (1) to find more efficacious thrombolytic agents, and (2) to define which patients have reperfused and do not need an emergency catheterization.

Until more precise data are available, unless there is a major contraindication (i.e., other life-threatening diseases, advanced age, or a recent bleeding diathesis), all patients with acute myocardial infarction who can be treated within six hours of the onset of pain should receive thrombolytic therapy and an emergency cardiac catheterization. In my opinion, the long-term survival results¹ with this approach are so impressive that a more conservative approach does not appear to be warranted. ■

Reference

- 1 Stack RS, Califf RM, Hinohara R, et al. Survival and cardiac event rates in the first year after emergency coronary angioplasty for acute myocardial infarction. *JACC* 1988 (in press).

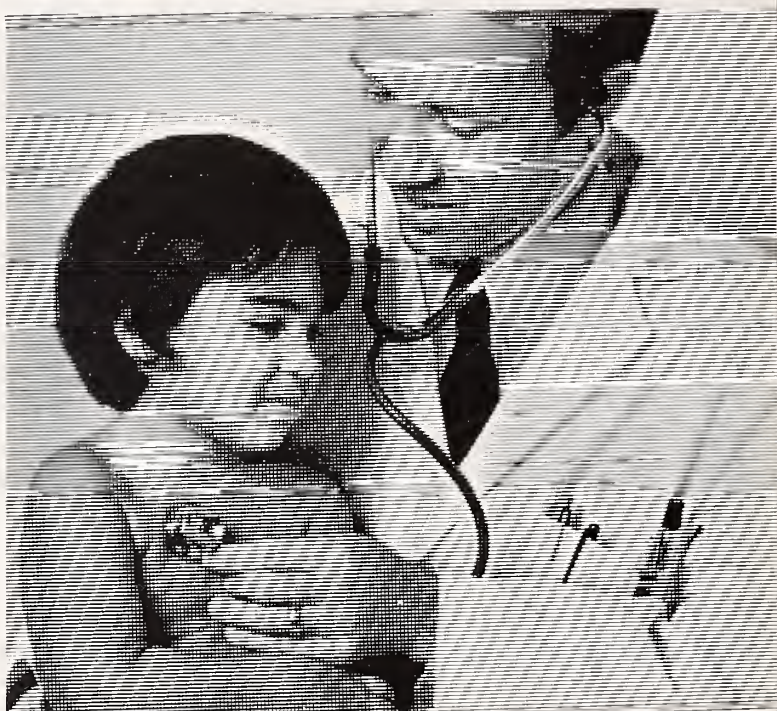
FAMILY PRACTICE. A REWARDING EXPERIENCE IN ARMY MEDICINE.

The Army has more soldiers with families than ever before. So when you join the Army Medical Team as a Family Practitioner, expect to spend most of your time serving not only soldiers, but their spouses and children, too. What's more, you won't have to worry about the paperwork, malpractice insurance premiums, or the costs incurred in running a private practice.

Expect to work in a highly challenging and varied environment. Working with a team of highly trained professionals, you can receive assignments almost anywhere in the United States; the Army offers the largest system of comprehensive health care in the nation. Family Practice positions are also available overseas, in Germany and Korea.

The benefits package available to Army Family Practitioners is quite attractive. You'll receive 30 days paid vacation, opportunities to continue education and conduct research, a chance to travel, and reasonable work hours.

All in all, your Army Family Practice will be a rewarding experience. Not only for you, but for Army families, too. Talk to your Army Medical Department Counselor for more information.



**Army Health Care Team
Federal Office Bld.
400 North 8th St.
P.O. Box 10167
Richmond, VA 23240-0167
(804) 771-2354**

ARMY MEDICINE. BE ALL YOU CAN BE.



The World's Most Popular K^{*}

Slow-K[®]
potassium chloride
slow-release tablets
8 mEq (600 mg)

It means "dependability" in almost any language

*Based on worldwide sales data on file, CIBA Pharmaceutical Company.
Capsule or tablet slow-release potassium chloride preparations should be reserved for patients who cannot tolerate, refuse to take, or have compliance problems with liquid or effervescent potassium preparations because of reports of intestinal and gastric ulceration and bleeding with slow-release KCl preparations.

Before prescribing, please consult Brief Prescribing Information on next page.

C I B A

The World's Most Popular K

For good reasons

- ☐ **It works**—a 12-year record of efficacy¹
- ☐ **It's safe**—unsurpassed by any other KCl tablet or capsule^{2*}
- ☐ **It's acceptable vs liquids**—greater palatability, fewer GI complaints, lower incidence of nausea²
- ☐ **It's comparable to 10 mEq**—in low-dosage supplementation^{3†}
- ☐ **It's economical**—less expensive than all other leading KCl slow-release supplements on a per tablet cost to the patient¹



Slow-K[®]
potassium chloride
slow-release tablets 8 mEq (600 mg)

For patients who can't or won't tolerate liquid KCl.

*The most common adverse reactions to potassium salts are gastrointestinal side effects.

†Pooled mean serum potassium following oral administration of 30 mEq K-Tab compared to 24 mEq Slow-K in diuretic-treated hypertensives (n = 20) over 8 weeks.

C I B A

References: 1. Data on file. CIBA Pharmaceutical Company. 2. Skoutakis VA, Acchiardo SR, Wojciechowski NJ, et al: Liquid and solid potassium chloride: Bioavailability and safety. *Pharmacotherapy* 1980;4(6):392-397. 3. Skoutakis VA, Carter CA, Acchiardo SR: Therapeutic assessment of Slow-K and K-Tab potassium chloride formulations in hypertensive patients treated with thiazide diuretics. *Drug Intell Clin Pharm* 1987;21:436-440.

Slow-K[®]
potassium chloride USP
Slow-Release Tablets
8 mEq (600 mg)

BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION SEE PACKAGE INSERT)

INDICATIONS AND USAGE

BECAUSE OF REPORTS OF INTESTINAL AND GASTRIC ULCERATION AND BLEEDING WITH SLOW-RELEASE POTASSIUM CHLORIDE PREPARATIONS, THESE DRUGS SHOULD BE RESERVED FOR THOSE PATIENTS WHO CANNOT TOLERATE OR REFUSE TO TAKE LIQUID OR EFFERVESCENT POTASSIUM PREPARATIONS OR FOR PATIENTS IN WHOM THERE IS A PROBLEM OF COMPLIANCE WITH THESE PREPARATIONS.

1. For therapeutic use in patients with hypokalemia with or without metabolic alkalosis, in digitalis intoxication and in patients with hypokalemic familial periodic paralysis.

2. For prevention of potassium depletion when the dietary intake of potassium is inadequate in the following conditions: patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis with ascites, states of aldosterone excess with normal renal function; potassium-losing nephropathy; and certain diarrheal states.

3. The use of potassium salts in patients receiving diuretics for uncomplicated essential hypertension is often unnecessary when such patients have a normal dietary pattern. Serum potassium should be checked periodically, however, and if hypokalemia occurs, dietary supplementation with potassium-containing foods may be adequate to control milder cases. In more severe cases supplementation with potassium salts may be indicated.

CONTRAINDICATIONS

Potassium supplements are contraindicated in patients with hyperkalemia, since a further increase in serum potassium concentration in such patients can produce cardiac arrest. Hyperkalemia may complicate any of the following conditions: chronic renal failure, systemic acidosis such as diabetic acidosis, acute dehydration, extensive tissue breakdown as in severe burns, adrenal insufficiency, or the administration of a potassium-sparing diuretic (e.g., spironolactone, triamterene) (see OVERDOSAGE).

All solid dosage forms of potassium supplements are contraindicated in any patient in whom there is cause for arrest or delay in tablet passage through the gastrointestinal tract. In these instances, potassium supplementation should be with a liquid preparation. Wax-matrix potassium chloride preparations have produced esophageal ulceration in certain cardiac patients with esophageal compression due to an enlarged left atrium.

WARNINGS

Hyperkalemia (See OVERDOSAGE).

In patients with impaired mechanisms for excreting potassium, the administration of potassium salts can produce hyperkalemia and cardiac arrest. This occurs most commonly in patients given potassium by the intravenous route but may also occur in patients given potassium orally. Potentially fatal hyperkalemia can develop rapidly and be asymptomatic.

The use of potassium salts in patients with chronic renal disease, or any other condition which impairs potassium excretion, requires particularly careful monitoring of the serum potassium concentration and appropriate dosage adjustment.

Interaction With Potassium-Sparing Diuretics

Hypokalemia should not be treated by the concomitant administration of potassium salts and a potassium-sparing diuretic (e.g., spironolactone or triamterene), since the simultaneous administration of these agents can produce severe hyperkalemia.

Gastrointestinal Lesions

Potassium chloride tablets have produced stenotic and/or ulcerative lesions of the small bowel and deaths. These lesions are caused by a high localized concentration of potassium ion in the region of a rapidly dissolving tablet, which injures the bowel wall and thereby produces obstruction, hemorrhage, or perforation. Slow-K is a wax-matrix tablet formulated to provide a controlled rate of release of potassium chloride and thus to minimize the possibility of a high local concentration of potassium ion near the bowel wall. While the reported frequency of small-bowel lesions is much less with wax-matrix tablets (less than one per 100,000 patient-years) than with enteric-coated potassium chloride tablets (40-50 per 100,000 patient-years) cases associated with wax-matrix tablets have been reported both in foreign countries and in the United States. In addition, perhaps because the wax-matrix preparations are not enteric-coated and release potassium in the stomach, there have been reports of upper gastrointestinal bleeding associated with these products. The total number of gastrointestinal lesions remains approximately one per 100,000 patient-years. Slow-K should be discontinued immediately and the possibility of bowel obstruction or perforation considered if severe vomiting, abdominal pain, distention, or gastrointestinal bleeding occurs.

Metabolic Acidosis

Hypokalemia in patients with metabolic acidosis should be treated with an alkalinizing potassium salt such as potassium bicarbonate, potassium citrate, or potassium acetate.

PRECAUTIONS

General:

The diagnosis of potassium depletion is ordinarily made by demonstrating hypokalemia in a patient with a clinical history suggesting some cause for potassium depletion. In interpreting the serum potassium level, the physician should bear in mind that acute alkalosis *per se* can produce hypokalemia in the absence of a deficit in total body potassium, while acute acidosis *per se* can increase the serum potassium concentration into the normal range even in the presence of a reduced total body potassium.

Information for Patients

Physicians should consider reminding the patient of the following:

To take each dose without crushing, chewing, or sucking the tablets.

To take this medicine only as directed. This is especially important if the patient is also taking both diuretics and digitalis preparations.

To check with the physician if there is trouble swallowing tablets or if the tablets seem to stick in the throat.

To check with the doctor at once if tarry stools or other evidence of gastrointestinal bleeding is noticed.

Laboratory Tests

Regular serum potassium determinations are recommended. In addition, during the treatment of potassium depletion, careful attention should be paid to acid-base balance, other serum electrolyte levels, the electrocardiogram, and the clinical status of the patient, particularly in the presence of cardiac disease, renal disease, or acidosis.

Drug Interactions

Potassium-sparing diuretics: see WARNINGS.

Carcinogenesis, Mutagenesis, Impairment of Fertility

Long-term carcinogenicity studies in animals have not been performed.

Pregnancy Category C

Animal reproduction studies have not been conducted with Slow-K. It is also not known whether Slow-K can cause fetal harm when administered to a pregnant woman or can affect reproductive capacity. Slow-K should be given to a pregnant woman only if clearly needed.

Nursing Mothers

The normal potassium ion content of human milk is about 13 mEq/L. It is not known if Slow-K has an effect on this content. Caution should be exercised when Slow-K is administered to a nursing woman.

Pediatric Use

Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

One of the most severe adverse effects is hyperkalemia (see CONTRAINDICATIONS, WARNINGS, and OVERDOSAGE). There also have been reports of upper and lower gastrointestinal conditions including obstruction, bleeding, ulceration, and perforation (see CONTRAINDICATIONS and WARNINGS); other factors known to be associated with such conditions were present in many of these patients.

The most common adverse reactions to oral potassium salts are nausea, vomiting, abdominal discomfort, and diarrhea. These symptoms are due to irritation of the gastrointestinal tract and are best managed by taking the dose with meals or reducing the dose.

Skin rash has been reported rarely.

OVERDOSAGE

The administration of oral potassium salts to persons with normal excretory mechanisms for potassium rarely causes serious hyperkalemia. However, if excretory mechanisms are impaired or if potassium is administered too rapidly intravenously, potentially fatal hyperkalemia can result (see CONTRAINDICATIONS and WARNINGS). It is important to recognize that hyperkalemia is usually asymptomatic and may be manifested only by an increased serum potassium concentration (6.5-8.0 mEq/L) and characteristic electrocardiographic changes (peaking of T waves, loss of P wave, depression of S-T segment, and prolongation of the Q-T interval). Late manifestations include muscle paralysis and cardiovascular collapse from cardiac arrest (9-12 mEq/L).

Treatment measures for hyperkalemia include the following: (1) elimination of foods and medications containing potassium and of potassium-sparing diuretics; (2) intravenous administration of 300-500 ml/hr of 10% dextrose solution containing 10-20 units of insulin per 1,000 ml; (3) correction of acidosis, if present, with intravenous sodium bicarbonate; (4) use of exchange resins, hemodialysis, or peritoneal dialysis.

In treating hyperkalemia in patients who have been stabilized on digitalis, too rapid a lowering of the serum potassium concentration can produce digitalis toxicity.

DOSEAGE AND ADMINISTRATION

The usual dietary intake of potassium by the average adult is 40-80 mEq per day. Potassium depletion sufficient to cause hypokalemia usually requires the loss of 200 or more mEq of potassium from the total body store. Dosage must be adjusted to the individual needs of each patient but is typically in the range of 20 mEq per day for the prevention of hypokalemia to 40-100 mEq or more per day for the treatment of potassium depletion. Large numbers of tablets should be given in divided doses.

Note: Slow-K slow-release tablets must be swallowed whole and never crushed, chewed, or sucked.

HOW SUPPLIED

Tablets—600 mg of potassium chloride (equivalent to 8 mEq) round, buff colored, sugar-coated (imprinted Slow-K)

Bottles of 100 NDC 0083-0165-30

Bottles of 1000 NDC 0083-0165-40

Consumer Pack—One Unit

12 Bottles—100 tablets each NDC 0083-0165-65

Accu-Pak[®] Unit Dose (Blister pack)

Box of 100 (strips of 10) NDC 0083-0165-32

Do not store above 86°F (30°C). Protect from moisture. Protect from light.

Dispense in tight, light-resistant container (USP).

Dist. by:

CIBA Pharmaceutical Company
Division of CIBA-GEIGY Corporation
Summit, New Jersey 07901

C87-31 (Rev. 8/87)

C I B A

128-3568-A

Charcot's Joint:

A chronic, progressive, degenerative arthropathy resulting from the loss of proprioceptive and pain sensation in the affected joint. Today, it most commonly occurs in the knees and feet (photo) of patients with peripheral diabetic neuropathy.



Jean-Martin Charcot (1825-1893) even before his death was considered by many the “Master of Neurology.” Using the neglected facilities of the Salpetriere Hospital in Paris, Charcot described, defined and shed new light on a variety of neurologic disorders. Tabes dorsalis, with its associated locomotor ataxia and arthropathy; amyotrophic lateral sclerosis (Charcot’s disease); multiple sclerosis; Parkinson’s disease; and hysteria, with its associated paralysis — all were linked to Charcot and the Salpetriere.

Charcot’s fame grew from his brilliant elucidation and presentation of these neurologic disorders during his Tuesday and Friday “lessons” at the Salpetriere, clinicians from around the world in attendance. One observer commented that the lectures “left on the mind . . . a series of mental pictures of patients and of lessons which no amount of private study could possibly produce. It taught men so that they could not fail to remember.” Not surprisingly, the prominent neurologists of the time — Joseph Babinski, Gilles de la Tourette, Charles Bouchard, Pierre Marie, Moritz Romberg, Sigmund Freud — all had studied under Charcot.

Because of his fame, Charcot became consulting physician to the prominent — the Czar of Russia, the Emperor of Brazil, the Queen of Spain. From his professional fees (and through his marriage), Charcot amassed a small fortune. He was known for lavish Tuesday evening parties, held at his gothic mansion and attended by clinicians, artists, and foreign dignitaries.

A “larger than life” reputation was evident in Charcot’s clinic as well. Dr. Lubinov, a close friend, described the effect of his presence on a young woman, paralyzed for years: “Charcot bade her stand up and walk, which she did under the astounded eyes of her parents and the Mother Superior . . .” Charcot embodied the French ideal of a *prince de la science*.

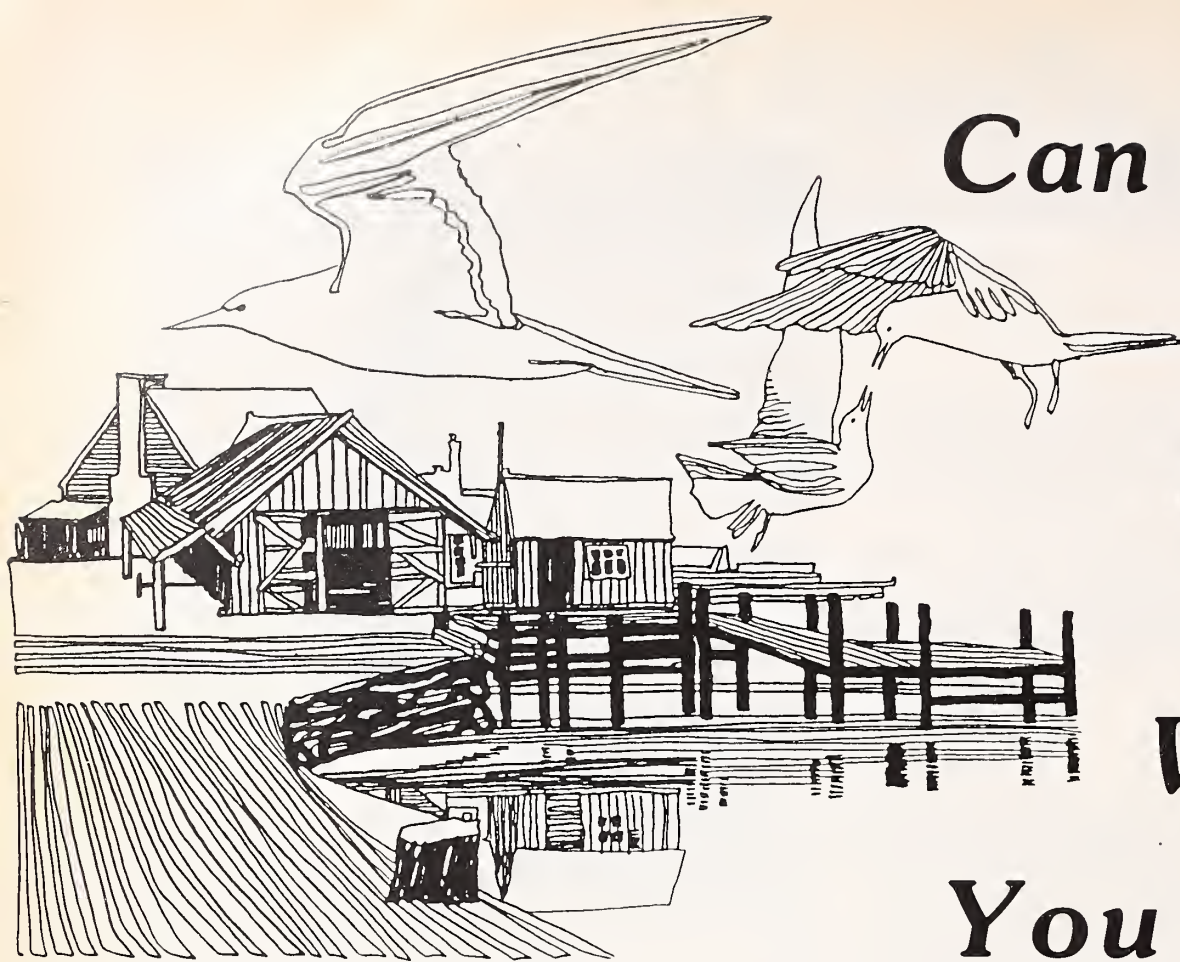
The brilliance of Charcot’s neurologic reign sharply contrasts with his lackluster childhood and early medical career. Born to a Parisian carriage builder, Charcot was described as a shy, aloof child with a speech impediment. As a medical *interne*, he was assigned to the “medical poorhouse” of

Paris, the Salpetriere. Built by Louis XIII as an arsenal (thus its literal name “saltpeter”), its history encapsulated the color and turbulence of pre- and post-revolutionary France. Cardinal Mazarin, St. Vincent de Paul, Manon Lescaut, and prisoners of the Revolution — all had walked the hallways and courtyards of the Salpetriere. When Charcot arrived in 1848 he found a huge asylum of 5,000 destitute women, mainly prostitutes, beggars and the insane.

Although he spent four years surrounded by clinical problems, Charcot’s interest was not yet fully engaged, and he left, in 1852, to become the personal physician to a rich French banker. He traveled to Italy, where he spent more time at the art museums than in the medical wards. Returning to Paris in 1860, he had difficulties with his oral examinations, barely passing his second attempt.

In 1862 Charcot returned to the Salpetriere as attending physician and professor. He had purposefully chosen his arena, realizing, unlike his colleagues, its potential for the study of neurologic disease. He set out on the Herculean task of interviewing and examining the patients and reviewing the corresponding pathological material obtained later. His descriptions and definitions of neurologic disorders are as clear and accurate today as when he articulated them. His clinical and political influence transformed the Salpetriere into “an internationally renowned school of neurology” — an impressive metamorphosis for two medical misfits.

Charcot’s ability to arrange clinical information into patterns of disease stemmed from his interest in art. As a youth, he wavered between art and medicine as a career. Even after Charcot, the physician, chose medicine, Charcot, the artist, was ever watchful. One of his students said his “ability to discern in a country scene or in a human body certain essential contours, to perceive instantly a pattern and to be able to isolate from this pattern the elements necessary for its expression — and to do it exactly in spite of all irrelevant details — this is the faculty that Charcot possessed.” Within the walls of the Salpetriere, the Master found his studio and his gallery.



**Can You Find
Time To
Unwind?
We Think
You Should!**

And, what better place to relax than the beach! We can supply the sun, the breeze, and the beach, all we need is you! So what are you waiting for? Come see why they call Emerald Isle "the Jewel of the Crystal Coast."

*** VERY SPECIAL PROPERTIES ***

Oceanfront Amenities! This beautiful duplex half was created for comfort. The 4 BRM, 3 Bath floor plan is very functional, the amenities excellent. Custom stained glass windows, cedar ceilings, covered cabana at the beach, landscaped with sprinkler system, and Andersen windows and doors.

A new oceanfront home! This 5 BRM, 3½ Bath, luxury has super detail and a floorplan that is easy to customize. Your choice of colors and carpeting! Call for details.



This custom built Oceanfront home was built with an eye for detail! Created by a builder for his family, this home sports 4 BRMS, and 3 Baths. Everyone will appreciate the open kitchen, marble hearth, ceramic baths, Whirlpool tub, full-size bar, and much, much more! Over 1700 feet of decking!

For over twenty-five years we have been finding and building "dream homes". We currently have over 50 select properties available for you. For a complete list please contact us at:

Coast Realty and Construction Company
7703 Emerald Drive
Emerald Isle, North Carolina 28594
(919) 354-3700

All inquiries will be held in strictest confidence.

Fluoxetine

A New Antidepressant

Timothy E. Poe, PharmD.

Fluoxetine (Prozac[®]), the newest antidepressant marketed in the United States, is chemically and pharmacologically distinct from other currently available tricyclic and second-generation antidepressants. Fluoxetine appears to be as effective as tricyclic antidepressants with the potential for fewer, but different, side effects. One difference of potential importance is the lack of weight gain. In fact weight loss has been reported during therapy for depression.¹

Fluoxetine is a bicyclic antidepressant which specifically inhibits the reuptake of serotonin and exerts few other direct pharmacological effects. Although most clinically effective antidepressants down-regulate postsynaptic beta-adrenergic receptors, fluoxetine does not appear to do so. However, like other antidepressants, fluoxetine does appear to cause up-regulation of GABA B receptors in the frontal lobe of rats.¹

Fluoxetine is well absorbed from the gastrointestinal tract and absorption is not influenced by the presence of food.² Fluoxetine binds extensively to plasma proteins, which at least accounts for its large apparent volume of distribution. Elimination of fluoxetine is by extensive metabolism in the liver. It is demethylated hepatically to norfluoxetine which is also active. The half-life of the parent drug is reported to be one to three days, while norfluoxetine has an elimination half-life of seven days. However, the plasma half-life of fluoxetine increases with long-term administration, from 1.9 to 5.1 days in subjects given 60 mg/day.¹ Only about 2.5% of fluoxetine is excreted unchanged by the kidney. The half-life in elderly patients does not appear to be different from that in younger patients.³

Trials

Clinical trials have shown fluoxetine to be effective in the treatment of depression when compared to imipramine, ami-

triptyline, and doxepin. However, fluoxetine did not appear to have increased efficacy over the other agents.^{1,3} Patients with atypical depression (Quitkin-Klein criteria and global rating), a longer duration of the current depressive episode, history of poor response to prior treatment, and a history of chronic episodic or chronic depression appeared to benefit most from fluoxetine.^{1,4} It is also interesting that in one fixed-dose study in patients with mild major depression fluoxetine was no more effective than placebo. It appears that the onset of action is similar to other antidepressants, although one study showed the onset of action to occur within one week. Others have shown the onset to occur in two to three weeks.³

Although fluoxetine appears to be well tolerated in the dosage range of 20 to 80 mg daily, one review of 1,034 patients noted that approximately 14% discontinued therapy due to adverse reactions.¹ The most common side effects are nausea and anxiety. Others include insomnia, nervousness, diarrhea, dry mouth, headache, tremor, drowsiness, asthenia, and dizziness. Because of the lack of effect on norepinephrine or acetylcholine function, fluoxetine has minimal to no cardiovascular and anticholinergic side effects. Weight loss is also a frequent side effect but may be a potential advantage when compared to other antidepressants which cause weight gain.^{1,3,5} It should be noted that weight loss was small (1.12 kg) and was temporary, reverting to baseline values within six months.³

Drug Interactions

There are limited data regarding drug interactions with fluoxetine. Most studies use single doses of fluoxetine administered to animals or human volunteers. Although animal studies have shown fluoxetine to inhibit the metabolism of hexobarbital and warfarin, similar studies in humans have not shown the same results. One trial of fluoxetine with L-tryptophan in five patients resulted in increased agitation in all five and restlessness in three patients. Symptoms disappeared when the L-tryptophan was discontinued.^{1,3} As with many new drugs, further study will be required to

From Department of Family Medicine, Bowman Gray School of Medicine, Wake Forest University; and Pharmacy Education Director, Northwest Area Health Education Center, 300 S. Hawthorne Rd., Winston-Salem 27103; and School of Pharmacy, University of North Carolina, Chapel Hill 27514.

determine the possibility of drug interactions with long-term administration.

Safety

The safety of fluoxetine in pregnancy has not been established. Animal studies have shown no deleterious effects and the drug has been categorized as pregnancy category B. The degree of excretion of the drug in breast milk is also unknown. In addition, the use of this agent in children has not been approved.

Dose

Effective doses of fluoxetine have ranged from 20 mg to 80 mg daily, given once a day (in the morning) or in divided doses twice a day (morning and noon).⁵ It appears that 20 mg daily is as effective in most patients as higher doses and results in fewer adverse effects.^{1,3} Dosage should be initiated with 20 mg/day and can be titrated in 20 mg/day increments to a maximum of 80 mg daily, if clinical improvement is not seen after several weeks.⁵

Fluoxetine appears to be an effective antidepressant; however, no more effective than other antidepressants. This drug does appear to offer some advantage to patients who experience side effects to older agents, such as anticholinergic or cardiovascular side effects. Fluoxetine is marketed as Prozac[®] (20 mg capsules) by Dista Products, a division of Eli Lilly & Company. The average wholesale price (AWP)

is \$132 per 100 capsules. Price comparisons with other antidepressants will of course depend on the dosages used. Elavil[®] 75mg is \$58.73 per 100 tablets. If one compares 150 mg/day Elavil[®] to 20 mg/day Prozac[®], the difference is about \$4.37/month. However, generic brands of amitriptyline are much less expensive. ■

Acknowledgment

This publication was prepared in association with the University of North Carolina Area Health Education Center Program.

References

- 1 Sommi RW, Crismon ML, Bowden CL. A serotonin-specific, second-generation antidepressant. *Pharmacotherapy* 1987;7:1-15.
- 2 Lemberger L, Bergstrom RF, Wolen RL, et al. Fluoxetine: clinical pharmacology and physiologic disposition. *J Clin Psychiatry* 1985;46:14-9.
- 3 Benfield P, Heel RC, Lewis SP. Fluoxetine: a review of its pharmacodynamic and pharmacokinetic properties, and therapeutic efficacy in depressive illness. *Drugs* 1986;32:481-508.
- 4 Reimherr FW, Wood DR, Byerley B. Characteristics of responders to fluoxetine. *Psychopharmacol Bull* 1984;40:70-2.
- 5 Package Insert. Dista Products Company, Division of Eli Lilly and Company, Indianapolis, IN, December 1987.

AIM HIGH

YOU CAN KEEP THEM IN BALANCE— YOUR FAMILY LIFE AND YOUR MEDICAL PRACTICE.



We'd like to help you spend more time with your family yet receive professional satisfaction from your medical practice. As a member of the Air Force health care team, you'll be able to participate in our group practice concept which will free you of most administrative duties.

Air Force benefits are also very attractive. You and your family will enjoy 30 days of vacation with pay each year plus many more Air Force advantages. Call

CAPT CHUCK HELVEY

919-850-9549

STATION-TO-STATION COLLECT



Edward C. Halperin, M.D., Book Review Editor

***A World Unsuspected: Portraits of Southern Childhood*, edited and with an introduction by Alex Harris. Chapel Hill: University of North Carolina Press, 1987 (\$16.95).**

Reviewed by Harold J. Harris, M.D., Durham.

This is a unique book, consisting of candid memoirs by eleven diverse Southern authors as evoked by their family album photos. The concept came from Alex Harris, distinguished photographer and director of the Center for Documentary Photography at Duke University. The book evokes in the reader memories, mostly pleasant, of his or her childhood. There were also unpleasant, painful memories of rejections by rogues and alcoholics to go along with the loving memories of angelic family members and friends. While the locales are mostly southern, the experiences and memories recounted are universal so that readers in the rest of the United States will enjoy the book. The authors are a diverse group, coming from financially rich and poor families, and represent a broad spectrum of cultural backgrounds. Some are Pulitzer Prize winners and others are relatively unknown outside the South, but all obviously put their heart and soul into the stories of their childhood.

Some of the pictures are what all of us have — candid or posed amateur snapshots — while others were made by professional photographers. All beautifully stimulated memories that could be shared with the readers.

The book can be enjoyed at several levels. First, at the manifest level for the pleasure of "living" the experiences with the author, as well as just enjoying delightful prose. Then, at a barely subconscious level, the sensing of the tension and struggles of each author's coping attempts. And, finally, at a more deeply unconscious level, becoming aware of the author's psychological motivations, e.g., competing with sibs for parental affection. While we all enjoy fiction and biography by identifying with the characters, this book is special because it immediately puts one in touch with the author's childhood memories and perceptions. This leads inevitably to the reader's experiencing recall of his or her own childhood. For me, this resulted in pleasant memories of early and middle childhood experiences, memories that carried over into a period of euphoria for several days.

It is difficult to do justice to all of the authors because of limited space, but certain highlights stand out.

Sheila Bosworth's "Didn't Mean Goodbye" is notable for the detailed narrative of the interaction between her

influential grandmother and her epileptic Uncle Jamie. The clarity of the details recalled is amazing. You feel like you are *there!* And then to feel the grief for the dead uncle, unresolved until the photo is recalled!

Robb Forman Dew's "The Power and the Glory" recounts the dramatic change in her personality at age 14. The impact on her life of segregation as well as of an alcoholic physician father is poignant. Such feelings are rarely voiced by the children of alcoholic parents except in professional counseling. Her last paragraph is outstanding, particularly the first sentence, "I don't believe that I have ever really felt that I was native of any place."

Barry Hannah's "Your Own Beautiful Lie" is an upbeat account of a boy's idealization of a maternal uncle, Bootsy, who died as an aviator in the war but lived on in Hannah's memory. The influence on the boy's personality is depicted clearly in his preoccupation with aggressive themes.

James Alan McPherson's "Going Up to Atlanta" is a wonderful narrative of a teenager trying to cope with growing up in the midst of blatant racial prejudice. The prejudice affected his father most overtly, resulting in his becoming a "cheater and swindler" (and also an alcoholic) and, secondarily, the author, who took refuge in reading comic books. There are clear recollections of family members as well as others in the community, drawn so skillfully that they almost walk out of the pages. McPherson closes by stating, "like all permanent exiles, I have learned to be at home inside myself."

Bobbie Ann Mason's "Reaching the Stars" is an account of the transformation of a shy teenage girl who becomes a "fifties groupie" as the result of becoming very active in the fan club of a Kentucky vocal group, The Hilltoppers. The many photos are a solid foundation for the author's narrative of how her life revolved around the group. "My function was to promote their fame, so that the glow would rub off on me, like the luminescent stuff from lightening bugs."

T.R. Pearson's "When We Used to Go Where We Went" shares some experiences from a quite different sociocultural background. The family would spend two weeks each summer at the beach house of his wealthy aunt, Miss Edith. The account of the two-car caravan is in itself excellent, but the nuances of family interactions are heartwarmingly honest. The nearly "stream-of-consciousness" prose was particularly effective in developing the aura of that special vacation time.

The flavor of Padgett Powell's "Hitting Back" is seen in his first sentence: "One's personal history is ordered

From the Division of Radiation Oncology, Box 3085, Duke University Medical Center, Durham 27710.

precisely as a drawer of family snapshots, i.e., it is NOT ordered, it is lost, it is illogically duplicate — several copies of insignificant photos (dull days) while the big moments, the dear ones, are absent and go forever underexposed.” Powell shares his memories of frightening episodes with a threatening aunt and an equally threatening father. This is balanced by the warm memories of his grandmother, who, among other things, outwitted federal agents trying to raid a bootlegging operation run by family friends.

“A Secret You Can’t Break Free” is Dave Smith’s poignant account of some of his inner thoughts and feelings, particularly as related to the death first of his father and later of his mother. He tells us:

We are all trying to live sufficiently long to see the self come true. We invent selves, we prance and pose and dream and labor, confirming what we might be by what others think we are and by what we see we have been. The pictures a family takes of itself, of its members, are only the images of its dream selves. But that dreaming is the truth of the family as sure as the stories given from generation to generation.

This could be the theme of the entire book.

Ellease Southerland’s “I Got A Horn, You Got A Horn” is a fascinating narrative of being brought up in a musical family — of 15 members! The family tradition of singing

together and playing various musical instruments seemed to be the glue that knit them together. The descriptions are so carefully drawn that you have the feeling “you are there.” In reaction to her mother’s untimely death, she wrote, “before too late, I needed to record my heart’s response to danger, love, and joy.”

The final section, Al Young’s “Unripened Light,” is one of the best in the book. His is a very powerful story of carrying a much-too-big watermelon home to prove himself, only to face a hostile rejection by his beloved grandfather who said, “This boy will never amount to the salt in his bread.” Apparently this affected Young’s life for years until he received some help to be able to forgive that hostile act. Less obvious, but equally important, was having to cope with the prejudice and poverty that existed during the 40s and 50s.

It is difficult to do justice to a book that has such a diverse treasure of riches between its covers. I feel that I know each and every one of the authors and could talk with them comfortably as with an old friend. The book should be read for the sheer pleasure it gives directly, but also because I feel it will make each of us feel better about ourselves. I plan to give the book to relatives and friends, knowing that it is a gift that will be welcomed as a very personal gesture. One could also teach a course on early childhood development with this as the sourcebook. ■

Skin Cancer

Cancer of the skin is the most common of all cancers. Repeated overexposure to the ultraviolet rays of the sun, such as is experienced while sunbathing, is the chief cause in most of the over 300,000 new cases that occur each year.

There are three main types, classified according to the cells involved — basal cell, squamous cell and melanoma. With the exception of malignant melanoma, the overall cure rate for skin cancer is over 90%. Malignant melanoma, however, claimed more than 170 lives in North Carolina during 1980.

You should be alert to any unusual skin condition and have it checked by a physician, says the North Carolina Medical Society. This is especially important in case of a change in the size or color of an existing mole or other darkly pigmented growth. A mole that begins to change rapidly should be examined by a medical doctor promptly.

The danger signals include changes in:

- 1 color — especially red, white, and blue; sudden darkening, mottled shades of brown and black
- 2 diameter — especially development of irregular margins
- 3 outline — especially development of irregular margins
- 4 surface characteristics — especially persistent itching
- 5 shape — especially irregular elevation from previously flat condition
- 6 surrounding skin — especially “leaking” of pigment from the lesion into surrounding tissue or pigmented “satellite” lesions

A tan is not healthy; it means your skin has been damaged. You can limit your exposure to strong sunlight and reduce your chances of developing skin cancer by wearing protective clothing and by using sunscreen or sunblock lotions with a Sun Protection Factor (SPF) of at least 10.

—North Carolina Medical Society

FOR ALCOHOLISM AND CHEMICAL
DEPENDENCY

SOMETIMES STAYING NEAR

**HOME
SWEET
HOME**

Offering
EXECUTIVE
RECOVERY
MANAGEMENT
Program

MAKES

**GOOD
CLINICAL
SENSE**

P.O. BOX 240197
1715 SHARON ROAD WEST
CHARLOTTE, NC 28224
704/554-8373

JCAHO Accredited
Member NAATP
Member NCHA

**Charlotte
Treatment
Center** 
IS AMETHYST *

JACK E. HARVILLE
EXECUTIVE DIRECTOR

***Amethyst - from the Greek: NOT DRUNKEN**

A Picture Is Worth A Thousand Words? Not Always...

Some Plain Talk on Physician Dispensing

Q. What is Physician Dispensing?

A. It is the resurgence of a time honored service that once included all doctors. It is that service that can save your patients' time and allow you to conveniently dispense the prescriptions you write in your own office. In short Physician Dispensing combines income enhancement with increased patient convenience.

Q. How do I really know my patients will like this service?

A. Extensive surveys and the experience of thousands of doctors have shown that many patients prefer the convenience of purchasing their medications directly from their physicians. With our recommended prices, your patients will usually SAVE money and time.

Q. Is Physician Dispensing ethical?

A. Yes, just as other physician's services — lab, x-ray, diagnostic procedure. Physician Dispensing is ethical since patients have the choice to drive to the pharmacy or let you fill their prescriptions.

Q. Will dispensing affect my insurance?

A. In the view of most insurers, you are already dispensing when you give sample drugs to the patient or administer injections, so dispensing represents no change.

Q. How much staff time is involved in dispensing and is there much extra paperwork?

A. Our computerized labeling and record keeping system is very efficient. *All needed reports are automatically*

generated. It only takes about 60 seconds to dispense a prescription ... frequently less time than calling back and forth to the drug store.

Q. May I try the system in my office without obligation?

A. You can order a 30 day supply and get acquainted with the system. We will come in and help you get started. If you should find that dispensing is just "not for my practice", *You may return any unused medication within 30 days, without any further obligation.*

Q. Why should I choose CompuMed as my dispensing system?

A. CompuMed's System has been designed to meet the individual Physician's specific needs...designed after thousands of hours of hands on experience actually helping physicians dispense in their practices...designed from the inside of the physician's office up — not from the warehouse or the board room down:

- We Can Provide Any of Over 13,000 Medications.
- Including All Brand Names.
- Full Line of Bioequivalent Generics.
- Custom Packaged in the Exact Size You Prefer.
- Packaging Meets or Exceeds FDA & DEA Requirements.
- Your Choice of Computerized or Manual Dispensing Systems.
- Local Service Representatives.

Q. Is an investment required to get started?

A. Nothing, CompuMed can structure terms so no cash investment is needed.

COMPUMED[®] Inc.

PHARMACEUTICALS

HELPING PHYSICIANS REVIVE

A TIME HONORED SERVICE

Combining Income Enhancement With Increased Patient Convenience

CompuMed makes filling a prescription as easy as writing one

MAYBE IT'S TIME YOU LOOKED INTO PHYSICIAN DISPENSING

Call: 1-800-443-9218

MAIL TO: CompuMed, Inc., P.O. Box 23706, 1517 Edwards Ave., New Orleans, LA 70183

Free Physician Dispensing Videotape Available. Circle one: VHS BETA

DR./CLINIC _____ MEDICAL SPECIALTY: _____

ADDRESS _____ CITY _____

STATE _____ ZIP _____ PHONE () _____

Letters to the Editor

More on Dr. Page's article

To the Editor:

Thanks to Coin T. Page, M.D. for a thorough and enlightening article on North Carolina Workers' Compensation (49:185-90).

I have a question, the answer to which I think may be of interest to many other physicians. My reading of the statute leads me to believe that a worker seeking medical help under worker's compensation has every right to select a personal physician. I understand that there has been considerable legal contention regarding this right, and Dr. Page states that "the employer usually determines where and from whom the treatment will be received, rarely allowing the worker to select a personal physician." I should be most interested to know if that statement by Dr. Page is based on further legislation or court decision.

John R. Dykers, Jr., M.D.
P.O. Box 565
Siler City 27344

Dr. Page's reply

Following is my reply to the letter received from Dr. John R. Dykers, Jr., concerning my recent article on Workers' Compensation.

Dr. Dykers is correct in saying that a worker may select a physician of his choice. G.S. 97-25 states: medical care "... shall be provided by the employer ..." and goes on to say "... an injured employee may select a physician of his own choosing ... subject to the approval of the Industrial Commission."

Approval is the key word. Dr. Dykers's belief that a worker "has every right to select a personal physician" depends on Commission approval which may or may not be granted. The carrier and employer have the right to a hearing to contest the worker's choice. Workers often win these appeals, but the Commission approval may be denied.

Some companies will give authorization in advance for a worker to select a personal physician. This is what my statement, quoted by Dr. Dykers, referred to. In addition, many companies do not contest payments to physicians chosen by the worker even though the physician was not authorized in advance. Lastly, many personal selections of physicians are approved by the Commission over the carrier's objections. The real question is: how often is approval denied? Unfortunately, Commission decisions are not published so that it is difficult to determine.

My statement was meant to summarize the above situa-

tion. The possibility that a worker's choice of a physician may not be approved should be recognized by the worker and physician. The thrust of the article was to point out a pitfall and allow it to be anticipated. The best way to avoid the pitfall is to check in advance with the carrier or employer.

Coin T. Page, M.D.
P.O. Box 25042
Durham, NC 27702

On physician dispensing

To the Editor:

After watching a still noble profession being "nibbled to death by minnows" for the past 20 years I would like to emphatically advise, in the current issue of dispensing drugs, that every physician in the state register with the Board of Pharmacy to dispense drugs. This centuries old right and responsibility should not be allowed to pass away by default. It is completely irrelevant whether one individual dispenses drugs at present or not. The entire profession should specifically and emphatically reserve the right to, if we choose. To obtain 1,000 prescription labels in proper form costs less than \$50. This can easily be obtained from any print shop.

I personally have never dispensed a drug in my life and most likely never will, but I feel that the right should not be lost. Once lost it will not be regained.

The "conflict of interest" Red Herring that is raised by functional illiterates is a propaganda smoke-screen and nothing more. As anyone with any intelligence and education realizes this is the distinction of a "profession." Every single action a physician takes from morning until night involves a "potential" conflict of interest. That is why we are a Profession, not a Trade. We shouldn't be shy in asserting this.

I would hope that the officers of the Medical Society would officially and firmly recommend that every physician in this state register with the Board of Pharmacy. The Society could provide labels at cost.

David H. Jones
3900 Browning Place
Raleigh 27609

Dr. Ravenel's response to a letter critiquing his editorial

To the Editor:

Charlotte Brody in her response (letter 49:169) to my commentary (American teens and birth control: commen-

tary. 1987;48:606-7) typifies the adherence to the failed birth control approach to teen pregnancies often demonstrated among those who reject the alternative approach stressing premarital abstinence. The idea that one can effectively teach in schools abstinence combined with information and availability of birth control for those who "are going to be sexually active anyway" is to abdicate a responsibility as parents and educators to teach what is right, the only completely safe approach, and, most importantly, the only approach that has been shown to lead to a measurable reduction in unmarried teen pregnancies in a targeted population.

Even if teaching unmarried teens about, and providing for, birth control were not in a sense condoning or aiding in behavior which is morally wrong, not in the best interest of the individual, and in North Carolina as well as in many other states in violation of the law, the failure of this approach to stem the tide of increasing pregnancy rates has been acknowledged by such statements as the following: "... it is increasingly unusual to hear that adolescent pregnancy is due to a lack of information or to faulty information about reproduction and contraception" (from a commentary following several articles pointing out the failure of pregnancy or contraceptive education to exert any significant effect on the risk of premarital pregnancy, published in the journal of Planned Parenthood's research arm, the Alan Guttmacher Institute).¹

As pointed out in my commentary, there has yet to be reported any confirmed intervention where contraceptive information and availability have been shown to lead to a reduction in pregnancy rates in a targeted population of teens.

On the other hand, there have been two reports of a significant reduction in pregnancies following intervention in which premarital abstinence is the educational focus, to the exclusion of birth control information and availability. The first, a community-based educational program in South Carolina, showed a dramatic and sustained decline in pregnancies among unmarried adolescents in a population characterized as high risk for teen pregnancy by the usual demographic characteristics.² A preliminary report of a multifaceted intervention in California which included study skills, decision making, and self-esteem promoting educational efforts along with sex education centered about pre-marital abstinence to the exclusion of birth control education, showed a reduction in pregnancies in the target school from 147 prior to the intervention to 20 in the 1986/87 school year.³

Birth control information and provision to unselected populations of unmarried teens is an intervention that has not been proven efficacious on the one hand, and which is associated with increased levels of sexual activity, on the other. The National Research Council in its exhaustive review of teenage sexuality has acknowledged that this association may be a causal one.⁴ The burden of proof falls upon those who would extend this intervention strategy to prove its safety as well as efficaciousness rather than for those opposed to prove causality, as Ms. Brody seems to

prefer. it is inappropriate to extend this approach to schools and other unselected populations in which, by Planned Parenthood's own estimates in the poll under discussion, only 24% of total teenage girls and 42% of 16-year-old girls have ever had intercourse. If pregnancy rates have decreased by only 5.7% to 6% among only sexually active teens exposed to the birth control approach, while overall rates of sexual activity have increased by 52.9% from 1971 to 1983, clearly there is far greater potential for harm than benefit from applying this approach to overall populations of teens if increased levels of sexual activity are causally associated with exposure.

This leaves aside completely other important considerations such as the relative risks of sexually transmitted diseases, side effects of oral contraceptives begun in early teen years, etc., from the birth control approach compared with the incidence of these when the abstinence approach is taken. Clearly birth control education and measures to promote availability must be provided for the minority of teens who have engaged in intercourse and intend to continue to do so. These should not be provided in schools, but in settings in which those who are engaging in high risk and self-injurious behavior are not accompanied by those for whom such information would be unnecessary and potentially detrimental.

S. Dubose Ravenel

High Point Infant and Child Clinic

624 Quaker Lane

High Point 27262

References

- 1 Muraskin LD. Sex education mandates: are they the answer - comment. *Fam Plann Perspect* 1986;18:171.
- 2 Vincent ML, Clearie AF, Schluchter MD. Reducing adolescent pregnancy through school and community-based education. *JAMA* 1987;257:3382.
- 3 Dedimicantano J. Letter on file (10/2/87). Teen Aid, North 1330 Calispel, Spokane, WA 99208.
- 4 National Research Council. Risking the future - adolescent sexuality, pregnancy, and childbearing. Washington, DC: National Academy Press, 1987, p. 165.

Comments on Dr. Sabiston's article and subsequent letters

To the Editor:

Dr. Sabiston's recent article in the NCMJ seems to have stirred a bit of controversy (The antivivisection movement: a threat to medical research and future progress. 1987;48:653-5; and Letters to the Editor, 1988;49:277-80). Let us begin with "the crippling effect that an end to the use of animals would have on medical research." I am closely familiar with only one field, namely anesthesiology.

On my desk is the May 1988 issue of *Anesthesiology*. This issue contains 15 original articles. Article 4 is a study on dogs, 5 is on guinea pig heart, 9 is on rats, 10 is on cats, 13 is on dogs, and 15 is on rats. Clearly, animal

experiments form a significant part of research in anesthesiology.

In the same issue, a laboratory report gives the minimum alveolar concentrations (MAR) of halothane, enflurane, and isoflurane in ferrets. If anyone can determine the effective concentrations of anesthetic agents without using animals or humans, they ought to share this knowledge. Otherwise, the question becomes: which is preferable, experiments on animals, or experiments on humans, or a cessation of the introduction and full study of new anesthetic agents?

It seems Dr. Sabiston made a mistake which many (including myself) would have made. He assumed the readers were familiar with the place of animal experimentation in medical research.

Pound animals are ordinarily used because they are less expensive than specially bred animals. Otherwise, medical researchers would promptly switch to using the latter.

What irks me is the publicity and attention given to the antivivisection movement while other, important issues are ignored. Each day about 10,000 babies and children die from starvation and malnutrition-related diseases. Yet I seldom hear anyone remark that maybe the World is becoming

overpopulated with humans. If I ask people how they would define overpopulation and whether the USA is overpopulated, I seldom receive an answer which indicates the need to control the growth of our population.

As I ride in the dense traffic of large cities, I am concerned that the World does not appreciate that petroleum is a finite resource and our descendants will inevitably run short of oil. We live in a society which has "drift disease," a society coasting along when it should be acting in a responsible manner. We need fewer automobiles and better mass transit systems. We need to stop drifting.

I too am concerned about animals, especially those in danger of extinction, such as whales, rhinoceros, chimpanzees, gorillas, and cranes. I am concerned about their slaughter and the loss of habitat from human expansion.

At present there is no shortage of dogs and cats. It seems a minor matter whether the excess dogs and cats are promptly killed or first used for appropriate medical experiments.

Albert D. Warshauer, M.D.
1608 East Fifth Street
Greenville 27858

A Plea For Gilbert Abbott*
Boston, October 19, 1896

Mr. Editor: — Amid all our rejoicing on Friday and Saturday, and amid all our expressions of gratitude and admiration for Morton the inventor, and Warren the surgeon, nothing was said about Gilbert Abbott, the patient. This omission was one noticed by the laity, although not thought of by us. Of course, the great fact was the introduction of anesthesia, but the name of Gilbert Abbott, single, printer, of Boston, who showed so much pluck in being willing to inhale the ether ought properly to be mentioned at this time. The tumor was what would be commonly called a "birthmark" and discolored the whole of one side of his neck in front. What his subsequent history has been I know not; but perhaps some of the descendants of Dr. Morton and Dr. Warren may have looked him up.

Very truly yours,
John Homans, M.D.

*Reprinted from Boston Med & Surgical J 1896;85:427.

Continuing Medical Education

Please note: The Continuing Medical Education Programs at Bowman Gray, Duke (DUMC), East Carolina (ECU) and UNC Schools of Medicine, and Dorothea Dix are accredited by the American Medical Association. Therefore CME programs sponsored or cosponsored by these schools automatically qualify for AMA Category I credit toward the AMA's Physician Recognition Award, and for North Carolina Medical Society Category A credit. Where AAFP credit has been obtained, this also is indicated.

July 24-29

Southern OB-GYN Seminar

Place: Asheville

Info: W. Otis Duck, M.D., Box 729 Mars Hill, NC. 704/689-2411

August 12-14

Family Physicians Weekend

Place: Wrightsville Beach

Credit: 12 Hours AAFP

Info: Lois Voelker, Meeting Coordinator North Carolina Academy of Family Physicians, P. O. Box 18469, Raleigh 27619. 919/781-6467

August 27-28

State-of-the-Art Summer Urology Conference 1988

Place: Winston-Salem

Info: Sally Hudson Guley, Div. of CME, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4450

September 9-10

Topics in Geriatric Medicine

Place: Winston-Salem

Info: Sally Hudson Guley, Div. of CME, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4450

September 14-16

Diagnostic Ultrasound: Physics

Place: Winston-Salem

Credit: 7 hours per day Category I, AMA

Info: Registrar, Ultrasound Center, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4505

September 19-23

Diagnostic Ultrasound: Obstetrics

Place: Winston-Salem

Credit: 7 hours per day Category I, AMA

Info: Registrar, Ultrasound Center, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4504

September 26-30

Diagnostic Ultrasound: Radiology (Abdomen)

Place: Winston-Salem

Credit: 7 hours per day Category I, AMA

Info: Registrar, Ultrasound Center, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4504

Mid-September

Practice Management Seminar

Place: Raleigh

Info: Lois Voelker, Meeting Coordinator, NCAFP, P.O. Box 18469, Raleigh 27619. 919/781-6467

September 30/October 1

Advanced Cardiac Life Support Provider

Place: Asheville

Credit: 16 hours Category 1 AMA, ACEP, AAFP

Fee: \$200

Info: Daniel L. Dolan, M.D., MAHEC, 501 Biltmore Ave., Asheville 28801-4686. 704/257-4419

October 3-7

Diagnostic Ultrasound: Neurovascular

Place: Winston-Salem

Credit: 7 hours per day Category I AMA

Info: Registrar, Ultrasound Center, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4505

October 7

Scientific Session, Medical Alumni Association

Place: Winston-Salem

Info: Sally Hudson Guley, Div. of CME, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4450

October 10-11

Diagnostic Ultrasound: Transcranial Doppler

Place: Winston-Salem

Credit: 7 hours per day Category I AMA

Info: Registrar, Ultrasound Center, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4504

October 12-14

Diagnostic Ultrasound: Arterial/Venous Doppler

Place: Winston-Salem

Credit: 7 hours per day Category I AMA

Info: Registrar, Ultrasound Center, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4505

October 15-18

Ninth Mountain Meeting

Place: Asheville

Credit: 12 hours Category I AMA

Info: Sally Hudson Guley, Div. of CME, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4450

October 19-21

14th Annual Southeastern High Blood Pressure Conference

Place: Asheville

Fee: \$65

Info: Betty Lamb, Adult Health Services Section, Div. of Health Services, Raleigh 27602. 919/733-7081

New Members

John Given Spangler, 310 Ridgemed Rd., Apt. 105, Baltimore, MD 21210

Buncombe

Melissa Maxine Hicks (FP), 491 Biltmore Ave., Asheville 28801

Stephen David Hulkower (FP), 491 Biltmore Ave., Asheville 28801

Keith Melvin Maxwell (ORS), 445 Biltmore Ave., Ste. 401, Asheville 28801

Catawba

John Douglas Nelson (FP), 3345 4th St. Blvd. NW, Hickory 28601

Craven-Pamlico-Jones

Sharon Joe Givens Willingham (P), 1315 S. Glenburnie, PO Box 2068, New Burn 28560

Joyce Alice Yerex (R), 908 Plantation Dr., New Bern 28560

Cumberland

Thomas Pinckney McIlwain (P), 1262 Oliver St., Fayetteville 28304

Duplin

M. Kamran Goudarzi-Langroudi (GS), 219 E. Main St., Wallace 28466

Durham-Orange

Jonathan Charles Fox (RESIDENT), Box 3163, DUMC, Durham 27710

RaeLynne Hornsby (STUDENT), C-9 Carolina Apts., Carrboro 27510

Kevin Michael Johnson (R), 2609 N. Duke St., Durham Radiology Associates, Durham 27704

Yi-Sheng Lee (RESIDENT), 2920 Erwin Rd., Durham 27705
Sally Jo Trued (EM), NC Memorial Hosp, Ste. 1015, Chapel Hill
27514

Forsyth-Stokes-Davie

Kimberley J. Hansen (GS), 300 S. Hawthorne Rd., Winston-Salem
27103

Per Manuel Montero-Pearson (GS), PO Box 407, Mocksville 27028
Donald Walter Peters (P), 300 S. Hawthorne Rd., Winston-Salem
27103

Jeffrey Norman Pierce (STUDENT), Box 274, 300 S. Hawthorne
Rd., Winston-Salem 27103

Gaston

Richard Glen King (FP), 226 Wilmot Dr., Gastonia 28054

Greensboro Society of Medicine

James Anthony Pascale, 3710 Hazel Ln., Greensboro 27408

Sandra Smith Woolfitt (ON), 604 Walter Reed Rd., Greensboro
27403

High Point

Michael David Tripp (R), 1101 Shalimar Court, High Point 27262

Iredell

Jeffrey Michael Berman (AN), 750-D Hartness Rd., Statesville
28677

Lee

Brian Frederick Wrodzynski (EM), 1524 Phillips Dr., Sanford
27330

Mecklenburg

Paul Ray Cheney, Jr., (IM), 7108 Pineville-Mathews Rd., Char-
lotte 28211

Michael John Kelley (DR), 3535 Randolph Rd., Ste. 102, Char-
lotte 28211

Charles Edwin Reaves (D), 1012 S. Kings Dr., Ste 705, Charlotte
28283

Charles Boyce Rich, Jr., (IM), 212 S. Tryon St., Ste. 1500,
Charlotte 28281

Kevin Lindsay Smith (PS), 2215 Randolph Rd., Charlotte 28207

New Hanover-Pender

Robert George Everhart (CD), 1202 Medical Center Dr., Wil-
mington 28401

Pitt

Eric Paul Brestel (A), ECU Dept. of Medicine Greenville 27858

Timothy Joseph Clark (R), 324 Dupont Cir., Greenville 27858

Robert Alan Del Pero (OPH), 301 Bowman Gray Dr., Greenville
27834

Kevin Straight Good (N), 425 Stantonsburg Rd., Greenville 27834

Amy Denise Vann Price (RESIDENT), 207 Speight Dr., Green-
ville 27834

Edward Timothy Wilson (STUDENT), 32 University Condomin-
iums, Greenville 27834

Stanly

Delia Cupino Sykes (AN), 1408 Northridge Dr., Albemarle 28001

Swain

Charles Humberto Toledo (PD), PO Drawer 760, Bryson City
28713

Vance

Luzviminda Torres-Hecker (IM), 542 W. Ridgeway St., Warren-
ton 27589

Wake

Leroy George Hoffman, Jr., (ON), PO Box 10407, Triangle On-
cology Services, Raleigh 27605




"The Power of the Pen"

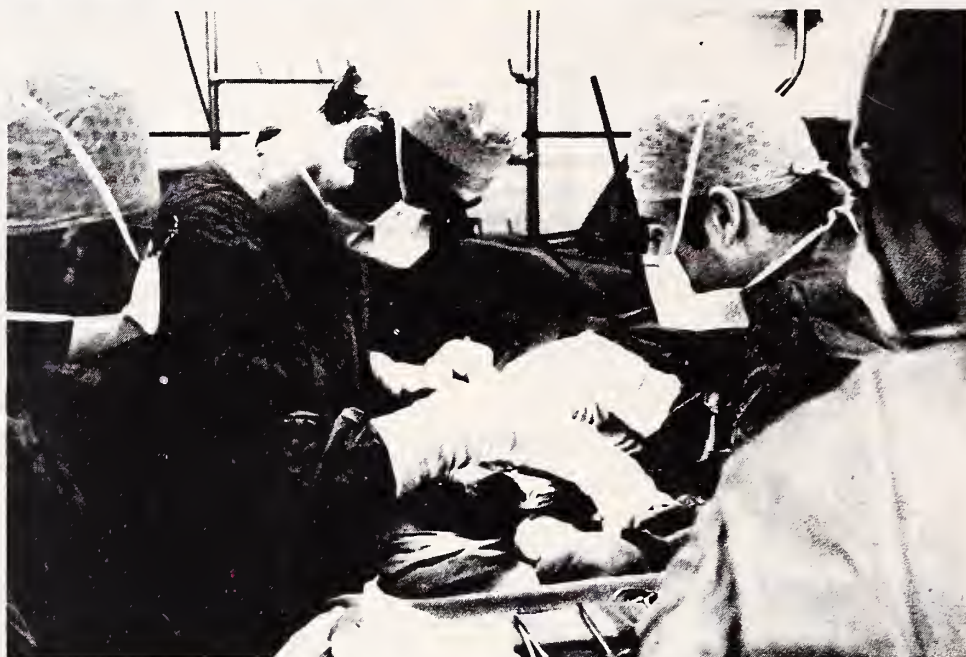
When you decide to use Bactrim,
use the power of the pen as well.
Protect your prescribing decision in
accordance with your state regula-
tions to prevent substitution. It guar-
antees your patients will get the
power of Bactrim.

Specify
"Dispense as written"

BactrimTM
(trimethoprim and
sulfamethoxazole/Roche)

Roche Laboratories
a division of Hoffmann-La Roche Inc.
 340 Kingsland Street, Nutley, New Jersey 07110-1199

THE ARMY RESERVE OFFERS NEW FINANCIAL INCENTIVES FOR RESIDENTS.



If you are a resident in Anesthesiology or Surgery*, the Army Reserve has a new and exciting opportunity for you. The new Specialized Training Assistance Program will provide you with financial incentives while you're training in one of these specialties.

Here's how the program can work for you. If you qualify, you may be selected to participate in the Specialized Training Program. You'll serve in a local Army Reserve medical unit with flexible scheduling so it won't interfere with your residency

training, and in addition to your regular monthly Reserve pay, you'll receive a stipend of \$644 a month.

You'll also have the opportunity to practice your specialty for two weeks a year at one of the Army's prestigious Medical Centers.

Find out more about the Army Reserve's new Specialized Training Assistance Program.

Call or write your US Army Medical Department Reserve Personnel Counselor:

**Army Reserve Health Care Team
2634 Chapel Hill Blvd.
Suite 205
Durham, NC 27707-2875
(919) 493-1364 Collect**

* General, Orthopaedic, Neuro, Colon/Rectal, Cardio/Thoracic, Pediatric, Peripheral/Vascular, or Plastic Surgery.

ARMY RESERVE MEDICINE. BE ALL YOU CAN BE.

In Memoriam

Darius Jenkins Sammons, M.D. (1898-1988)

Dr. Darius Jenkins Sammons was born May 18, 1898, in Elizabethtown, North Carolina. When he was still small, the family moved to Lumberton, North Carolina, where Darius grew up. He would often reminisce about his childhood days when he sometimes had to walk to school barefoot and during the summer catch fish with his bare hands for fun. Dr. Sammons's education included attendance at the Red Stone Academy in Lumberton, and completion of college work at Biddle University (now Johnson C. Smith) where he received a B.S. degree in 1918. Dr. Sammons attended Meharry Medical College in Nashville, Tennessee, earning his M.D. degree in 1922. He then did a one-year internship at Saint Agnes Hospital in Raleigh, North Carolina.

Dr. Sammons came to Clinton, North Carolina in September of 1925 and began a family practice. His first office was located on McKoy Street. In 1935 he relocated his office to 12 Lisbon Street, where he remained until his retirement in 1980.

Dr. Sammons was a 33rd degree Mason and a Shriner. He was a member of Silver Square Lodge #433 of the Masonic Order, and served as Master of Lodge for a number of years. He also served as District Deputy and Grand Master of the 2nd Masonic District for 35 years, resigning this position in 1976. Dr. Sammons received the Meharry Medical College Presidents award in 1974 and again in 1984. He was a regular contributor toward the continuous growth of Meharry.

Dr. Sammons was instrumental in organizing the first Boy Scout troop in Clinton, more than 50 years ago. He was president of the first Voters League organized in Sampson County and was instrumental in getting the first open registration of blacks in the county. Dr. Sammons was also co-founder of a Sampson Sewing Factory and also Mary Gran Nursing Home in Clinton. He was a member of the Faison Memorial United Presbyterian Church where he served as deacon and elder. Dr. Sammons was a member of courtesy medical staff of Sampson Memorial Hospital from the time of its opening in 1950 until his retirement.

Dr. Sammons died on January 17, 1988, as he lay peacefully sleeping in Sampson Memorial Hospital.

Bruce F. Caldwell, M.D.
Secretary
Sampson County Medical Society
Clinton, North Carolina

Our **A**lumni Make Great Recoveries.

They needed our program to solve their problems, so you probably won't hear them brag about their Alma Mater. But they're proud of us and we're proud of them, because they continue to live straight and sober *after* they leave our program.

Some people call it success. We call it recovery. And it happens because of teamwork. Our staff, our client's physician, employer, and family, all working together with each patient for the same goal: freedom from drugs and alcohol one day at a time.

Guaranteed. That's right, if a patient follows our program and doesn't remain drug and alcohol free, we'll provide additional treatment at *no charge*.

Don't lose your patients to alcohol and drugs. Get them back with our help and discover what recovery can mean for your patient's life.

We offer 24 hour free confidential evaluations and case consultations 7 days a week.



**Charter
Northridge
Hospital**

400 Newton Road
Raleigh, NC 27615
1-800-447-1800

Patient costs covered by Medicaid, Medicare and most insurance companies.



A Facility of Charter Medical Corporation
Quality Hospitals.

Classified Ads

CONSIDER the cost-effective potential of adding a physician assistant to your practice. The North Carolina Academy of Physician Assistants will help you advertise to a large pool of qualified PAs at no cost to you. For information on how you can advertise your PA employment opportunity, contact: Bob Franks, PA-C, NCAPA Employment Chairman, 206 Camelia Dr., Goldsboro 27530. 919/731-3225 (work); 919/734-4657 (home).

GENERAL INTERNIST desired to replace retiring member of four physician F.P. group. Busy general adult medicine practice. Pine Ridge Family Practice, P.A., 147 Columbine Dr. Winston Salem, 919/722-9535.

FAMILY PHYSICIAN BC/BE needed to replace retiring member of four physician F.P. group. OB optional. Available 7-88 or after. Pine Ridge Family Practice, PA. 147 Columbine Drive, Winston-Salem 27106.

INTERNIST to join established multi-specialty group. Cardiology experience preferred. Practice is based in scenic, waterfront community; hospital with three nursing homes. Near Norfolk, VA. Competitive salary/benefits. Send CV to: Box 429, Edenton, NC 27932.

OWNER MUST SELL — will take loss, magnificent newly built tri-level four-bedroom, four-bathroom, garage, gazebo dining room area, fireplace. Completely furnished with linens, drapes, wood floors, dining and cooking utensils. Located on 1.5 acres at Fairfield Mountain, Lakelure, NC. Two 18-hole golf courses, clubhouse, 26 mile lake, boating, fishing, health club, tennis courts, three pools, gourmet restaurants on premises and area. Call collect, Helen Kittay, 1-800/327-4287.

INTERNAL MEDICINE — The Kaiser Permanente Medical Care Program of North Carolina has immediate openings for BC/BE internists to staff positions available in our Charlotte Medical Offices. Competitive salary and benefits to include full malpractice and retirement plan. CV to: Stephen A. Silbiger, M.D., Carolina Permanente Medical Group, P.A., Three Fairview Plaza, Suite 100, 5950 Fairview Rd., Charlotte 28210. Call 704/551-4200.

RESEARCH TRIANGLE AREA: Busy, well established pediatric practice for sale. Suitable for one/two pediatricians. Community near hospitals with level 2 and 3 nurseries, full time ER, pediatric teaching program. Seller will stay to introduce buyer. Please reply to Code 70, NCMJ, Box 3910, DUMC, Durham 27710.

GENERAL SURGEON needed immediately. Rural Eastern North Carolina. Pleasant community, fine

people, busy practice, near beaches, good hunting and fishing. Desire BC/BE physician to join practice with opportunity for partnership in one year. Reply: R.B. Dietrick, M.D., Box 501, Kenansville, NC 28349. Tel: 919/296-0545/1006.

FOR SALE - Established practice of Urology in the Piedmont area of North Carolina. Easy access to metropolitan areas via Interstate highway. Solid opportunity in a growing area. For details, send inquiry with address and telephone number to Mr. C. David Carpenter, Professional Consulting Services, Inc. 125 E. Pennsylvania Avenue, Southern Pines, N.C. 28387.

PSYCHIATRY: Opportunity for Board Certified/Board Eligible to join established practice in the Greenville area of North Carolina, with a 550 + bed community hospital. Start with a partnership potential. Contact Judith Sallé Yongue, M.D., P.A., 107-C Commerce Street, Greenville, N.C. 27858. Phone 919/355-2768.

FAMILY MEDICINE: Busy BC F.P. group in W. N. Carolina needs BE/BC assoc. Competitive guarantee, plus productivity/fringe benefits. Buy-in provision.

OTOLARYNGOLOGY

EXCELLENT HOSPITAL-BASED PRACTICE
AVAILABLE IN THE FASTEST-GROWING AREA IN
CENTRAL NORTH CAROLINA.

Our client will offer the right candidate:

- A competitive two-year guarantee
- Backup and relief coverage by congenial associates
- Free office space and well-trained staff
- Dedicated, progressive and highly motivated operating room team

The ideal candidate will be board certified or eligible, and an interest in allergies would be a plus.

For further information, please call Mr. Jim Murphy at 1-800-325-6143, or send your curriculum vitae to:

CEJKA & COMPANY
222 South Central, Department 539A
St. Louis, MO 63105

Confidentiality assured
and all interview expenses covered.

Paradise! Picturesque community w/cultural & recreational amenities. One hour from Asheville; 90 minutes from Charlotte. Contact Don Gustavson, Tyler & Co., 9040 Roswell Rd., Atlanta, GA 30350. Call 404/641-6411.

EMERGENCY MEDICINE opportunity in beautiful W.N. Carolina. Compet. salary plus benefits. Paradise! Picturesque community w/cultural and recreational amenities. BE/BP in EM, FP, IM preferred. Contact Don Gustavson, Tyler & Co., 9040 Roswell Rd., Atlanta, GA 30350. Call 1-800/223-3659.

MULTISPECIALTY GROUP of 15 physicians, located in beautiful Piedmont area of North Carolina needs recently trained B/C, B/E General Surgeon and BC/BE Urologist to help present doctors with busy practices. Group practice is in close proximity to two hospitals. In-house Lab, X-ray, Stress lab and Echo. Association leads to equal shareholdership in one to two years. Full benefit package, guaranteed salary and professional management. Send CV to: Administrator, Statesville Medical Group, P.O. Box 1460, Statesville NC 28677 or call 704/878-2011.

GREENSBORO: Full-time or part-time position available. Established Outpatient General Family Practice 5 1/2 years old, growing rapidly. Wonderful opportunity in the best U.S. location to live. Very well equipped with state of the art Lab, X-ray, EKG/Defibrillator, Spirometry, Audiometry, etc. Financial re-

ward: Excellent. Quality of life: Excellent. Opportunity for medically challenging work: Excellent. Contact: Chris W. Guest, M.D., 919/299-0000 or send CV to 102 Pomona Drive, Greensboro 27407.

INTERNIST wanted to join three man group in Winston-Salem. Excellent opportunity with well established largely fee-for-service practice. Reply to Forsyth Internal Medicine Associates, P.A., 1405 Plaza Drive, Winston-Salem 27103.

PRACTICES FOR SALE: General medical practice located in small NC town adjacent to large metropolitan area. Ideal location for starting a practice. Only physician in this town. Practitioner in poor health and needs to sell immediately. Appraised at \$145,000, but will sell for \$80,000. Call AFTCO Associates, 803/329-9655.

FAMILY PHYSICIANS. BC/BE. Group practice, no buy-in, salary guarantee plus incentive year 1, shared call. Resumé to Medical Director, Box 4568, Spartanburg, SC 29305.

OB-GYN - Rural Coastal North Carolina Health Department seeks Board Certified/Eligible OB-GYN to provide prenatal services in multi-county health centers. Prenatal care only — no deliveries or surgery involved. Contact Director, Martin-Tyrell-Washington District Health Department, PO Box 396, Plymouth, NC 27962 - Phone 919/793-4949.

PHYSICIANS

Ambulatory Care Clinics

John Short & Associates, Inc., an internationally recognized health care management and consulting firm, is actively seeking **PHYSICIANS** with experience and credentials in **FAMILY MEDICINE** and **PRIMARY CARE SPECIALTIES**.

Full or part-time positions are available to staff existing Primary Care Clinics in the North Carolina Coastal Region. Qualifications include Board Certification or Board Eligibility and State Licensure.

John Short & Associates, Inc. offers competitive compensation including paid malpractice insurance, professional development funding and incentive programs. For additional information please contact: **Susan Bray, Recruiting Director, John Short & Associates, Inc., Box 1305, Dept.NMJ, Columbia, MD 21044. E/O/E.**

NEONATOLOGIST

New Hanover Memorial Hospital, located in beautiful, historic, oceanside Wilmington, North Carolina, is seeking an additional board certified or board eligible neonatologist.

New Hanover Memorial Hospital is a 500-bed major referral hospital for southeastern North Carolina with graduate medical education programs affiliated with the University of North Carolina School of Medicine.

Candidate will be eligible for academic appointment at UNC School of Medicine. Academic appointment and salary dependent on training and experience. Please submit curriculum vitae and references to:

**Chairman, Search Committee in Neonatology
Area Health Education Center
New Hanover Memorial Hospital
2131 South 17th Street
Wilmington, North Carolina 28402**

The University of North Carolina at Chapel Hill is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.

MECKLENBURG COUNTY HEALTH DEPARTMENT, located in Charlotte, North Carolina, is currently seeking three (3) physicians: (1) Assistant Health director to head the Personal Health Division consisting of seven (7) programs for a large county health department. Program areas include Child Health, Children's Special Health Services, Dental Health, Nutrition and Dietetic Services, WIC, Family Planning and Maternity Care. Administratively responsible for a staff of 90 in addition to clinical responsibilities of direct patient care. Must be Board Certified in OB-GYN specialty, eligible for NC Medical Licensure, public health experience/training preferred. (2) Staff physician, Board Certified in Family Medicine to deliver clinical services in a variety of medical disciplines. (3) Staff physician Board Certified in Pediatrics with training in adolescent medicine or with combined residency in Pediatric/Internal Medicine. Salary range \$61,554 to \$77,711 with competitive benefits package including malpractice insurance. Qualified applicants should submit resumé and salary history in confidence to: Recruitment Administrator - Mecklenburg County Personnel, Charlotte-Mecklenburg Government Center, 600 East Fourth Street, Fifth Floor, Charlotte 28202-2836. EOE M/F/H.

PHYSICIAN OFFICE supply including examination tables, EKG machine, typewriter, file cabinets, table calculator - for sale. Call 704/253-0312.

OCEANFRONT COMMUNITY, Unique 24-hour ER/FP in growing area, desire residency trained FP or gen. IM for day shift only, 3 1/2 day work week 28-35 hrs/wk, no hospital duties, excellent schools, partnership available, will consider locum tenens until permanent position filled. Send CV or call Bob Kastner, M.D., Rt. 1, Box 229, Nags Head, NC 27959, 919/441-7111.

I WANT TO BUY ESTABLISHED PRACTICE: Internist with interest in cardiology wants to buy practice from a retiring physician. Small group and solo practice situation also considered. Please write to Code 30, NCMJ, Box 3910 DUMC, Durham 27710.

NORTH CAROLINA — Emergency Medicine opportunities with local Emergency Medical group in central N.C. in two medium volume E.D.'s Board certified/prepared in E.M., F.P./I.M. preferred. Competitive salary, CME, ACEP dues, malpractice paid. Replies and C.V.'s to James Strickland, M.D.; P.O. Box 464; Burlington, N.C. 27215. 919/228-0768.

RADIOLOGIST AVAILABLE immediately — Full- or part-time; desire Piedmont, NC; general diagnosis; twenty-plus years experience. Reply: Code 80, NCMJ, Box 3910 DUMC, Durham 27710.

See 408 for NCMJ Classified Advertising details.

EMERGENCY MEDICINE PRACTICE OPPORTUNITIES

- Full Time/Part Time
- Locations throughout North Carolina
- Low, moderate or high volume
- 12 or 24 hour shifts
- Full malpractice insurance provided
- Very competitive compensation
- Flexible scheduling

Call Sharon or Dee
1-800-637-3627

or send CV to:

**NATIONAL EMERGENCY
SERVICES, INC.**

Physician Placement Div.
P.O. Box 64309
Virginia Beach, VA 23464

MEDICAL DIRECTOR N.C. PHYSICIANS HEALTH AND EFFECTIVENESS PROGRAM

The North Carolina Medical Society is seeking a full-time medical director for its impaired physicians program. Position may be filled as early as September.

Basic requirements are:

- ~Degree of Doctor of Medicine
- ~License to practice medicine in N.C. prior to employment
- ~Good health
- ~Successful administrative experience
- ~Demonstrable communication skills
- ~Demonstrable knowledge in addictionology
- ~Strong, verifiable recovery, if applicable

Letter of application, accompanied by detailed curriculum vitae, should be addressed to:

Medical Director Search
N.C. Medical Society
P.O. Box 27167
Raleigh, N.C. 27611

Winchester®

"CAROLINAS' HOUSE OF SERVICE"

Winchester Surgical Supply Company

200 South Torrence St. Charlotte, N.C. 28204

Phone No. 704/372-2240

Winchester Home Healthcare

Medical supplies and equipment for your patients at home

Charlotte, N.C.

Greensboro, N.C.

Hickory, N.C.

704/332-1217

919/275-0319

704/324-0336

704/547-0708

**Serving the MEDICAL PROFESSION of NORTH CAROLINA
and SOUTH CAROLINA since 1919.**

We equip many physicians beginning practice each year and invite your inquiries.

Our salesmen are located in all parts of North Carolina.

*We have DISPLAYED at every N.C. State Medical Society Meeting since 1921
and advertised CONTINUOUSLY in the N.C. Journal since January 1940 issue.*

AUTHORS: INSTRUCTIONS FOR SUBMITTING PAPERS

Copyright of an article published in the *North Carolina Medical Journal* is retained by the author, but the copyright to each entire issue is the property of The North Carolina Medical Society, and permission to reprint all or any part of a published article must be negotiated with the author and the editor jointly. The reprinted material must carry a credit line signifying that it appeared in the *North Carolina Medical Journal*.

Medical articles, editorials, patient oriented articles, letters to the editor and all other text submitted for publication must be double-spaced throughout, including references and legends. The material should be typed on one side of the paper with 1¼ inch margins all around. Do not use an all-caps or a script typeface. Submit one original and one copy. Please be sure to include your phone number.

The author is responsible for the accuracy of all statements and references. Acronyms and other abbreviations should be kept to a minimum; *any acronym used should be fully translated in the text*. Refer to pharmaceutical products by their generic names; brand names may follow in parentheses. Units of measure should appear in the metric system. References, typed

double-spaced, should be listed in the order of their citation in the text, not alphabetically. They should follow the style used in the *Journal*.

Illustrations should be black and white glossy prints or color or black and white slides, with legends typed in double-space on a separate sheet of paper. Since the *Journal* has a limited budget for color, it may be a factor in publishing color illustrations.

Attach to the two copies of the manuscript a cover letter giving the address and telephone number of the person who will correspond about it, and address the completed communication to the Editor, Box 3910, Duke University Medical Center, Durham, NC 27710.

All manuscripts are subject to editorial changes. If extensive revision is necessary, the author may be sent a draft of the edited article for approval before publication. The author will be sent galley proofs if the paper is published.

Authors interested in more effective writing may find *The Elements of Style* by Strunk and White and *How to Write and Publish a Scientific Paper* by Day helpful.

Extracted, with permission, from *Virginia Medical* with thanks.

Index to Advertisers

Baron Financial Services, Inc.	361	Medical Protective Company	355
B & B X-Ray, Inc.	349	MONY Financial Services	359
Burroughs Wellcome Co.	373-376	National Emergency Services	406
Cejka Company	404	NCMS	406
Charlotte Treatment Center	395	Roche Laboratories	369, 401, C3, C4
Charter Northridge Hospital	403	Saint Albans Psychiatric Hospital	356
CIBA Pharmaceuticals	387, 388	Smith Kline and French Laboratories	364b
Coast Realty and Construction Co.	390	Southern Medical Association	350
CompuMed, Inc.	396	Unique Boutique	367
Crompton Company	Cover 2	U.S. Air Force	392
Eli Lilly	372	U.S. Army	386
Hinrichs Financial Group	362	U.S. Army Reserve	364a, 402
John Short & Associates	405	Wilmington AHEC	405
Lakeshore Systems	361	Winchester Surgical Supply Co.	407
Medical Mutual Insurance Company of N.C.	368	Wyeth-Ayerst Laboratories	356a-d

NCMJ Classified Ads . . .

Send your ad to:

**Managing Editor
Box 3910
Duke University Medical Center
Durham 27710**

Please specify the number of monthly issues in which you'd like it to appear. (Note: no issue is published in August.) Include your name, address, and phone number.

Closing date is the 25th of the second prior month.

**Rates: NCMS members, \$15/25 words,
plus .25 each additional word;
Others, \$25/25 words, plus .25
each additional word.**

For further information, call 919/684-5728.

ROSTER ISSUE

1988-1989

NORTH CAROLINA *Medical Journal*

VOLUME 49, NUMBER 8

AUGUST, 1988


ALPHABETICAL MEMBERSHIP LISTING AND ROSTER BY COUNTIES
Officers, Committees, Commissions and Boards

North Carolina Medical
Journal
UCSF LIBRARY
Received on: 08-29-88



Price: \$45.00 (plus 5% N.C. Sales Tax). Extra copies may be obtained from North Carolina Medical Society, Box 27167, 222 N. Person St., Raleigh, N.C. 27611. Telephone 919/833-3836.

THE USE OF THIS ROSTER AS A MAILING LIST IS PROHIBITED EXCEPT BY SPECIFIC AUTHORITY.



Who knows a physician's professional liability needs better?

Another physician, of course. That is why Medical Mutual Insurance Company of North Carolina is a physician owned and directed company. Our Board of Directors consists of 18 physicians, all members of the North Carolina Medical Society. Currently we insure approximately 80% of North Carolina's physicians and surgeons in private practice. We offer our insured physicians:

- policy limits of up to \$5,000,000/\$7,000,000
- nationally recognized Loss Prevention Department providing on-site office audits.
- experienced judicious claims service
- participation in the company through a Board of Directors elected entirely by policyholders and guaranty capital holders.

**Medical Mutual Insurance Company
of North Carolina
and Medical Insurance Agency**

222 N. Person Street, P.O. Box 26088
Raleigh, North Carolina 27611-6088
Phones: Raleigh 828-9334 or
Statewide 1-800-662-7917

“Continuity of care is the greatest value”

...My practice is hospital-based primary care...patient base of around 3000. I usually see 20 to 25 patients a day.

...I've been using Duke's Physician's Referral Service for a few years. On the average, I'd say I call them twice a week ...occasional diagnostic consultations, but for the most part, you already know what needs to be done.

A full range of competently staffed services

...Neurology is excellent. Cardiology and Urology are my most frequent referrals, and some of those folks are *stellar* ...Marvin Rozear and John Weinerth, for example. I've developed a pattern of referral with them over the years.

...It's the colleague-to-colleague, person-to-person, aspect... that and the ease of contact, which make all the difference in the world.

Rapid response

...Of course in an emergent or acute care situation you expect rapid service, but I'm talking about overall efficiency and dependability.

Quality care

...Continuity of care is the greatest value. What it means for me is confidence. I know my patient will be well cared for and returned as soon as medically practical. What it means for my patient is less stress. I can say, "You're going to see Dr. So-and-so. We've

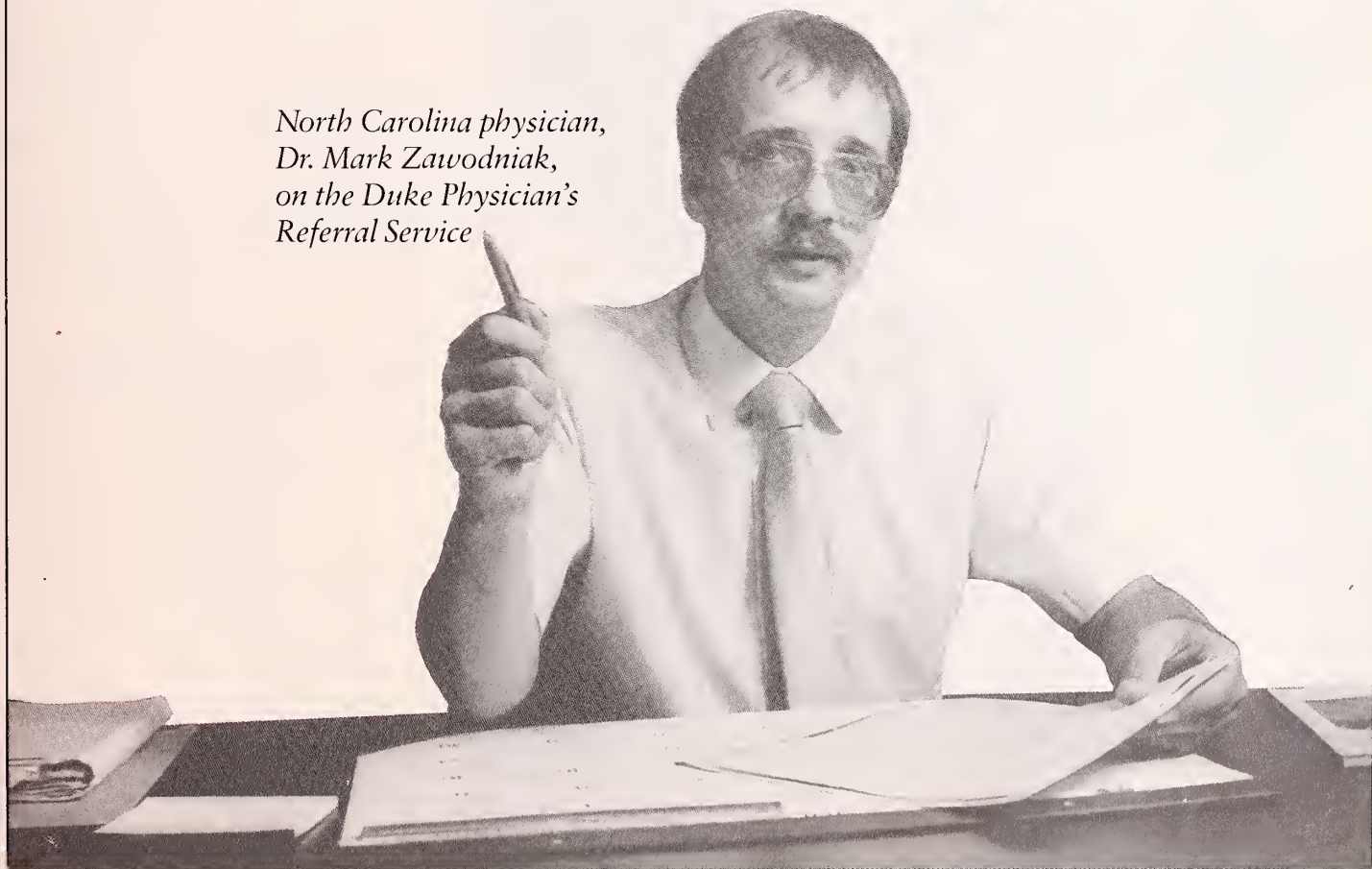
arranged for your transportation. There's a bed waiting for you."

...It helps allay the fear many patients feel about going out of town to a strange hospital. ...The bottom line? Quality of care...continuity of care.

Duke Physician's Referral Service
1-800-672-0066

Duke Physician's Referral Service

*North Carolina physician,
Dr. Mark Zawodniak,
on the Duke Physician's
Referral Service*



Are You Only Smiling For The Camera?



Or do you know someone who is?

Saint Albans Psychiatric Hospital in Radford, Virginia has been helping people deal with life since 1916. We offer comprehensive programs for adults and adolescents in chemical dependency, eating disorders, depression, out-of-control behavior and other life problems — all supervised by a skillful and compassionate staff.

When you know someone in need of psychiatric help call Saint Albans.

We build real smiles.

*In Virginia: 1-800-572-3120
Outside Virginia: 1-800-368-3468
P.O. Box 3608 Radford, Va., 24143*

 **Saint Albans
Psychiatric Hospital**
Radford, Virginia

Roster

North Carolina Medical Society

1988-1989

222 N. Person St., Box 27167
Raleigh, N.C. 27611
Telephone 919/833-3836
Toll Free: 1-800-722-1350 (N.C. only)

OFFICERS, COMMITTEES, COMMISSIONS AND ROSTER OF MEMBERS

Alphabetical Listings and Roster by Counties

Roster information correct according to North Carolina Medical Society records on membership on June 30, 1988.

The roster information of the members of the State Medical Society contained in this publication may not be used as a general mailing list without specific authority from the State Society.

CONTENTS

Officers	11
Headquarters Staff	12
NCMS Membership Categories	15
Commissions	17
Committees	18
Boards	30
Councilor Districts	30
Key to Specialties	31
Roster Coding Key	31
Alphabetical List of Members	35
Resident/Fellow Members	123
Student Members	127
Fifty Year Club	135
Roster of Members by Component Society	139
Specialty Societies & Other Health Care Organizations	266
Deceased Members	270
Index to Advertisers	270

Now America's oldest professional liability insurer has come to North Carolina.

The newest professional liability insurer in North Carolina is the oldest in the nation. The Medical Protective Company pioneered the concept of professional protection before the turn of the century and has been serving doctors exclusively ever since. Through good times and bad.

With the current liability crisis escalating, you need to take a close look at your coverage and the company that stands behind it. Then take a close look at us. You'll see we carry the highest

rating from A.M. Best, the firm that tracks the financial stability of insurance companies nationwide. Beyond that, you'll find complete protection at premium rates that are likely lower than you're currently paying. Plus the personal attention and claims prevention assistance you deserve.

Contact Stu Mitchelson today at 704/541-8020. He's the oldest company's representative in its newest state. And he's here to serve you.

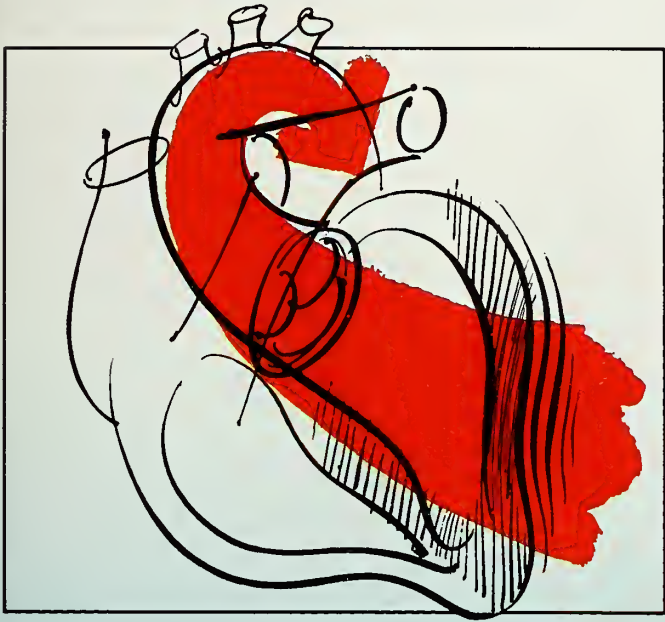
THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

Stuart Mitchelson, P.O. Box 13489
Charlotte, North Carolina 28211, (704) 541-8020

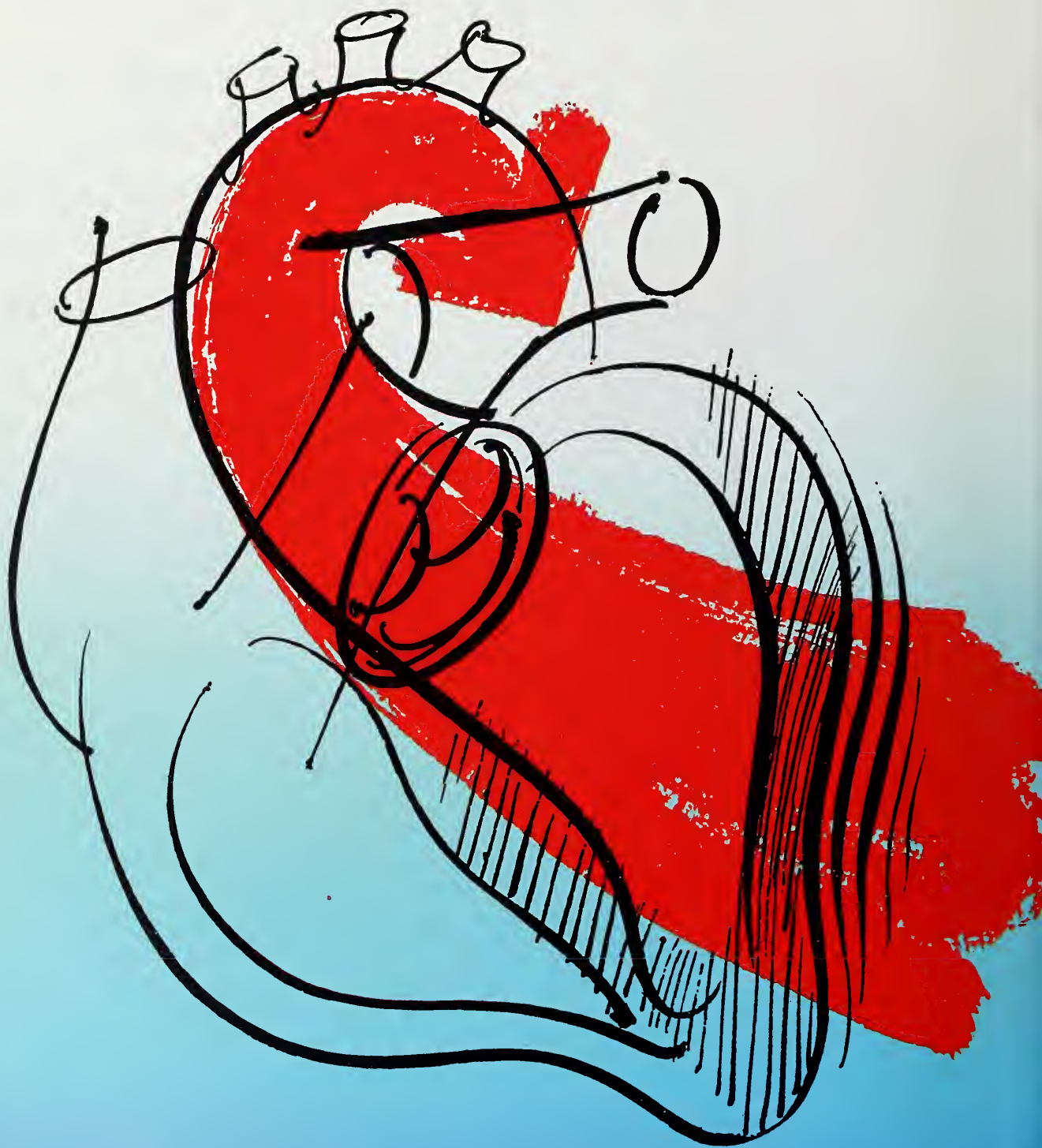
New clinical studies^{1,2} continue to confirm the essential value of digoxin in CHF and show:



In patients with normal sinus rhythm...

- **Improved ejection fraction.**
- **Improved cardiac output.**
- **Improved exercise tolerance.**

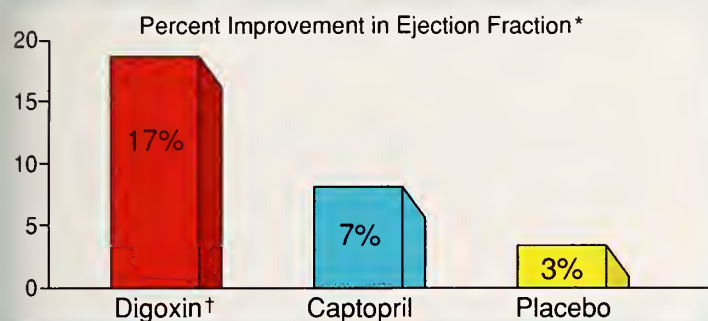
New evidence continues to
confirm the essential value of
LANOXIN[®] in CHF.^{1,2}



Improved ejection fraction

In a recent double-blind, placebo-controlled study¹ in patients with normal sinus rhythm, digoxin produced a significant increase in ejection fraction compared to captopril ($P<.05$) and placebo ($P<.01$). By contrast, there was no significant difference between captopril and placebo.

Improvement in ejection fraction represents improvement in myocardial contractile performance and better emptying of the left ventricle.



* Adapted from the Captopril-Digoxin Multicenter Research Group study.¹

† $P<.05$ compared to captopril; $P<.01$ compared to placebo.

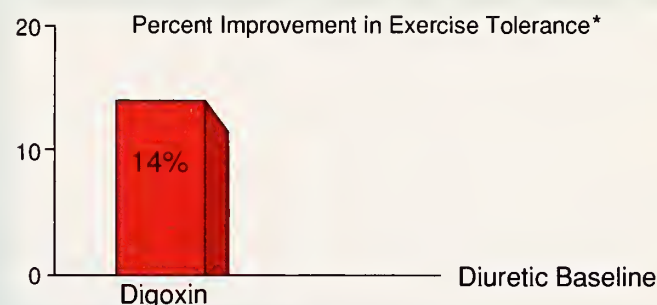
Improved cardiac output

The positive inotropic effect of digoxin (as measured in part by improved cardiac output) was associated with improved left ventricular (LV) function.³ This significant improvement in cardiac output was seen in patients at rest as well as during exercise. Long-term therapy with digoxin contributed to the maintenance of LV function as indicated by both a decrease in cardiac output when digoxin was stopped and a restoration to treatment levels with readministration of the drug.



Improved exercise tolerance

In a new placebo-controlled study² of CHF patients with normal sinus rhythm and on diuretics, exercise tolerance (treadmill) was improved 14% ($P<.05$) by digoxin. In this study, digoxin produced favorable effects on cardiac function beyond those of the diuretic alone. Another study⁴ showed that digoxin significantly improved exercise tolerance and O_2 consumption over placebo. In the latest digoxin/captopril study, there was no significant statistical difference between the two drugs with regard to effects on exercise tolerance and functional class.¹



* Adapted from DiBianco et al.²

References: 1. The Captopril-Digoxin Multicenter Research Group: Comparative effects of therapy with captopril and digoxin in patients with mild to moderate heart failure. *JAMA* 1988;259:539-544. 2. DiBianco R, Shabetai R, Kostuk W, et al: Oral milrinone and digoxin in heart failure: Results of a placebo-controlled, prospective trial of each agent and the combination, abstract. *Circulation* 1987;76(suppl 4):256. 3. Arnold SB, Byrd RC, Meister W, et al: Long-term digitalis therapy improves left ventricular function in heart failure. *N Engl J Med* 1980;303:1443-1448. 4. Alicandri C, Fariello R, Boni E, et al: Comparison of captopril and digoxin in mild to moderate heart failure. *Postgrad Med J* 1986;62(suppl 1):170-175.

IN THE EARLY TREATMENT OF CHF

LANOXIN[®]

(digoxin) Tablets

Unique inotropic support for the failing heart.

See brief summary of prescribing information on following page.

LANOXIN® (DIGOXIN) TABLETS

125 µg (0.125 mg) Scored I.D. Imprint Y3B (yellow)
250 µg (0.25 mg) Scored I.D. Imprint X3A (white)
500 µg (0.5 mg) Scored I.D. Imprint T9A (green)

Before using Lanoxin Tablets, the physician should be thoroughly familiar with the basic pharmacology of this drug as well as its drug interactions, indications, and usage.

DESCRIPTION: Lanoxin is digoxin, one of the cardiac (or digitalis) glycosides, a closely related group of drugs having in common specific effects on the myocardium.

INDICATIONS AND USAGE:

Heart Failure: The increased cardiac output resulting from the inotropic action of digoxin ameliorates the disturbances characteristic of heart failure (venous congestion, edema, dyspnea, orthopnea and cardiac asthma).

Digoxin is more effective in "low output" (pump) failure than in "high output" heart failure secondary to arteriovenous fistula, anemia, infection or hyperthyroidism.

Digoxin is usually continued after failure is controlled, unless some known precipitating factor is corrected. Studies have shown, however, that even though hemodynamic effects can be demonstrated in almost all patients, corresponding improvement in the signs and symptoms of heart failure is not necessarily apparent. Therefore, in patients in whom digoxin may be difficult to regulate, or in whom the risk of toxicity may be great (e.g., patients with unstable renal function or whose potassium levels tend to fluctuate) a cautious withdrawal of digoxin may be considered. If digoxin is discontinued, the patient should be regularly monitored for clinical evidence of recurrent heart failure.

CONTRAINDICATIONS: Digitalis glycosides are contraindicated in ventricular fibrillation.

In a given patient, an untoward effect requiring permanent discontinuation of other digitalis preparations usually constitutes a contraindication to digoxin. Hypersensitivity to digoxin itself is a contraindication to its use. Allergy to digoxin, though rare, does occur. It may not extend to all such preparations, and another digitalis glycoside may be tried with caution.

WARNINGS: Digitalis alone or with other drugs has been used in the treatment of obesity. This use of digoxin or other digitalis glycosides is unwarranted. Moreover, since they may cause potentially fatal arrhythmias or other adverse effects, the use of these drugs solely for the treatment of obesity is dangerous.

Anorexia, nausea, vomiting and arrhythmias may accompany heart failure or may be indications of digitalis intoxication. Clinical evaluation of the cause of these symptoms should be attempted before further digitalis administration. In such circumstances determination of the serum digoxin concentration may be an aid in deciding whether or not digitalis toxicity is likely to be present. If the possibility of digitalis intoxication cannot be excluded, cardiac glycosides should be temporarily withheld, if permitted by the clinical situation.

Patients with renal insufficiency require smaller than usual maintenance doses of digoxin (see DOSAGE AND ADMINISTRATION section in the complete prescribing information).

Heart failure accompanying acute glomerulonephritis requires extreme care in digitalization. Relatively low loading and maintenance doses and concomitant use of antihypertensive drugs may be necessary and careful monitoring is essential. Digoxin should be discontinued as soon as possible.

Patients with severe carditis, such as carditis associated with rheumatic fever or viral myocarditis, are especially sensitive to digoxin-induced disturbances of rhythm.

Newborn infants display considerable variability in their tolerance to digoxin. Premature and immature infants are particularly sensitive, and dosage must not only be reduced but must be individualized according to their degree of maturity.

Note: Digitalis glycosides are an important cause of accidental poisoning in children.

PRECAUTIONS:

General: Digoxin toxicity develops more frequently and lasts longer in patients with renal impairment because of the decreased excretion of digoxin. Therefore, it should be anticipated that dosage requirements will be decreased in patients with moderate to severe renal disease (see DOSAGE AND ADMINISTRATION section in the complete prescribing information). Because of the prolonged half-life, a longer period of time is required to achieve an initial or new steady-state concentration in patients with renal impairment than in patients with normal renal function.

In patients with hypokalemia, toxicity may occur despite serum digoxin concentrations within the "normal range", because potassium depletion sensitizes the myocardium to digoxin. Therefore, it is desirable to maintain normal serum potassium levels in patients being treated with digoxin. Hypokalemia may result from diuretic, amphotericin B or corticosteroid therapy, and from dialysis or mechanical suction of gastrointestinal secretions. It may also accompany malnutrition, diarrhea, prolonged vomiting, old age and long-standing heart failure. In general, rapid changes in serum potassium or other electrolytes should be avoided, and intravenous treatment with potassium should be reserved for special circumstances as described below (see TREATMENT OF ARRHYTHMIAS PRODUCED BY OVERDOSAGE section).

Calcium, particularly when administered rapidly by the intravenous route, may produce serious arrhythmias in digitalized patients. Hypercalcemia from any cause predisposes the patient to digitalis toxicity. On the other hand, hypocalcemia can nullify the effects of digoxin in man; thus, digoxin may be ineffective until serum calcium is restored to normal. These interactions are related to the fact that calcium affects contractility and excitability of the heart in a manner similar to digoxin.

Hypomagnesemia may predispose to digitalis toxicity. If low magnesium levels are detected in a patient on digoxin, replacement therapy should be instituted.

Quinidine, verapamil, and amiodarone cause a rise in serum digoxin concentration, with the implication that digitalis intoxication may result. This rise appears to be proportional to the dose. The effect is mediated by a reduction in the digoxin clearance and, in the case of quinidine, decreased volume of distribution as well.

Certain antibiotics may increase digoxin absorption in patients who convert digoxin to inactive metabolites in the gut (see Pharmacokinetics portion of the CLINICAL PHARMACOLOGY section in the complete prescribing information). Recent studies have shown that specific colonic bacteria in the lower gastrointestinal tract convert digoxin to cardioinactive reduction products, thereby reducing its bioavailability. Although inactivation of these bacteria by antibiotics is rapid, the serum digoxin concentration will rise at a rate consistent with the elimination half-life of digoxin. The magnitude of rise in serum digoxin concentration relates to the extent of bacterial inactivation, and may be as much as two-fold in some cases. Patients with acute myocardial infarction or severe pulmonary disease may be unusually sensitive to digoxin-induced disturbances of rhythm.

Atrial arrhythmias associated with hypermetabolic states (e.g., hyperthyroidism) are particularly resistant to digoxin treatment. Large doses of digoxin are not recommended as the only treatment of these arrhythmias and care must be taken to avoid toxicity if large doses of digoxin are required. In hypothyroidism, the digoxin requirements are reduced. Digoxin responses in patients with compensated thyroid disease are normal.

Reduction of digoxin dosage may be desirable prior to electrical cardioversion to avoid induction of ventricular arrhythmias, but the physician must consider the consequences of rapid increase in ventricular response to atrial fibrillation if digoxin is withheld 1 to 2 days prior to cardioversion. If there is a suspicion that digitalis toxicity exists, elective cardioversion should be delayed. If it is not prudent to delay cardioversion, the energy level selected should be minimal at first and carefully increased in an attempt to avoid precipitating ventricular arrhythmias.

Incomplete AV block, especially in patients with Stokes-Adams attacks, may progress to advanced or complete heart block if digoxin is given.

In some patients with sinus node disease (i.e., Sick Sinus Syndrome), digoxin may worsen sinus bradycardia or sinoatrial block.

In patients with Wolff-Parkinson-White Syndrome and atrial fibrillation, digoxin can enhance transmission of impulses through the accessory pathway. This effect may result in extremely rapid ventricular rates and even ventricular fibrillation.

Digoxin may worsen the outflow obstruction in patients with idiopathic hypertrophic subaortic stenosis (IHSS). Unless cardiac failure is severe, it is doubtful whether digoxin should be employed.

Patients with chronic constrictive pericarditis may fail to respond to digoxin. In addition, slowing of the heart rate by digoxin in some patients may further decrease cardiac output.

Patients with heart failure from amyloid heart disease or constrictive cardiomyopathies respond poorly to treatment with digoxin.

Digoxin is not indicated for the treatment of sinus tachycardia unless it is associated with heart failure.

Digoxin may produce false positive ST-T changes in the electrocardiogram during exercise testing.

Intramuscular injection of digoxin is extremely painful and offers no advantages unless other routes of administration are contraindicated.

Laboratory Tests: Patients receiving digoxin should have their serum electrolytes and renal function (BUN and/or serum creatinine) assessed periodically; the frequency of assessments will depend on the clinical setting. For discussion of serum digoxin concentrations, see DOSAGE AND ADMINISTRATION section in the complete prescribing information.

Drug Interactions: Potassium-depleting corticosteroids and diuretics may be major contributing factors to digitalis toxicity. Calcium, particularly if administered rapidly by the intravenous route, may produce serious arrhythmias in digitalized patients. Quinidine, verapamil, and amiodarone cause a rise in serum digoxin concentration, with the implication that digitalis intoxication may result. Certain antibiotics increase digoxin absorption in patients who inactivate digoxin by bacterial metabolism in the lower intestine, so that digitalis intoxication may result. Propantheline and diphenoxylate, by decreasing gut motility, may increase digoxin absorption. Antacids, kaolin-pectin, sulfasalazine, neomycin, cholestyramine and certain anticancer drugs may interfere with intestinal digoxin absorption, resulting in unexpectedly low serum concentrations. There have been inconsistent reports regarding the effects of other drugs on the serum digoxin concentration. Thyroid administration to a digitalized hypothyroid patient may increase the dose requirement of digoxin. Concomitant use of digoxin and sympathomimetics increases the risk of cardiac arrhythmias because both enhance ectopic pacemaker activity. Succinylcholine may cause a sudden extrusion of potassium from muscle cells, and may thereby cause arrhythmias in digitalized patients. Although β adrenergic blockers or calcium channel blockers and digoxin may be useful in combination to control atrial fibrillation, their additive effects on AV node conduction can result in complete heart block.

Due to the considerable variability of these interactions, digoxin dosage should be carefully individualized when patients receive coadministered medications.

Carcinogenesis, Mutagenesis, Impairment of Fertility: There have been no long-term studies performed in animals to evaluate carcinogenic potential.

Pregnancy: Teratogenic Effects: Pregnancy Category C. Animal reproduction studies have not been conducted with digoxin. It is also not known whether digoxin can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Digoxin should be given to a pregnant woman only if clearly needed.

Nursing Mothers: Studies have shown that digoxin concentrations in the mother's serum and milk are similar. However, the estimated daily dose to a nursing infant will be far below the usual infant maintenance dose. Therefore, this amount should have no pharmacologic effect upon the infant. Nevertheless, caution should be exercised when digoxin is administered to a nursing woman.

ADVERSE REACTIONS: The frequency and severity of adverse reactions to digoxin depend on the dose and route of administration, as well as on the patient's underlying disease or concomitant therapies (see PRECAUTIONS section). The overall incidence of adverse reactions has been reported as 5 to 20%, with 15 to 20% of them being considered serious (one to four percent of patients receiving digoxin). Evidence suggests that the incidence of toxicity has decreased since the introduction of the serum digoxin assay and improved standardization of digoxin tablets. Cardiac toxicity accounts for about one-half, gastrointestinal disturbances for about one-fourth, and CNS and other toxicity for about one-fourth of these adverse reactions.

Adults:

Cardiac: Unifocal or multifocal ventricular premature contractions, especially in bigeminal or trigeminal patterns, are the most common arrhythmias associated with digoxin toxicity in adults with heart disease. Ventricular tachycardia may result from digitalis toxicity. Atrioventricular (AV) dissociation, accelerated junctional (nodal) rhythm and atrial tachycardia with block are also common arrhythmias caused by digoxin overdosage. Excessive slowing of the pulse is a clinical sign of digoxin overdosage. AV block (Wenckebach) of increasing degree may proceed to complete heart block.

Note: The electrocardiogram is fundamental in determining the presence and nature of these cardiac disturbances. Digoxin may also induce other changes in the ECG (e.g., PR prolongation, ST depression), which represent digoxin effect and may or may not be associated with digitalis toxicity.

Gastrointestinal: Anorexia, nausea, vomiting and less commonly diarrhea are common early symptoms of overdosage. However, uncontrolled heart failure may also produce such symptoms. Digitalis toxicity very rarely may cause abdominal pain and hemorrhagic necrosis of the intestines.

CNS: Visual disturbances (blurred or yellow vision), headache, weakness, apathy and psychosis can occur.

Other: Gynecomastia is occasionally observed.

Infants and Children: Toxicity differs from the adult in a number of respects. Anorexia, nausea, vomiting, diarrhea and CNS disturbances may be present but are rare as initial symptoms in infants. Cardiac arrhythmias are more reliable signs of toxicity. Digoxin in children may produce any arrhythmia.

The most commonly encountered are conduction disturbances or supra-ventricular tachyarrhythmias, such as atrial tachycardia with or without block, and junctional (nodal) tachycardia. Ventricular arrhythmias are less common. Sinus bradycardia may also be a sign of impending digoxin intoxication, especially in infants, even in the absence of first degree heart block. Any arrhythmia or alteration in cardiac conduction that develops in a child taking digoxin should initially be assumed to be a consequence of digoxin intoxication.

TREATMENT OF ARRHYTHMIAS PRODUCED BY OVERDOSAGE:

Adults: Digoxin should be discontinued until all signs of toxicity are gone. Discontinuation may be all that is necessary if toxic manifestations are not severe and appear only near the expected time for maximum effect of the drug.

Potassium salts are commonly used, particularly if hypokalemia is present. Potassium chloride in divided oral doses totaling 3 to 6 grams of the salt (40 to 80 mEq K⁺) for adults may be given provided renal function is adequate (see below for potassium recommendations in Infants and Children).

When correction of the arrhythmia is urgent and the serum potassium concentration is low or normal, potassium should be administered intravenously in 5% dextrose injection. For adults, a total of 40 to 80 mEq (diluted to a concentration of 40 mEq per 500 ml) may be given at a rate not exceeding 20 mEq per hour, or slower if limited by pain due to local irritation. Additional amounts may be given if the arrhythmia is uncontrolled and potassium well-tolerated. ECG monitoring should be performed to watch for any evidence of potassium toxicity (e.g., peaking of T waves) and to observe the effect on the arrhythmia. The infusion may be stopped when the desired effect is achieved.

Note: Potassium should not be used and may be dangerous in heart block due to digoxin, unless primarily related to supra-ventricular tachycardia.

Other agents that have been used for the treatment of digoxin intoxication include lidocaine, procainamide, propranolol and phenytoin, although use of the latter must be considered experimental. In advanced heart block, temporary ventricular pacing may be beneficial. Digoxin Immune Fab (Ovine), Digibind®, can be used to reverse potentially life-threatening digoxin (or digitoxin) intoxication. Improvement in signs and symptoms of digitalis toxicity usually begins within 12 hours of Digibind administration. Each 40 mg vial of Digibind will neutralize 0.6 mg of digoxin (which is a usual body store of an adequately digitalized 70 kg patient).

Infants and Children: See Adult section for general recommendations for the treatment of arrhythmias produced by overdosage and for cautions regarding the use of potassium.

If a potassium preparation is used to treat toxicity, it may be given orally in divided doses totaling 1 to 1.5 mEq K⁺ per kilogram (kg) body weight (1 gram of potassium chloride contains 13.4 mEq K⁺).

When correction of the arrhythmia with potassium is urgent, approximately 0.5 mEq/kg of potassium per hour may be given intravenously, with careful ECG monitoring. The intravenous solution of potassium should be dilute enough to avoid local irritation; however, especially in infants, care must be taken to avoid intravenous fluid overload.

DOSAGE AND ADMINISTRATION: Recommended dosages are average values that may require considerable modification because of individual sensitivity or associated conditions. Diminished renal function is the most important factor requiring modification of recommended doses.

In deciding the dose of digoxin, several factors must be considered:

1. The disease being treated. Atrial arrhythmias may require larger doses than heart failure.
2. The body weight of the patient. Doses should be calculated based upon lean or ideal body weight.
3. The patient's renal function, preferably evaluated on the basis of creatinine clearance.
4. Age is an important factor in infants and children.
5. Concomitant disease states, drugs or other factors likely to alter the expected clinical response to digoxin (see PRECAUTIONS and Drug Interactions sections).

Consult complete product information before prescribing.

Copr. © 1988 Burroughs Wellcome Co. All rights reserved.

IN THE EARLY TREATMENT OF CHF

LANOXIN®

(digoxin) Tablets



Wellcome

Burroughs Wellcome Co.

Research Triangle Park, NC 27709

**ROSALYN P. STERLING-SCOTT, M.D.**

Assistant Professor of Surgery, UCLA School of Medicine and Drew University of Medicine and Science, Los Angeles

Associate Surgeon, Department of Cardiovascular & Thoracic Surgery, Centinela Hospital Medical Center, Los Angeles

Major, U.S. Army Reserve

EDUCATION Rensselaer Polytechnic Institute, Troy, NY, B.S. Chemistry; NYU School of Medicine, New York, M.D.

RESIDENCY Boston University School of Medicine (Cardiovascular); Saint Vincent's and St. Claire's Hospitals, New York City (General Surgery)

FELLOWSHIP First Mary A. Fraley Cardiovascular Surgical Research Fellow at the Texas Heart Institute, Houston

OUTSTANDING ACHIEVEMENTS Author of numerous articles, including "Indications for Early Bypass Grafting Following Intracoronary Streptokinase"; author of "The Female Surgeon—Dawn of a New Era," chapter in *A Century of Black Surgeons—The U.S.A. Experience*; Board of Directors, Association of Black Cardiologists; Secretary, Drew Society

“The caliber of physicians you meet in the Army Reserve exposes you to new ways of looking at a problem. It's easy for young surgeons to become entrenched in one method, but in the Army Reserve you'll have the chance to work with outstanding physicians in your own specialty, and often learn new ideas that will help you to improve your own approach to clinical or research problems,” says Dr. Sterling-Scott.

The Army Reserve can offer physicians a variety of challenging options such as teaching, research, unique training programs, and the opportunity to practice in prestigious Army medical centers.

“Joining the Army Reserve enabled me to take advantage of a number of conferences, including one at Walter Reed, where I worked with thoracic surgical colleagues, while conducting my own research project.”

We understand the time demands on a busy physician. So the Army Reserve offers training programs that will allow you to be flexible about the time you serve.

For more information about specific programs, call toll-free 1-800-USA-ARMY.

**ARMY RESERVE MEDICINE.
BE ALL YOU CAN BE.**



A NEW H₂ Antagonist

AXID[®] 300mg

nizatidine

Effective once-nightly
duodenal ulcer therapy available in a
Unique Convenience Pak
for better patient compliance



AXID[®] nizatidine capsules

Brief Summary. Consult the package insert for prescribing information

Indications and Usage. Axid is indicated for up to eight weeks for the treatment of active duodenal ulcer. In most patients, the ulcer will heal within four weeks.

Axid is indicated for maintenance therapy for duodenal ulcer patients, at a reduced dosage of 150 mg h.s. after healing of an active duodenal ulcer. The consequences of continuous therapy with Axid for longer than one year are not known.

Contraindication. Axid is contraindicated in patients with known hypersensitivity to the drug and should be used with caution in patients with hypersensitivity to other H₂-receptor antagonists.

Precautions: General.—1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Because nizatidine is excreted primarily by the kidney, dosage should be reduced in patients with moderate to severe renal insufficiency.

3. Pharmacokinetic studies in patients with hepatorenal syndrome have not been done. Part of the dose of nizatidine is metabolized in the liver. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

Laboratory Tests.—False-positive tests for urobilinogen with Multistix[®] may occur during therapy with nizatidine.

Drug Interactions.—No interactions have been observed between Axid and theophylline, chloridazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

Carcinogenesis, Mutagenesis, Impairment of Fertility.—A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high dose males compared to placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement

compared to concurrent controls, and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive, and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery is not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, and the mouse lymphoma assay.

In a two-generation, perinatal and postnatal, fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy—Teratogenic Effects—Pregnancy Category C.—Oral reproduction studies in rats at doses up to 300 times the human dose, and in Dutch Belted rabbits at doses up to 55 times the human dose, revealed no evidence of impaired fertility or teratogenic effect; but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers.—Nizatidine is secreted and concentrated in the milk of lactating rats. Pups reared by treated lactating rats had depressed growth rates. Although no studies have been conducted in lactating women, nizatidine is assumed to be secreted in human milk, and caution should be exercised when nizatidine is administered to nursing mothers.

Pediatric Use.—Safety and effectiveness in children have not been established.

Use in Elderly Patients.—Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations. Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo. Among the more common adverse events in the domestic placebo-controlled trials, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common in the nizatidine group. A variety of less common events was also reported, it was not possible to

determine whether these were caused by nizatidine.

Hepatic.—Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients possibly or probably related to nizatidine. In some cases, there was marked elevation of SGPT, SGPT enzymes (greater than 500 IU/L), and in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients. All abnormalities were reversible after discontinuation of Axid.

Cardiovascular.—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

Endocrine.—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo. Rare reports of gynecomastia occurred.

Hematologic.—Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H₂-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs.

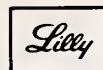
Integumental.—Sweating and urticaria were reported significantly more frequently in nizatidine than in placebo patients. Rash and exfoliative dermatitis were also reported.

Other.—Hyperuricemia unassociated with gout or nephrolithiasis was reported.

Overdosage: There is little clinical experience with overdosage of Axid in humans. If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance by approximately 84%.

Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal. Intravenous LD₅₀ values in the rat and mouse were 301 mg/kg and 232 mg/kg respectively. PV 2091 AMP [041286]

Axid[®] (nizatidine, Lilly)



Eli Lilly and Company
Indianapolis, Indiana
46285

NZ-2903-B-849356 © 1988, ELI LILLY AND COMPANY

Axid[®] (nizatidine, Lilly)

**“I’ve gone
through a bypass,
6 months of
physical therapy
and now
I’m supposed
to come up
with a \$150,000
malpractice
tail premium.”**



This could be a real situation. Worse, it could happen to you because of a “loop-hole” in your malpractice coverage.

Even though Claims Made malpractice insurance extends protection if you face a lawsuit after retirement or death, most policies provide no protection if you return to work during a disability, even if you return to your occupational specialty.

So you may be forced to pay a whopping premium – the tail premium – in order to maintain your malpractice tail coverage.

If your malpractice insurance company doesn’t waive this tail premium, there’s only one policy in the marketplace designed to cover it: MONY’s new Distinction Disability Insurance Series.

DISTINCTION™

The Intelligent Choice In Disability Income



Sue Anne Schoonderwoerd
P.O. Box 95161, Raleigh 27625
(919) 872-8666

The Mutual Life Insurance Company of New York, NY, NY.

Malpractice protection is only part of the story.

Malpractice Tail Premium Coverage is only one of the reasons MONY’s Distinction is a different approach to disability insurance. It meets your needs.

- ☐ Your coverage cannot be canceled. No restrictions can ever be added.
- ☐ We’re a mutual company and any dividends we pay can actually reduce the cost of your policy.

Please send me more information on MONY’s Malpractice Tail Rider.

Name: _____

Address: _____

Phone: () - Age: Tail Amount: _____

Sue Anne Schoonderwoerd
(919/872-8666)



P.O. Box 95161
Raleigh, North Carolina 27625

The Direct Line To Security And Peace of Mind



CRUMPTON COMPANY

Many N.C. Physicians participate in the
**Crumpton Plan of Disability Income
Protection —**

a plan that provides income when you cannot!

Because **we care** we have

- Benefits designed to meet today's needs
- Personalized claim service
- New broadened portfolio of insurance products

NOT PROMISES BUT PERFORMANCE
from the Disability Income Specialists who
have served N.C. Professionals for nearly
50 years!

Take a few minutes to call us today for
information on our expanded products and
services.

You will be glad you did!



CRUMPTON COMPANY
PROFESSIONAL INSURANCE ADMINISTRATORS
POST OFFICE BOX 51939, DURHAM, NC 27717-1939
919/493-2441 800/672-1674 (NC) 919/489-7380 (FAX)

OFFICERS — 1988-1989

<i>President</i>	Ernest B. Spangler, M.D., Drawer X-3, Greensboro 27402
<i>President-Elect</i>	T. Reginald Harris, M.D., 808 Schenck St., Shelby 28150
<i>First Vice-President</i>	John T. Dees, M.D., P.O. Box 815, Burgaw 28425
<i>Second Vice-President</i>	Elizabeth P. Kanof, M.D., 3400 Executive Dr., Ste. 207, Raleigh 27609
<i>Secretary-Treasurer</i>	Thomas F. O'Brien, Jr., M.D., ECU School of Medicine, Greenville 27834
<i>Speaker</i>	John A. Fagg, M.D., 2901 Maplewood Ave., Winston-Salem 27103
<i>Vice-Speaker</i>	Alfred L. Ferguson, M.D., 6 Doctor's Park, Greenville 27834
<i>Immediate Past-President</i>	Henry J. Carr, Jr., M.D., 603 Beaman St., Clinton 28328
<i>Executive Vice-President</i>	George E. Moore, P.O. Box 27167, 222 N. Person St., Raleigh 27611

COUNCILORS AND VICE-COUNCILORS — 1988-1989

<i>First District</i>	John E. Cook, M.D., P.O. Box 96, Camden 27921 (1989)
<i>Vice-Councilor</i>	Robert E. Lane, M.D., 118 W. Market St., Box 487, Hertford 27944 (1989)
<i>Second District</i>	Charles L. Herring, M.D., 310 Glenwood Ave., Kinston 28501 (1991)
<i>Vice-Councilor</i>	Neil C. Bender, M.D., P.O. Box 68, Pollocksville 28573 (1991)
<i>Third District</i>	Charles L. Garrett, Jr., M.D., Onslow Mem. Hospital, Jacksonville 28540 (1991)
<i>Vice-Councilor</i>	Michael J. Donahue, M.D., 1505 Medical Center Drive, Wilmington 28401 (1991)
<i>Fourth District</i>	Gloria F. Graham, M.D., 702 Broad St., Wilson 27893 (1989)
<i>Vice-Councilor</i>	Daniel L. Crocker, M.D., 100 Nash Med. Arts Mall, Rocky Mount 27801 (1989)
<i>Fifth District</i>	Charles A. Hoffman, Jr., M.D., 513 Owen Dr., Fayetteville 28304 (1990)
<i>Vice-Councilor</i>	Roy A. Weaver, M.D., P.O. Box 2000, Fayetteville 28302 (1990)
<i>Sixth District</i>	Richard L. Taylor, M.D., 1018 College St., Oxford 27565 (1989)
<i>Vice-Councilor</i>	Elizabeth P. Kanof, M.D., 3400 Executive Dr., Ste. 207, Raleigh 27609 (1989)
<i>Seventh District</i>	Richard V. Liles, Jr., M.D., 320 Yadkin St., Albemarle 28001 (1990)
<i>Vice-Councilor</i>	William F. Milam, M.D., P.O. Box 1268, Shelby 28150 (1990)
<i>Eighth District</i>	Clifford R. Guy, M.D., 250 Charlois Blvd., Winston-Salem 27103 (1991)
<i>Vice-Councilor</i>	J. Grayson Hall, M.D., P.O. Box 158, Dobson 27017 (1991)
<i>Ninth District</i>	Donald D. McNeill, Jr., M.D., Drawer 680, Lenoir 28645 (1991)
<i>Vice-Councilor</i>	W. Grimes Byerly, Jr., M.D., 24 Second Ave., N.E., Hickory 28601 (1991)
<i>Tenth District</i>	John A. Henderson, M.D., 117 Rathfarnham Circle, Asheville 28803 (1990)
<i>Vice-Councilor</i>	F. Maxton Mauney, Jr., M.D., 257 McDowell St., Asheville 28803 (1990)

SECTION CHAIRMEN — 1988-1989

<i>Allergy & Clinical Immunology</i>	Millie P. Hancock, M.D., 221 13th Ave. Pl., NW, Hickory 28601
<i>Anesthesiology</i>	D. Clark Bright, M.D., 1705 W. Sixth St., Greenville 27834
<i>Dermatology</i>	A. Elise Weinrich, M.D., 2609 N. Duke St., Ste. 505, Durham 27704
<i>Emergency Medicine</i>	Jeffrey W. Runge, M.D., P.O. Box 32861, Charlotte 28232
<i>Family Practice</i>	Frank W. Leak, M.D., Clinton Medical Center, Clinton 28328
<i>Hospital Medical Staffs</i>	Philip H. Pearce, M.D., 1821 Green St., Durham 27705
<i>Internal Medicine</i>	Perry William Aycock, Jr., M.D., 1896 Remount Rd., Gastonia 28054
<i>Medical Students</i>	Christopher Jones, 408 Rotary Ave., Greenville 27858
<i>Neurological Surgery</i>	J. Maurice McWhorter, M.D., 300 S. Hawthorne Rd., Winston-Salem 27103
<i>Neurology</i>	Frank Fleming, M.D., 425 Stantonsburg Rd., Greenville 27834
<i>Obstetrics & Gynecology</i>	Robert G. Deyton, Jr., M.D., 101 Bethesda Dr., Greenville 27834
<i>Ophthalmology</i>	Donald P. Renaldo, M.D., 1900 Randolph Rd., Ste. 800, Charlotte 28207
<i>Orthopaedics</i>	John M. Harrelson, M.D., Duke Medical Center, Box 3023, Durham 27710
<i>Otolaryngology & Maxillofacial Surgery</i>	Robert C. Williams, Jr., M.D., P.O. Box 2484, Hickory 28603
<i>Pathology</i>	R. Lee West, M.D., Rt. 38, Box 769, Greenville 27834
<i>Pediatrics</i>	Robert P. Schwartz, M.D., Charlotte Mem. Hosp., P.O. Box 32861, Charlotte 28232
<i>Plastic & Reconstructive Surgery</i>	Noel D. McDevitt, M.D., 1 Memorial Dr., Pinehurst 28374
<i>Psychiatry</i>	Eric W. Peterson, M.D., P.O. Box 1101, Asheville 28802
<i>Public Health & Education</i>	Alan W. Cross, M.D., UNC Clinical Science Bldg., Chapel Hill 27514
<i>Radiology & Nuclear Medicine</i>	Michael D. Weaver, M.D., 1711 W. 6th St., Greenville 27834
<i>Resident Physicians</i>	Mary Ann Contogiannis, M.D., 3529 Spicebush Tr., Greensboro 27410
<i>Surgery</i>	Timothy C. Pennell, M.D., Bowman Gray, Dept. of Surgery, Winston-Salem 27103
<i>Urology</i>	Joseph M. Jenkins, M.D., 604 E. 12th St., Washington 27889
<i>Young Physicians (1990)</i>	

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION

LOUIS DES. SHAFFNER, M.D., 740 N. Pine Valley Rd., Winston-Salem 27106 — 2-year term (January 1, 1988-December 31, 1989)
FRANK R. REYNOLDS, M.D., 1613 Dock St., Wilmington 28401 — 2-year term (January 1, 1989-December 31, 1990)
JESSE CALDWELL, JR., M.D., 1307 Park Lane, Gastonia 28052 — 2-year term (January 1, 1988-December 31, 1989)
E. HARVEY ESTES, JR., M.D., 407 Crutchfield St., Durham 27704 — 2-year term (January 1, 1988-December 31, 1989)
D. E. WARD, JR., M.D., 2604 N. Elm St., Lumberton 28358 — 2-year term (January 1, 1988-December 31, 1989)
FRANK SOHMER, M.D., 9808 Reynolda Rd., Tobaccoville 27050 — 2 year term (January 1, 1988-December 31, 1989)
THOMAS B. DAMERON, JR., M.D., P.O. Box 10707, Raleigh 27605 — 2 year term (January 1, 1989-December 31, 1990)
Vacancy — 2-year term (January 1, 1989-December 31, 1990)

ALTERNATE DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION

HENRY J. CARR, JR., M.D., 603 Beaman St., Clinton 28328 — 2-year term (January 1, 1989-December 31, 1990)
 DON C. CHAPLIN, M.D., Kernodle Clinic, 316 Graham-Hopedale Rd., Burlington 27215 — 2-year term (January 1, 1988-December 31, 1989)
 JOHN T. DEES, M.D., P.O. Box 815, Burgaw 28425 — 2-year term (January 1, 1988-December 31, 1989)
 JOHN A. FAGG, M.D., 2901 Maplewood Ave., Winston-Salem 27103 — 2-year term (January 1, 1989-December 31, 1990)
 JOHN W. FOUST, M.D., 3535 Randolph Rd., Charlotte 28211 — 2-year term (January 1, 1988-December 31, 1989)
 T. REGINALD HARRIS, M.D., 808 Schenck St., Shelby 28150 — 2-year term (January 1, 1988-December 31, 1989)
 ERNEST B. SPANGLER, M.D., Drawer X-3, Greensboro 27402 — 2-year term (January 1, 1989-December 31, 1990)
 CHARLES L. GARRETT, JR., M.D., Onslow Memorial Hospital, Jacksonville 28540 — 2-year term (January 1, 1988-December 31, 1989)

HEADQUARTERS STAFF

GEORGE E. MOORE Executive Vice-President
 MARGARET WOODCOCK Director, Administrative Affairs
 DONALD R. WALL Director, Business Affairs
 PATRICIA K. HODGSON Director, Communications
 ANN L. SAWYER Director, Governmental Affairs
 MONA H. SAULS Executive Administrator, Auxiliary
 KATHERINE MOORE Executive Assistant, Accounting Services
 ALAN MCKENZIE Executive Assistant, Communications
 BUD COWAN Executive Assistant, Communications Production
 ALAN SKIPPER Executive Assistant, Conferences
 DEBORAH NELSON Executive Assistant, Health Policy & Programs
 BOB BURNS Executive Assistant, Legislative Relations
 DEANNA GODWIN Executive Assistant, Membership
 CAROL RUSSELL Executive Assistant, Specialty Societies
 Executive Assistant, Governmental Relations
 LINDA CARTER Administrative Assistant to Executive Vice-President
 Coordinator, AIDS and STD's and Indigent Care Programs
 LUCY GROSS Administrative Assistant, Administrative Affairs
 GARRY LINTON Production Assistant
 SUSAN FORD Secretary, Administrative Affairs
 PATRICIA STRICKLAND Secretary, Administrative Affairs
 KELLY WILKERSON Secretary, Business Affairs
 SARAH JENKINS Secretary, Communications
 JEAN LEWIS Secretary, Governmental Affairs
 KIM DEFORD Secretary, Governmental Affairs
 Jacqueline E. Hyrhorchuk Receptionist

NORTH CAROLINA MEDICAL JOURNAL

For Doctors and their Patients

August 1988, Volume 49, Number 8

Published Monthly as the Official Organ of the North Carolina Medical Society

(ISSN-0029-2559)

STAFF

Eugene A. Stead, Jr., M.D.
 Rt. 1, Box 194, Bullock
 EDITOR
 919/693-4531
 Francis A. Neelon, M.D.
 Durham
 ASSOCIATE EDITOR
 F. Maxton Mauney, Jr., M.D.
 Asheville
 ASSOCIATE EDITOR
 Eben Alexander, Jr., M.D.
 Winston-Salem
 ASSOCIATE EDITOR
 William B. Blythe, M.D.
 Chapel Hill
 ASSOCIATE EDITOR
 William W. Fore, M.D.
 Greenville
 ASSOCIATE EDITOR
 Edward C. Halperin, M.D.
 Durham
 ASSOCIATE EDITOR
 Laurel Ferejohn
 Durham
 MANAGING EDITOR
 919/684-5728

Jane Whalen
 Durham
 EDITORIAL ASSISTANT
 George E. Moore
 Raleigh
 BUSINESS MANAGER

EDITORIAL BOARD

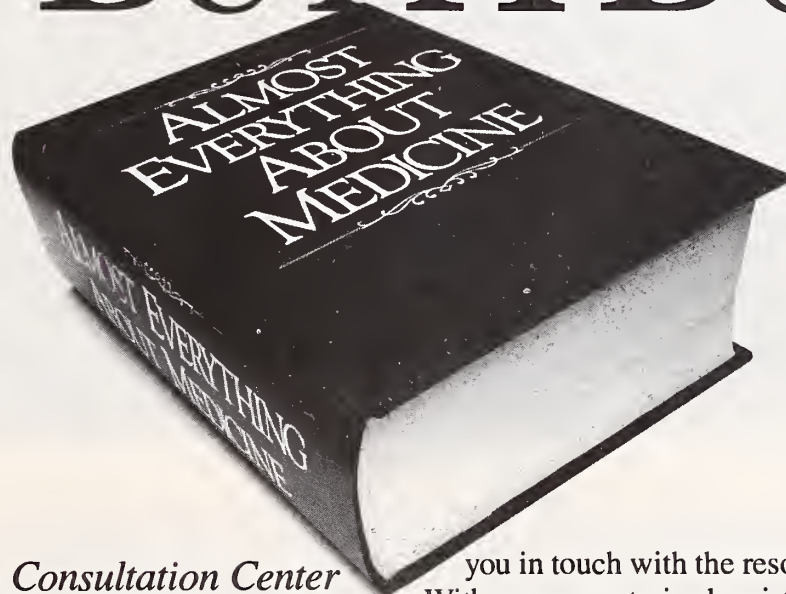
Charles W. Styron, M.D.
 Raleigh
 CHAIRMAN
 Edwin W. Monroe, M.D.
 Greenville
 Robert W. Prichard, M.D.
 Winston-Salem
 Louis deS. Shaffner, M.D.
 Winston-Salem
 Jay Arena, M.D.
 Durham
 Jack Hughes, M.D.
 Durham
 William B. Blythe, M.D.
 Chapel Hill
 Margaret N. Harker, M.D.
 Morehead City

The appearance of an advertisement in this publication does not constitute any endorsement of the subject or claims of the advertisement.

The Society is not to be considered as endorsing the views and opinions advanced by authors of papers delivered at the Annual Meeting or published in the official publication of the Society. — Constitution and Bylaws of the North Carolina Medical Society, Chapter IV, Section 3, page 4.

NORTH CAROLINA MEDICAL JOURNAL
 Box 3910, Duke University Medical Center, Durham, NC 27710 (919/684-5728), is owned and published by The North Carolina Medical Society under the direction of its Editorial Board. Copyright © The North Carolina Medical Society 1988. Address manuscripts and communications regarding editorial matters, advertising, subscription rates, etc., to the Managing Editor at the Durham address. All advertisements are accepted subject to the approval of a screening committee of the State Medical Journal Advertising Bureau, 711 South Blvd., Oak Park, Illinois 60302 and/or by a Committee of the Editorial Board of the North Carolina Medical Journal in respect to strictly local advertising. Instructions to authors appear in each issue (see table of contents). Annual Subscription, \$12.00 (+ tax in NC). Single copies, \$2.00. Publication office: The Ovid Bell Press, Inc., 1201-05 Bluff St., Fulton, MO 65251. Second-class postage paid at Raleigh, North Carolina 27611 and additional mailing offices. Postmaster: Send address changes to North Carolina Medical Society, 222 N. Person St., Raleigh, NC 27611.

HOW TO EXPAND YOUR REFERENCE RESOURCES AND NOT BUY A BOOK.



The Carolina Consultation Center at the University of North Carolina medical center provides reliable help, fast and free.

The Carolina Consultation Center provides rapid access to top specialists and advanced clinical information in virtually all fields. We put 530 specialists—the entire staff of the UNC medical center—at your fingertips.

Over the past 20 months more than 5,000 physicians—one of every two practicing in North Carolina—have used the center for information, requests for support and contacts to expedite transfers of patients.

The center is staffed by trained information specialists who have only one job—to put

you in touch with the resources you need. With our computerized registry, we can make your connection quickly and see that your questions are answered in minutes.

For a free copy of the Carolina Consultation Center's Directory of Consultants, call 1-800-UNC-NCMH. This up-to-date listing of the medical staff, complete with biographies and areas of expertise, is an invaluable tool to help you determine the consultant you need, before you place your call.

The call, the directory, and the service are all free.



1-800-862-6264

Finally, A Treatment Center For Physicians



The Mary Frances Center is North Carolina's newest, and one of the nation's most complete alcohol and drug dependency treatment centers. And we believe that in order to successfully treat a patient, the referring physician should be a part of the treatment team.

You'll receive interim reports, throughout the patient's stay, from the medical director. Following treatment, we'll refer the patient back to you with complete medical information to allow you to continue success-

ful medical management.

And because we believe that chemical dependency is a family illness, we offer a unique Family Center, designed to allow the families of patients to begin their own recoveries as well.

The Mary Frances Center admits patients 24 hours a day, 365 days a year. And our medical staff is there every hour of every day. We believe that involving the referring physician is more than just professional courtesy. It's critical for continuity of care.



mary frances center

1212 Recovery Road, Box D, Tarboro, NC 27886

For more information or to refer patients, please call collect (919) 641-1111.

NCMS MEMBERSHIP CATEGORIES**REGULAR ACTIVE MEMBERS**

Active Members of the NCMS shall be the active members of the component societies, who pay dues to the NCMS and those physicians who are admitted by the Executive Council. Each component society shall be the judge of the qualifications of its members, but, as such societies are the portals to the NCMS and the AMA, only reputable physicians holding a license to practice medicine in NC shall be admitted as active members to component societies. Active member dues are \$325.00.

LIFE MEMBERS

Life Members shall consist of those current members of the NCMS who shall have retired from the active practice of medicine on or after the age of 65 and who shall have been dues paying members for 30 years; or who upon reaching the age of 70 shall have been dues paying members for 20 years providing that they have been dues paying members of the NCMS for the prior five (5) years or exempted by Council action. They shall be entitled to all the privileges enjoyed by active members. This is a dues exempt category.

EARLY RETIREMENT MEMBERS

Physicians who have been active members of the NCMS for at least 20 years and who are fully retired from the profession of medicine may become Early Retirement Members upon payment of 50% of the regular dues for Active Members and shall have all the rights and privileges of Life Membership.

SEMI-RETIRED MEMBERS

Current physician members of the NCMS who have been dues paying members of NCMS for at least 30 years, who are at least 60 years of age, and who continue to be active in the profession of medicine but are working less than 20 hours per week may qualify for Semi-Retired Membership status. These physicians shall pay dues equal to 66% of active dues until they become eligible for Life Membership.

HONORARY MEMBERS

Honorary Members must be nominated by the Council and must receive a two-thirds vote of the members of the House of Delegates. They shall be physicians distinguished by their contributions to medicine or physicians who have displayed an exceptional interest in the welfare of the NCMS; or reflected credit and honor upon the profession. They shall be exempt from all dues and assessments and, except for the right to vote and hold office, shall be entitled to all the privileges of the NCMS.

AFFILIATE MEMBERS

Upon recommendation of the component society in which they are located, those physicians who are not licensed to practice medicine in NC may be granted Affiliate Membership by the Executive Council. They shall pay annual dues at 75% of the active dues and, except for the right to vote and hold office, shall be entitled to all the privileges of the NCMS.

ASSOCIATE MEMBERS

Upon recommendation of a component society, a physician residing in North Carolina who has been a dues paying member of a state society(ies) belonging to the AMA Federation for 20 years and is retired shall pay dues at 60% of the active member dues. Those physicians in this category who are practicing 20 hours or less per week, shall pay dues at 75% of active member dues and shall have all the rights and privileges of the NCMS with the exception of holding office.

DISABILITY EXEMPT MEMBERS

Current members of the NCMS whose disability is certified by their component society and who are retired from the profession of medicine shall be exempt from all dues and assessments and shall have all the rights and privileges of active members except the right to vote or hold office.

RESIDENT/FELLOW MEMBERS

Physicians who are in training in hospitals in the US, which are accredited by the Joint Commission on Accreditation of Hospitals for residency training who are licensed to practice in NC may be admitted to membership in the NCMS directly or through membership in a component medical society for and during the period of time in which they are engaged in training. They shall have the same rights and privileges as active members and shall pay NCMS dues of \$20.00.

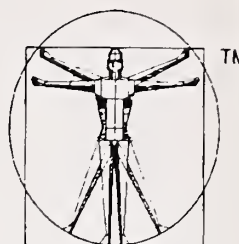
STUDENT MEMBERS

Any student who is regularly enrolled as a candidate for the degree of Doctor of Medicine in a NC medical school is eligible for NCMS student membership. These members shall enjoy all the rights and privileges of membership except voting for members of Boards or Commissions who are appointed or elected by the NCMS according to State Law. They shall pay dues of \$10.00.

Practice Management Refined

MEDICALIS

S Y S T E M V I



Featuring IBM/COMPAQ Computers



Medical Systems Division
ComputerLand of Rocky Mount

1100 Tiffany Square Rocky Mount 27804 (919) 977-7862

THE ULTIMATE TAX SHELTER.

- Fund Your Pension Plans At 25% Of Payroll With A Cost Of Only 5-11% For Staff Employees
- Add A Supplemental Retirement Plan For Key Employee Physicians And Spend No Additional Funds For Staff
- EQUALS: 85-95% Of All Retirement Funding Benefits Allocated To Key Employee Physicians!

For Information Call:

Baron Benefits Management, Inc.

A BARON FINANCIAL COMPANY

Executive Compensation and Employee Benefit Specialists

4110 Wake Forest Road, Suite 211
Raleigh, N.C. 27609
(919) 790-9904/(800) 222-8783

300 Wendover Avenue East, Suite 202
Greensboro, N.C. 27401
(919) 379-8207/(800) 822-1086

Committee and Commission Appointments 1988-1989

NOTE: The committees listed herein have been authorized by President Ernest B. Spangler, M.D., and/or as required under the Constitution and Bylaws and the Procedure and Policy Manual. Particular note should be taken of the authorization of the HOUSE OF DELEGATES of a commission form of organization activity and that all committees, excepting MEDIATION COMMITTEE, NOMINATING COMMITTEE, PLANNING COUNCIL, COORDINATING COUNCIL OF SPECIALTY SOCIETIES, are segregated under the respective commission in which the function of the committee logically rests. This will tend to eliminate overlapping and duplication in activity programs and result in coordination of the work of the Society in a manner to lessen the work of the Delegates during the Annual Meeting of the HOUSE OF DELEGATES.

(Superior figures (e.g. 21) indicate the component county society from which the member emanates, as in the membership list of the ROSTER.)

I. ADMINISTRATION COMMISSION

Edgar C. Garrabrant, M.D., **Commissioner** (919-787-7171)
P.O. Box 18946, Raleigh 27619

*Committee
Listing*
No. 3

1. Audit Committee (I-1)

William R. Hudson, M.D., **Chairman** (919-684-3834)
Duke Medical Center, Durham 27710

2. Finance Committee (I-2)

Thomas F. O'Brien, Jr., M.D., **Chairman** (919-551-4652)
ECU School of Medicine, Greenville 27834

No. 16

3. Membership Committee (I-3)

Charles L. Garrett, Jr., M.D., **Chairman** (919-353-3498)
Onslow Memorial Hospital, Jacksonville 28540

No. 26

4. Membership Services & Benefits Committee (I-4)

T. Reginald Harris, M.D., **Chairman** (704-482-1482)
808 Schenck St., Shelby 28150

No. 27

5. Procedures & Policies Committee (I-5)

Josephine E. Newell, M.D., **Chairman** (919-733-7611)
Raleigh Towne, Apt. 47, 525 Wade Ave., Raleigh 27605

No. 33

6. Professional Insurance Committee (I-6)

Julius A. Green, Jr., M.D., **Chairman** (919-787-8221)
P.O. Box 19366, Raleigh 27609

No. 34

II. ADVISORY AND STUDY COMMISSION

Jonnie H. McLeod, M.D., **Commissioner** (704-547-2171)
1504 Biltmore Dr., Charlotte 28207

*Committee
Listing*

1. Bioethics Committee (II-1)

George C. Barrett, M.D., **Chairman** (704-371-4056)
958 Cherokee Rd., Charlotte 28207

No. 5

2. Cancer Committee (II-2)

M. Robert Cooper, M.D., **Chairman** (919-748-4300)
300 S. Hawthorne Rd., Winston-Salem 27103

No. 6

3. Health Care Professionals Liaison Committee (II-3)

John L. McCain, M.D., **Chairman** (919-291-7001)
Wilson Clinic, Wilson 27893

No. 17

4. Traffic Safety Committee (II-4)

George Johnson, Jr., M.D., **Chairman** (919-966-3391)
UNC, Dept. of Surgery, CB #7050, Chapel Hill 27599

No. 38

III. ANNUAL CONVENTION COMMISSION

Ann F. Wolfe, M.D. **Commissioner** (919-733-3816)
6912 Hunters Way, Raleigh 27615

*Committee
Listing*

1. Aging Committee (III-1)

James S. Parsons, M.D. **Chairman** (919-832-5125)
704 W. Jones St., Raleigh 27603

No. 1

2. Arrangements Committee (III-2)

William B. Costenbader, Jr., M.D., **Chairman** (704-254-3517)
131 McDowell St., Asheville 28801

No. 2

3. Auxiliary Advisory Committee (III-3)

Charles L. Nance, M.D., **Chairman** (919-763-7344)
2001 S. 17th St., Wilmington 28401

No. 4

4. Constitution & Bylaws Committee (III-4)

Howard E. Strawcutter, M.D., **Chairman** (919-738-6441)
P.O. Box 1408, Lumberton 28359

No. 10

5. Credentials Committee (of Delegates to House of Delegates) (III-5)

Louis R. Wilkerson, M.D., **Chairman** (919-832-5529)
100 S. Boylan Ave., Raleigh 27603

No. 12

6. Medical Education Committee (III-6)

Preston A. Walker, M.D., **Chairman** (919-733-5130)
Dorothea Dix Hospital, Taylor Hall, Raleigh 27611

No. 24

IV. PROFESSIONAL SERVICE COMMISSION

Eugene S. Mayer, M.D., **Commissioner** (919-966-2461)
UNC, Wing C, CB #7165, Box 3, Chapel Hill 27599

*Committee
Listing*

1. Children's Special Health Services Advisory Committee (IV-1)

Angus M. McBryde, Jr., M.D., **Chairman** (704-372-0743)
120 Providence Rd., Charlotte 28207

No. 8

2. Health Insurance Companies & Plans Committee (IV-2)

Howard Holderness, Jr., M.D., **Chairman** (919-275-0919)
200 E. Northwood St., Ste. 400, Greensboro 27401

No. 18

3. Dept. of Human Resources Liaison Committee (IV-3)

John L. McCain, M.D., **Chairman** (919-291-7001)
Wilson Clinic, Wilson 27893

No. 19

4. N. C. Industrial Commission Liaison Committee (IV-4)

Thomas E. Castelloe, M.D., **Chairman** (919-781-5600)
P.O. Box 10707, Raleigh 27605

No. 30

5. Practice Pattern Variation Committee (IV-5)

Lawrence M. Cutchin, M.D., **Chairman** (919-828-1789)
Rt. 3, Box 325, Tarboro 27886

No. 32

6. Professional Review Organization Monitoring Committee (IV-6)

E. Thomas Marshburn, Jr., M.D., **Chairman** (919-762-9621)
1906 Meeting Court, Wilmington 28401

No. 35

7. Rehabilitation Medicine Committee (IV-7)

Angus M. McBryde, Jr., M.D., **Chairman** (704-372-0743)
120 Providence Rd., Charlotte 28207

No. 36

V. PUBLIC AFFAIRS COMMISSION

Edwin W. Monroe, M.D., **Commissioner** (919-551-2983)
ECU School of Medicine, Greenville 27834

Committee Listing

- | | |
|---|---------------|
| 1. Communications Committee (V-1) | No. 9 |
| Charles L. Garrett, Jr., M.D., Co-Chairman (919-353-3498)
Onslow Memorial Hospital, Jacksonville 28540
Shanane R. Taylor, Jr., M.D., Co-Chairman (919-274-4626)
348 N. Elm St., Greensboro 27402 | |
| 2. Disaster & Emergency Medical Care Committee (V-2) | No. 13 |
| Joseph A. Moylan, M.D., Chairman (919-684-2237)
Duke Medical Center, Box 3947, Durham 27710 | |
| 3. Eye Care & Eye Bank Committee (V-3) | No. 15 |
| Edward M. Hedgpeth, Jr., M.D., Chairman (919-682-9341)
1110 W. Main St., Durham 27701 | |
| 4. Legislation Committee (V-4) | No. 20 |
| H. David Bruton, M.D., Chairman (919-692-2444)
195 W. Illinois Ave., Southern Pines 28387 | |
| 5. Medical Aspects of Sports Committee (V-5) | No. 23 |
| Frank W. Clippinger, Jr., M.D., Chairman (919-684-4229)
Duke Medical Center, Box 3935, Durham 27710 | |
| 6. Medical-Legal Committee (V-6) | No. 25 |
| Joseph M. Jenkins, M.D., Chairman (919-946-0136)
604 E. 12th St., Washington 27889 | |

VI. PUBLIC SERVICE COMMISSION

Thad B. Wester, M.D., **Commissioner** (919-733-3446)
1001-101 Brighthurst Dr., Raleigh 27605

Committee Listing

- | | |
|--|---------------|
| 1. Child Health Committee (VI-1) | No. 7 |
| Charles K. Scott, M.D., Chairman (919-228-8316)
530 W. Webb Ave., Burlington 27215 | |
| 2. Drug Abuse & Pharmacy Committee (VI-2) | No. 14 |
| Ronald B. Mack, M.D., Chairman (919-727-8108)
2516 Woodberry Dr., Winston-Salem 27106 | |
| 3. Maternal Health Committee (VI-3) | No. 21 |
| Robert G. Brame, M.D., Chairman (919-551-4662)
ECU School of Med., Dept. of OB-GYN, Greenville 27834 | |
| 4. Mental Health Committee (VI-4) | No. 28 |
| Charles R. Vernon, M.D., Chairman (919-256-4106)
7230 Wrightsville Ave., Wilmington 28403 | |
| 5. Physicians Health & Effectiveness Committee (VI-5) | No. 31 |
| Wilmer C. Betts, M.D., Chairman (919-847-2624)
901-F Paverstone Dr., Raleigh 27615 | |
| 6. Sexually Transmitted Diseases & AIDS Committee (VI-6) | No. 37 |
| Jared N. Schwartz, M.D., Chairman (704-371-4814)
P.O. Box 33549, Charlotte 28233 | |

COMMITTEES NOT ASSIGNED TO A COMMISSION**COORDINATING COUNCIL OF SPECIALTY SOCIETIES**

Bertram W. Coffey, M.D., **Chairman** (919-781-7420)
P.O. Box 18139, Raleigh 27619

MEDIATION COMMITTEE

Jack Hughes, M.D., **Chairman** (919-489-9504)
30 Kimberly Dr., Durham 27707
John W. Foust, M.D., **Secretary** (704-365-0711)
3535 Randolph Rd., Charlotte 28211

NOMINATING COMMITTEE

Edna Hoffman, M.D., **Chairman** (919-485-4755)
348 Valley Rd., Fayetteville 28305

PLANNING COUNCIL

Thomas B. Dameron, Jr., M.D., **Chairman** (919-781-5600)
P.O. Box 10707, Raleigh 27605

1. Aging Committee III-1 (12) (7 Consultants)

James S. Parsons, M.D.⁹² (IM) (919-832-5125) **Chairman**
704 W. Jones St., Raleigh 27603
Jonnie H. McLeod, M.D.⁶⁰ (PD) (704-547-2171) **Vice-Chairman**
1504 Biltmore Dr., Charlotte 28207
Samuel T. Bickley, M.D.⁴⁰ (FP) (919-885-2118)
P.O. Box 5168, High Point 27262
Monroe T. Gilmour, M.D.⁶⁰ (IM) (704-375-0287)
1300 Baxter St., Ste. 163, Charlotte 28204
H. Ronald Gollberg, M.D.¹¹ (P/GER) (704-252-1421)
445 Biltmore Center, Ste. 304, Asheville 28801
William R. Hazzard, M.D.³⁴ (IM) (919-748-4305)
Bowman Gray, 300 S. Hawthorne Rd., Winston-Salem 27103
Joanne E. Helppie, M.D.⁴⁵ (IM) (919-692-2232)
510 7th Ave., W., Hendersonville 28739
Harold Kallman, M.D.⁷⁴ (FP/GER) (919-551-2597)
ECU, Dept. of Family Medicine, Greenville 27834
S. Miles Rudd⁷⁴ (ST) (ECU) (919-753-3321)
2462 Stantonburg Rd., Ste. 140, Greenville 27834
Clare Jeanne Sanchez, M.D.⁹² (GER/IM) (919-755-8520)
Wake AHEC, 3000 New Bern Ave., Raleigh 27610
Robert J. Sullivan, Jr., M.D.³² (IM/FP) (919-684-2248)
Duke Medical Center, Box 3003, Durham 27710
Thomas R. White, M.D.⁶⁰ (FP) (704-542-9227)
P.O. Box 280, Cherryville 28021

Consultants:

Mrs. Edwin Martinat (Martha) (Auxiliary) (919-678-0339)
120 Sherwood Forest Rd., Winston-Salem 27104
Mary Edith Rogers, Director (704-864-0774)
AARP, 1264 Owensgate, Gastonia 28054
Mrs. Ralph Snyder (Jackie) (Auxiliary Past-President)
(919-949-3166)
378-A Pine Ridge Dr., Whispering Pines 28327
Elaine Stoops, Assistant Secretary (919-733-3983)
NC Division of Aging, 1985 Umstead Dr., Raleigh 27603
Nancy Tintle, Associate Director (704-334-7656)
Council on Health Costs, 730 E. Trade St., Ste. 1020, Charlotte 28202
Mark E. Williams, M.D. (919-966-2276)
UNC, 141 MacNider Bldg., CB #7550, Chapel Hill 27599
Judith C. Wright (Health Director) (919-793-3023)
P.O. Box 396, Plymouth 27962

2. Arrangements Committee III-2 (12) (3 Consultants)

William B. Costenbader, Jr., M.D.¹¹ (OTO/HNS) **Chairman**
(704-254-3517)
131 McDowell St., Asheville 28801
Margaret N. Harker, M.D.¹⁶ (GP) (919-247-3476) **Vice-Chairman**
Drawer 897, Morehead City 28557
Luther E. Barnhardt, Jr., M.D.¹¹ (R/NM) (704-652-4630)
900 Medical Ct., Ste. A, 100 Rankin Dr., Marion 28752
Eugene M. Bozymski, M.D.³² (GE/IM) (919-966-2511)
UNC, Dept. of Medicine, 324 Clinical Science Bldg., 229-H, Chapel Hill 27514
Don C. Chaplin, M.D.¹ (IM/CD) (919-227-3621)
Kernodle Clinic, 316 Graham-Hopedale Rd., Burlington 27215
John A. Fagg, M.D.³⁴ (PS) (919-765-8620) (Speaker)
2901 Maplewood Ave., Winston-Salem 27103
Alfred L. Ferguson, M.D.⁷⁴ (NEP/IM) (Vice-Speaker)
(919-752-8880)
6 Doctor's Park, Greenville 27834
T. Reginald Harris, M.D.²³ (PUD/IM) (President-Elect)
(704-482-1482)
808 Schenck St., Shelby 28150
Edna M. Hoffman, M.D.²⁶ (OBG) (919-485-4755)
348 Valley Rd., Fayetteville 28305
Willis E. Mease, M.D.⁶⁷ (FP) (919-324-3105)
209 S. Church St., Richlands 28574
Peter W. Robie, M.D.³⁴ (IM) (919-748-2085)
300 S. Hawthorne Rd., Winston-Salem 27103
Ernest B. Spangler, M.D.⁴¹ (R) (President) (919-854-6546)
Drawer X-3, Greensboro 27402

Consultants:

Mrs. Hugh H. Hayes, Jr. (Imogene) (Auxiliary) (704-366-5621)
5033 Gorham Dr., Charlotte 28226
Mrs. Charles Neimeyer (Carolyn) (Auxiliary President)
(704-867-8180)
3421 Country Club Dr., Gastonia 28054
Mrs. Douglas L. Ritch (Helen) (Auxiliary) (704-542-9554)
3732 Table Rock Rd., Charlotte 28226

3. Audit Committee I-1 (5)

William R. Hudson, M.D.³² (OTO) (919-684-3834) **Chairman**
Duke Medical Center, Durham 27710
Lawrence M. Cutchin, M.D.³³ (IM/PD) (919-828-1789)
Rt. 3, Box 325, Tarboro 27886
Vartan A. Davidian, Jr., M.D.⁹² (PS/GS) (919-872-2616)
1112 Dresser Ct., Raleigh 27609
Gloria F. Graham, M.D.⁹⁸ (D) (919-291-5600)
702 Broad St., Wilson 27893
James H. Maxwell, M.D.⁴¹ (DR) (919-854-6546)
2313 Princess Ann St., Greensboro 27408

4. Auxiliary Advisory Committee III-3 (5) (4 Consultants)

Charles L. Nance, Jr., M.D.⁶⁵ (ORS) (919-763-7344) **Chairman**
2001 S. 17th St., Wilmington 28401
Charles J. Niemeyer, M.D.³⁶ (ORS) **Vice-Chairman**
(704-865-6487)
902 Cox Rd., Ste. A, Gastonia 28054
Gloria F. Graham, M.D.⁹⁸ (D) (919-291-5600)
702 Broad St., Wilson 27893
Hugh H. Hayes, Jr., M.D.⁶⁰ (IM) (704-371-4000)
P.O. Box 33549, Charlotte 28233
Elizabeth P. Kanof, M.D.⁹² (D) (919-878-0310)
3400 Executive Dr., Ste. 207, Raleigh 27609

Consultants:

Mrs. Edward L. Boyette (Helen) (919-285-2721)
P.O. Box 65, Chinoquin 28521
Mrs. Hugh H. Hayes (Imogene) (Auxiliary President-Elect)
(704-366-5621)
5033 Gorham Dr., Charlotte 28226
Mrs. Charles J. Niemeyer (Carolyn) (Auxiliary President)
(704-867-8180)
3421 Country Club Dr., Gastonia 28054
Mrs. Ralph E. Snyder (Jackie) (Auxiliary Past-President)
(919-949-3166)
378-A Pine Ridge Dr., Whispering Pines 28327

5. Bioethics Committee II-1 (18) (6 Consultants)

George C. Barrett, M.D.⁶⁰ (R) (704-371-4056) **Chairman**
958 Cherokee Rd., Charlotte 28207
C. Glenn Pickard, Jr., M.D.³² (IM) (919-966-4205) **Vice-Chairman**
N.C. Memorial Hospital, Chapel Hill 27514
Robert S. Carnes, III, M.D.³⁴ (AN) (919-748-2927)
300 S. Hawthorne Rd., Winston-Salem 27103
Gloria F. Graham, M.D.⁹⁸ (D) (919-291-5600)
702 Broad St., Wilson 27893
Donald M. Hayes, M.D.³⁴ (OM/IM) (919-744-3708)
P.O. Box 2760, Winston-Salem 27102
Susan Hazzard³² (ST) (DUKE) (919-688-7347)
500 N. Duke St., Apt. 53-308, Durham 27701
Jack Hughes, M.D.³² (U) (919-489-9504)
30 Kimberly Dr., Durham 27707
Samuel Andrew Johnson⁷⁴ (ST) (ECU) (919-756-5093)
#4 Carriage House, Greenville 27858
Tracy J. T. Latz³⁴ (ST) (BG) (919-723-5305)
1322 Madison Ave., Winston-Salem 27103
Allen J. McBride, M.D.³² (FP/ADM) (919-490-2585)
P.O. Box 2291, Durham 27702
John L. McCain, M.D.⁹⁸ (RHU/IM) (919-291-7001)
Wilson Clinic, Wilson 27893
Assad Meymandi, M.D.²⁶ (P/N) (919-485-6166)
1212 Walter Reed Rd., Fayetteville 28304
Lawrence R. Nycum³² (ST) (UNC) (919-929-3225)
43 Laurel Ridge Apts., Chapel Hill 27516
Louis deS. Shaffner, M.D.³⁴ (PDS/GS) (919-725-1503)
740 N. Pine Valley Rd., Winston-Salem 27106
J. Dale Simmons, M.D.⁸⁶ (PH/FP) (919-374-2131)
P.O. Box 1062, Dobson 27017

Donald D. Smith, M.D.⁴¹ (PD) (919-379-4025)
1200 N. Elm St., Greensboro 27401
Eugene A. Stead, Jr., M.D.³⁹ (IM/CD) (919-684-6587)
Rt. 1, Box 194, Bullock 27507
James P. Weaver, M.D.³² (CDS/GS) (919-383-5531)
1830 Hillandale Rd., Durham 27705

Consultants:

Larry Churchill, Ph.D. (919-962-1136)
UNC, Dept. Social & Admin. Medicine, Chapel Hill 27599
Arlene J. Diosegy, J.D. (919-489-9001)
P.O. Box 51729, Durham 27717
Mrs. Hugh H. Hayes, Jr. (Imogene) (Auxiliary) (704-366-5621)
5033 Gorham Dr., Charlotte 28226
D. Scott Lindsay, Chaplain (704-371-4168)
Presbyterian Hospital, P.O. Box 33549, Charlotte 28233
Susan Kelly Nichols (919-783-6400)
P.O. Box 10096, Raleigh 27625
Mrs. Charles J. Niemeyer (Carolyn) (Auxiliary President)
(704-867-8180)
3421 Country Club Dr., Gastonia 28054

6. Cancer Committee II-2 (25) (Legal — 1 ea. Congressional District)

M. Robert Cooper, M.D.³⁴ (ON/HEM) (5th) **Chairman**
(919-748-4300)
300 S. Hawthorne Rd., Winston-Salem 27103
Jon P. Gockerman, M.D.³² (ON/HEM) **Vice-Chairman**
(919-684-6283)
Duke Medical Center, Box 3877, Durham 27710
Ray G. Silverthorne, M.D.⁷ (OBG) (1st) (919-946-5168)
Rt. 2, Box 35, Washington 27889
Walter E. Davis, M.D.³² (ON/HEM) (2nd) (919-383-5531)
1830 Hillandale Rd., Durham 27705
Leonard S. Woodall, M.D.⁵¹ (OBG) (3rd) (919-934-7696)
711 North Street, Smithfield 27577
Don A. Gabriel, M.D.³² (HEM/IM) (4th) (919-966-4431)
UNC, Division of HEM/ON, Chapel Hill 27514
Kenneth S. Karb, M.D.⁴¹ (ON/IM) (6th) (919-272-2141)
1007 Professional Village, Greensboro 27401
James E. Wortman, M.D.⁶⁵ (ON/HEM) (7th) (919-763-5182)
715 Forest Hills Dr., Wilmington 28403
Richard W. Martin, M.D.⁸⁰ (GS) (8th) (704-637-2750)
P.O. Box 1665, Salisbury 28144
Arthur R. Cohen, M.D.⁶⁰ (PTH) (9th) (704-371-4814)
P.O. Box 33549, Charlotte 28233
Avery W. McMurry, M.D.²³ (GS) (10th) (704-482-6359)
207 Lee St., Shelby 28150
John F. Tannehill, M.D.⁴⁴ (OTO/HNS) (11th) (704-452-1406)
120 Hospital Dr., Clyde 28721
Rolland J. Barrett, II, M.D.³⁴ (GYN/ON) (919-748-2011)
300 S. Hawthorne Rd., Winston-Salem 27103
Daniel L. Crocker, M.D.⁶⁴ (ON/HEM) (919-443-9084)
100 Nash Med. Arts Mall, Rocky Mount 27801
E. Bruce Elliston, M.D.¹¹ (FP) (704-258-8681)
206 Ashland Ave., Asheville 28801
Margaret N. Harker, M.D.¹⁶ (GP) (919-247-3476)
P.O. Drawer 897, Morehead City 28557
Donald M. Hayes, M.D.³⁴ (OM/IM) (919-744-3708)
P.O. Box 2760, Winston-Salem 27103
Richard B. Marshall, M.D.³⁴ (PTH) (919-748-2626)
236 Stanaford Rd., Winston-Salem 27104
Robert C. Moffatt, M.D.¹¹ (ON/GS) (704-258-2464)
445 Biltmore Rd., Asheville 28801
Barton R. Paschal, M.D.¹¹ (ON/HEM) (704-254-8232)
1 Doctors Dr., Asheville 28801
Karen G. Seaton³² (ST) (UNC) (919-933-9515)
59 Polks Landing, Chapel Hill 27516
J. Dale Simmons, M.D.⁸⁶ (PH/FP) (919-374-2131)
P.O. Box 1062, Dobson 27017
Charles L. Spurr, M.D.³⁴ (ON/HEM) (919-748-2946)
1845 Buena Vista Rd., Winston-Salem 27104
Alan R. Thalinger, M.D.⁶⁰ (ON/IM) (704-365-0760)
3535 Randolph Rd., Charlotte 28211
Stuart K. Todd, M.D.⁶⁴ (GS) (919-443-9084)
100 Nash Medical Arts Mall, Rocky Mt. 27801

7. Child Health Committee VI-1 (12) (2 Consultants)

Charles K. Scott, M.D.¹ (PD/ADL) (919-228-8316) **Chairman**
 530 W. Webb Ave., Burlington 27215
 Douglas D. Sheets, M.D.⁸¹ (OBG) **Vice-Chairman**
 (704-827-7383)
 Tryon Rd., P.O. Box 1208, Rutherfordton 28139
 Marshall E. Agner, M.D.³⁶ (FP) (704-435-6058)
 609 E. Academy St., P.O. Box 159, Cherryville 28021
 J. Michele Cherry³² (ST) (UNC) (919-968-0846)
 805-A W. Main St., Carrboro 27510
 John E. Eisele, M.D.⁷⁴ (PD/PM) (919-551-4440)
 P.O. Box 6028, Greenville 27834
 Thomas E. Frothingham, M.D.³² (PD/ID) (919-684-6870)
 Duke Medical Center, Box 3937, Durham 27710
 R. McPhail Herring, Jr., M.D.⁸² (PD) (919-592-6011)
 403 Fairview St., Clinton 28328
 Thomas G. Irons, M.D.⁷⁴ (PD) (919-551-2535)
 ECU, Dept. of Pediatrics, Greenville 27834
 Paul F. Maness, M.D.¹ (PD) (919-228-8341)
 328 W. Davis St., Burlington 27215
 Charlie C. Miraglia³⁴ (ST) (BG) (919-723-2299)
 1057 S. Hawthorne Rd., Winston-Salem 27103
 Suzanne P. Starling⁷⁴ (ST) (ECU) (919-758-0928)
 Rt. 14, Box 47-A, Greenville 27834
 Thad B. Wester, M.D.⁷⁸ (PD/PH) (919-733-3446)
 1001-101 Brighthurst Dr., Raleigh 27605

Consultants:

Eugene C. Hines, Jr. (Health Director) (919-592-1131)
 County Complex, Rowan Rd., Clinton 28328
 Mrs. J. Marc Kadyk (Sandra) (Auxiliary) (704-264-2868)
 800 State Farm Rd., Boone 28607

8. Children's Special Health Services Advisory Committee IV-1 (15) (2 Consultants)

Angus M. McBryde, Jr., M.D.⁶⁰ (ORS) (704-372-0743) **Chairman**
 120 Providence Rd., Charlotte 28207
 Page Anderson, M.D.³² (PDC) (919-684-2538) **Vice-Chairman**
 Duke Medical Center, Box 3218, Durham 27710
 Michael A. Blackwell⁷⁴ (ST) (ECU) (919-758-7303)
 Rt. 2, Box 372, Winterville 28590
 Ralph W. Coonrad, M.D.³² (ORS/HS) (919-286-1249)
 1828 Hillandale Rd., Durham 27705
 William B. Costenbader, Jr., M.D.¹¹ (OTO/HNS) (704-254-3517)
 131 McDowell St., Asheville 28801
 Michael F. Durfee, M.D.⁹² (ADL/PD) (919-828-0035)
 619 Oberlin Rd., Raleigh 27605
 James B. Ebert, Jr.⁷⁴ (ST) (ECU) (919-756-5093)
 #4 Carriage House, Greenville 27834
 Howard C. Filston, M.D.³² (PDS/GS) (919-684-3478)
 Duke Medical Center, Box 3815, Durham 27710
 Robert I. Kohut, M.D.³⁴ (OTO/HNS) (919-748-4161)
 300 S. Hawthorne Rd., Winston-Salem 27103
 Ted Kushnick, M.D.⁷⁴ (PD) (919-551-2529)
 ECU School of Medicine, Greenville 27834
 J. Tony Liverman, Jr., M.D.⁵¹ (FP) (919-934-5149)
 706 Wilkins St., Smithfield 27577
 C. Scott McLanahan, M.D.⁶⁰ (NS) (704-376-1605)
 1010 Edgehill Rd., N., Charlotte 28207
 William G. Moorefield, Jr., M.D.⁶⁰ (ORS) (704-377-0351)
 120 Providence Rd., Charlotte 28207
 Robert P. Schwartz, M.D.⁶⁰ (PD/PDE) (704-338-3156)
 P.O. Box 32861, Charlotte 28232
 Thad B. Wester, M.D.⁷⁸ (PD/PH) (919-733-3446)
 1001-101 Brighthurst Dr., Raleigh 27605

Consultants:

Ann F. Wolfe, M.D. (PD) (919-733-3816)
 Dept. of Human Resources, Maternal & Child Health Section,
 P.O. Box 2091, Raleigh 27602
 Jerry W. Wiley, M.D. (PD) (919-733-7437)
 Dept. of Human Resources, Maternal & Child Health Section,
 P.O. Box 2091, Raleigh 27602

9. Communications Committee V-1 (20) (3 Consultants)

Charles L. Garrett, Jr., M.D.⁶⁷ (PTH/FOP) **Co-Chairman**
 (919-353-3498)

Onslow Memorial Hospital, Jacksonville 28540
 Shahane R. Taylor, Jr., M.D.⁴¹ (OPH) **Co-Chairman**
 (919-274-4626)

348 N. Elm St., Greensboro 27401
 Sidney L. Gullledge, III, M.D.⁹² (OPH) (919-878-0220)
 3400 Executive Dr., Ste. 101, Raleigh 27609
 Edward M. Hedgpeth, Jr., M.D.³² (OPH) (919-682-9341)
 1110 W. Main St., Durham 27701
 David J. Henderson, M.D.⁷⁹ (PD/A) (919-349-8402)
 P.O. Box 2299, Reidsville 27320
 Edna M. Hoffman, M.D.²⁶ (OBG) (919-485-4755)
 348 Valley Rd., Fayetteville 28305
 Nelson N. Howell, M.D.⁶⁰ (OTO/HNS) (704-365-0711)
 3535 Randolph Rd., Charlotte 28211
 Charles W. Lapp, M.D.⁹² (IM/PD) (919-878-0900)
 3400 Executive Dr., Raleigh 27609
 Ronald B. Mack, M.D.³⁴ (PD) (919-727-8108)
 2516 Woodberry Dr., Winston-Salem 27106
 O. Aiken Mays, M.D.⁹⁶ (PH) (919-731-1000)
 408 Taylor Pl., Goldsboro 27530
 Susan D. McLendon³⁴ (ST) (BG) (919-760-4458)
 2000-J Falcon Wood Ct., Winston-Salem 27107
 Assad Meymandi, M.D.²⁶ (P/N) (919-485-6166)
 1212 Walter Reed Rd., Fayetteville 28304
 W. Donald Moore, M.D.⁴³ (FP) (919-897-6423)
 P.O. Box 819, Coats 27521
 Francis A. Neelon, M.D.³² (IM/END) (919-684-4307)
 Duke Medical Center, Box 3021, Durham 27710
 Douglas D. Sheets, M.D.⁸¹ (OBG) (704-287-7383)
 Tryon Rd., P.O. Box 1208, Rutherfordton 28139
 J. Ross Shuping, M.D.⁷⁴ (N) (919-752-4848)
 425 Stantonsburg Rd., Greenville 27834
 J. Dale Simmons, M.D.⁸⁶ (PH/FP) (919-374-2131)
 P.O. Box 1062, Dobson 27017
 David D. Stewart, M.D.²⁶ (IM) (919-484-1156)
 114 Broadfoot Ave., Fayetteville 28305
 Paul R. Woodard, M.D.⁹² (AN) (919-755-8000)
 1825 St. Mary's St., Raleigh 27608
 William J. Wortman, Jr., M.D.⁶⁰ (GYN/OBS) (704-376-1580)
 2711 Randolph Rd., Ste. 309, Charlotte 28207

Consultants:

Mrs. Charles J. Niemeyer (Carolyn) (Auxiliary President)
 (704-867-8180)
 3421 Country Club Dr., Gastonia 28054
 Mrs. Martha Waters (919-832-7421)
 Epley Associates, P.O. Box 1801, Raleigh 27602
 Mrs. Leon F. Woodruff, Jr. (Bonnie) (Auxiliary, Communications
 Com. Chmn.) (919-782-9657)
 3513 Chaucer Pl., Raleigh 27609

10. Constitution & Bylaws Committee III-4 (5)

Howard E. Strawcutter, M.D.⁷⁸ (U) (919-738-6441) **Chairman**
 P.O. Box 1408, Lumberton 28359
 Charles L. Garrett, Jr., M.D.⁶⁷ (PTH/FOP) (919-353-3498)
Vice-Chairman
 Onslow Memorial Hospital, Jacksonville 28540
 S. Clayton Callaway, Jr., M.D.⁶⁵ (OTO) (919-762-8754)
 2311 Delaney Rd., Wilmington 28403
 John A. Fagg, M.D.³⁴ (PS)(Speaker) (919-765-8620)
 2901 Maplewood Ave., Winston-Salem 27103
 Thomas F. O'Brien, Jr., M.D.⁷⁴ (GE/ADM)(Secretary-Treasurer)
 (919-551-2149)
 ECU School of Medicine, Greenville 27834

11. Coordinating Council of Specialty Societies (19)

Bertram W. Coffey, M.D.⁹² (AN) (919-781-7420) **Chairman**
 P.O. Box 18139, Raleigh 27619
 Robert E. Miller, M.D.⁶⁰ (ORS) (704-373-0544) **Vice-Chairman**
 1822 Brunswick Ave., Charlotte 28207
 Jack W. Bonner, III, M.D.¹¹ (P) (704-254-3201)
 Highland Hospital, P.O. Box 1101, Asheville 28802
 Stephen C. Boone, M.D.⁹² (NS/EM) (919-832-4448)
 P.O. Box 14027, Raleigh 27620
 J. Ronald Edwards, M.D.⁹² (PTH) (919-755-8260)
 Rt. 7, Box 210-E, Raleigh 27614

Albert L. Ehle, M.D.³² (N) (919-966-3707)
UNC, 751 Burnett-Womack Bldg., Chapel Hill 27514

C. Allan Eure, M.D.⁹² (IM) (919-782-1806)
3521 Haworth Dr., Raleigh 27609

Douglas G. Freeman, Jr., M.D.⁹² (RHU/Al) (919-781-9633)
3831 Merton Dr., Raleigh 27609

Sidney L. Gullledge, III, M.D.⁹² (OPH) (919-878-0220)
3400 Executive Dr., Ste. 101, Raleigh 27609

Lloyd H. Harrison, M.D.³⁴ (U) (919-748-4131)
300 S. Hawthorne Rd., Winston-Salem 27103

William N. P. Herbert, M.D.³² (OBG/NPM) (919-966-1601)
UNC, 214 MacNider Bldg., CB#7570, Chapel Hill 27599

H. Slade Howell, Jr., M.D.⁴⁰ (GS/CDS) (919-886-4552)
624 Quaker Ln., Ste. 116-B, High Point 27262

Patrick D. Kenan, M.D.³² (OTO) (919-684-5238)
Duke Medical Center, Division of OTO, Durham 27710

R. Wade Markham, M.D.⁴⁰ (D) (919-887-3195)
624 Quaker Lane, Ste. 302-B, High Point 27262

George Podgorny, M.D.³⁴ (EM/GS) (919-727-1161)
2115 Georgia Ave., Winston-Salem 27104

Jimmy L. Rhyne, M.D.⁹² (PH/PD) (919-733-7791)
Div. of Health Services, P.O. Box 2091, Raleigh 27602

Robert P. Schwartz, M.D.⁶⁰ (PD/PDE) (704-338-3156)
P.O. Box 32861, Charlotte 28232

Dale R. Shaw, M.D.⁹² (DR) (919-787-8199)
P.O. Box 19366, Raleigh 27619

Robert G. Townsend, Jr., M.D.⁴⁷ (FP) (919-875-5101)
P.O. Box 665, Raeford 28376

12. Credentials Committee (of Delegates to House of Delegates) III-5 (4)

Louis R. Wilkerson, M.D.⁹² (OBG) (919-832-5529) **Chairman**
100 S. Boylan Ave., Raleigh 27603

J. Grayson Hall, M.D.⁸⁶ (FP) (919-386-8270) **Vice-Chairman**
P.O. Box 158, Dobson 27017

W. Otis Duck, M.D.⁵⁷ (FP) (704-689-2411)
Drawer 729, Mars Hill 28754

Charles H. Duckett, M.D.⁷⁴ (FP) (919-551-5452)
ECU, Dept. of Family Practice, Greenville 27834

13. Disaster & Emergency Medical Care Committee V-2 (18) (1 Consultant)

Joseph A. Moylan, M.D.³² (GS/VS) (919-684-2237) **Chairman**
Duke Medical Center, Box 3947, Durham 27710

Jeffrey W. Runge, M.D.⁶⁰ (EM) (704-331-3181) **Vice-Chairman**
P.O. Box 32861, Charlotte 28232

E. Jackson Allison, Jr., M.D.⁷⁴ (EM) (919-551-4757)
ECU, Dept. of Emergency Medicine, Greenville 27834

John W. Baker, M.D.⁶⁰ (EM/IM) (704-338-3181)
P.O. Box 32861, Charlotte 28232

Harry H. Ballard, M.D.²⁵ (GS/CDS) (919-633-2081)
800 Hospital Dr., Ste. 6, New Bern 28560

Paul R. Cunningham, M.D.⁷⁴ (GS) (919-551-2620)
ECU, Brody Bldg., Room 4S-10, Greenville 27834

Gregory S. Georgiade, M.D.³² (PS/GS) (919-684-3039)
Duke Medical Center, Box 3960, Durham 27710

Frederick W. Glass, M.D.³⁴ (EM/GS) (919-748-4626)
Bowman Gray Sch. of Med., Winston-Salem 27103

Chris W. Guest, M.D.⁴¹ (IM/GP) (919-299-0000)
102 Pomona Dr., Greensboro 27407

Alfred R. Hansen, M.D.³² (EM/FP) (919-966-5643)
UNC, 229-H Burnett-Womack Bldg., Chapel Hill 27514

Charles L. Herring, M.D.⁵⁴ (IM) (919-523-0026)
310 Glenwood Ave., Kinston 28501

George Johnson, Jr., M.D.³² (VS/CDS) (919-966-3391)
UNC, Dept. of Surg., CB#7050, Chapel Hill 27599

Hervy B. Kornegay, Sr., M.D.⁹⁶ (FP) (919-658-4954)
238 Smith Chapel Rd., Mt. Olive 28365

Ken R. Lamm³² (ST) (UNC)
105 Fidelity St., A-4, Carrboro 27510

Noel B. McDevitt, M.D.⁶³ (PS/PSF) (919-295-5131)
1 Memorial Drive, Pinehurst 28374

Robert W. Schafermeyer, M.D.⁶⁰ (EM/PD) (704-338-3181)
Charlotte Mem. Hospital, P.O. Box 32861, Charlotte 28232

Harold R. Silberman, M.D.³² (EM/IM) (919-684-5537)
Duke Hospital, Box 3975-M, Durham 27710

Llewellyn W. Stringer, M.D.³⁴ (PUD) (919-765-7517)
1728 S. Hawthorne Rd., Winston-Salem 27103

Consultant:

Mr. Bob Bailey, Chief (919-733-2285)
Office of Emergency Medical Services, 701 Barbour Dr.,
Raleigh 27603

14. Drug Abuse & Pharmacy Committee VI-2 (10) (6 Consultants)

Ronald B. Mack, M.D.³⁴ (PD) (919-727-8108) **Chairman**
2516 Woodberry Dr., Winston-Salem 27106

Robert B. Winslow, M.D.⁹² (PS/GS) **Vice-Chairman**
(919-782-7762)
2501 North St., Ste. 500, Raleigh 27607

Charles S. Betts, M.D.⁷⁶ (IM) (919-629-7710)
220-A Foust St., Asheboro 27203

John A. Ewing, M.D.⁶⁵ (P) (919-251-9888)
2311 Canterwood Dr., Wilmington 28401

Sarah Grossman³⁴ (ST) (BG) (919-723-3868)
2061 Craig St., Apt. 2, Winston-Salem 27103

Paul T. Kaye, M.D.⁹² (P/CHP) (919-733-7011)
Dept. of Human Resources, 325 N. Salisbury St., Raleigh
27611

Jonnie H. McLeod, M.D.⁶⁰ (PD) (704-547-2171)
1504 Biltmore Dr., Charlotte 28207

James H. Sanders, Jr., M.D.⁸⁸ (FP/GER) (704-884-9362)
P.O. Box 389, Brevard 28712

Daniel G. Sayers, M.D.³⁴ (EM) (919-748-4625)
2804 Montclair Rd., Winston-Salem 27106

Anthony J. Weisenberger, M.D.¹¹ (P/ALD) (704-253-3681)
P.O. Box 5534, Asheville 28813

Consultants:

Mr. Keith Bulla (919-295-5320)
SBI, P.O. Box 18243, Greensboro 27419

Col. Jack F. Cardwell (919-733-7952)
NC Highway Patrol, P.O. Box 27687, Raleigh 27611

Mr. A. H. Mebane, III, Executive Director (919-967-2237)
NC Pharmaceutical Association, Drawer 151, Chapel Hill 27514

Mrs. Ralph E. Snyder (Jackie) (Auxiliary) (919-949-3166)
378-A Pine Ridge Rd., Whispering Pines 28327

Robert Winslow, Pharm.D. (919-748-2037)
NC Baptist Hospital, 300 S. Hawthorne Rd., Winston-Salem
27103

Mr. David R. Work, Secretary-Treasurer (919-942-4454)
NC Board of Pharmacy, P.O. Box H, Carrboro 27510

15. Eye Care & Eye Bank Committee V-3 (23) (1 Consultant)

Edward M. Hedgpeth, Jr., M.D.³² (OPH) **Chairman**
(919-682-9341)
1110 W. Main St., Durham 27701

Walter G. Bullington, M.D.⁶⁰ (OPH/AM) **Vice-Chairman**
(704-364-7400)
4335 Colwick Rd., Charlotte 28211

Scott P. Bowers, M.D.⁹⁸ (OPH) (919-291-1300)
#5 Silver Lake Villas, Wilson 27893

L. Michael Cobo, M.D.³² (OPH) (919-684-3799)
Duke Eye Center, Box 3802, Durham 27710

Andrew Davidson, M.D.²⁵ (OPH) (919-633-4183)
802 McCarthy Blvd., New Bern 28560

Robert E. Dawson, M.D.³² (OPH) (919-682-7175)
512 Simmons St., Durham 27701

Gary N. Foulks, M.D.³² (OPH) (919-684-6417)
Duke Medical Center, Box 3802, Durham 27710

Baird S. Grimson, M.D.³² (OPH) (919-966-5296)
UNC, 733 Burnett-Womack, CB #7040, Chapel Hill 27599

Sidney L. Gullledge, III, M.D.⁹² (OPH) (919-878-0220)
3400 Executive Dr., Ste. 101, Raleigh 27609

Frank T. Hannah, M.D.²³ (OPH) (704-482-0696)
313 S. Washington St., Shelby 28150

Edward K. Isbey, Jr., M.D.¹¹ (OPH) (704-258-1586)
495 Biltmore Ave., Asheville 28801

James L. Kesler, M.D.⁶⁵ (OPH) (919-763-7316)
1120 Medical Center Dr., Wilmington 28401

Martin J. Kreshon, M.D.⁶⁰ (OPH) (704-372-3300)
1600 E. Third St., Charlotte 28204

J. Stuart McCracken, M.D.³² (OPH) (919-471-8495)
2609 N. Duke St., Ste. 203, Durham 27704
Dean P. Porter³² (ST) (UNC) (919-933-7840)
250 S. Estes Dr., #34, Chapel Hill 27514
Marshall S. Redding, M.D.⁷⁰ (OPH) (919-335-5446)
1142 N. Road St., P.O. Box 1402, Elizabeth City 27909
John W. Reed, M.D.³⁴ (OPH) (919-748-4091)
Bowman Gray, Dept. of Oph., Winston-Salem 27103
Luther C. Sappenfield, Jr., M.D.²⁶ (OPH) (919-484-6141)
1629 Owen Dr., Fayetteville 28304
William A. Shearin, M.D.⁹² (OPH) (919-781-7373)
2800 Blue Ridge Blvd., Ste. 405, Raleigh 27607
M. Bruce Shields, M.D.³² (OPH) (919-684-2841)
Duke University Eye Center, Durham 27710
J. Lawrence Sippe, M.D.⁶⁰ (OPH) (704-372-8750)
1350 S. Kings Dr., Charlotte 28207
Shahane R. Taylor, Jr., M.D.⁴¹ (OPH) (919-274-4626)
348 N. Elm St., Greensboro 27401
R. Patrick Yeatts, M.D.³⁴ (OPH/PSF) (919-748-4091)
300 S. Hawthorne Rd., Winston-Salem 27103

Consultant:

Byron A. Stratas, M.D. (RES) (803-792-2492)
171 Ashley Ave., Charleston, SC 29425

16. Finance Committee I-2 (5) (3 Ex Officio) (11 Consultants)

Thomas F. O'Brien, Jr., M.D.⁷⁴ (GE/IM) **Chairman**
(919-551-2149)
ECU School of Medicine, Greenville 27834
C. Christopher Bremer, M.D.⁷⁴ (FP) (919-551-2604)
Vice-Chairman
317 Pinewood Rd., Greenville 27858
Kenneth E. Cosgrove, M.D.⁴⁵ (IM/CD) (704-693-4963)
145 Cliff Terrace, Hendersonville 28739
Charles W. Lapp, M.D.⁹² (IM/PD) (919-878-0900)
3400 Executive Dr., Raleigh 27609
E. Thomas Marshburn, Jr., M.D.⁶⁵ (IM) (919-762-9621)
1906 Meeting Ct., Wilmington 28401

Ex Officio:

Ernest B. Spangler, M.D.⁴¹ (R) (President) (919-854-6546)
Drawer X-3, Greensboro 27402
Henry J. Carr, M.D.⁸² (IM) (Past-President) (919-592-6114)
603 Beaman St., Clinton 28328
T. Reginald Harris, M.D.²³ (PUD/IM) (President-Elect)
(704-482-1482)
808 Schenck St., Shelby 28150

Consultants:

Lawrence M. Cutchin, M.D.³³ (IM/PD) (919-828-1789)
Rt. 3, Box 325, Tarboro 27886
Vartan A. Davidian, Jr., M.D.⁹² (PS/GS) (919-872-2616)
1112 Dresser Ct., Raleigh 27609
Gloria F. Graham, M.D.⁹⁸ (D) (919-291-5600)
702 Broad St., Wilson 27898
William R. Hudson, M.D.³² (OTO) (919-684-3834)
Duke Medical Center, Durham 27710
James H. Maxwell, M.D.⁴¹ (DR) (919-854-6546)
2313 Princess Ann St., Greensboro 27408
I — Edgar C. Garrabrant, M.D.⁹² (OTO) (919-787-7171)
P.O. Box 18946, Raleigh 27619
II — Jonnie H. McLeod, M.D.⁶⁰ (PD) (704-547-2171)
1504 Biltmore Dr., Charlotte 28207
III — Ann F. Wolfe, M.D.⁹² (PD) (919-733-3816)
6912 Hunters Way, Raleigh 27615
IV — Eugene S. Mayer, M.D.³² (GPM) (919-966-2461)
UNC, Wing C, CB #7165, Box 3, Chapel Hill 27599
V — Edwin W. Monroe, M.D.⁷⁴ (IM) (919-551-2983)
ECU School of Medicine, Greenville 27834
VI — Thad B. Wester, M.D.⁷⁸ (PD/PH) (919-733-3446)
1001-101 Brighthurst Dr., Raleigh 27605

17. Health Care Professionals Liaison Committee II-3 (6) (5 Consultants)

John L. McCain, M.D.⁹⁸ (RHU/IM) (919-291-7001) **Chairman**
Wilson Clinic, Wilson 27893
D. Edmond Miller, M.D.³² (CD/IM) (919-471-8441) **Vice-Chairman**
2609 N. Duke St., Ste. 403, Durham 27704
Roy A. Agner, Jr., M.D.⁸⁰ (IM) (704-637-9820)
611 Mocksville Ave., Salisbury 28144

Clyde J. Dellinger, M.D.¹² (FP) (704-437-3634)
P.O. Box 8, Drexel 28619
F. Randolph Jackson, M.D.⁴¹ (R) (919-299-6851)
107 Elmwood Terrace, Greensboro 27408
F. Maxton Mauney, Jr., M.D.¹¹ (CDS/TS) (704-258-1121)
257 McDowell St., Asheville 28803

Consultants:

Gale B. Johnston, R.N. (NCNA) (919-851-7077)
3109-D Aileen Dr., Raleigh 27606
Marc Katz, P.A. (NCAPA) (704-328-2941)
Rt. 4, Box 213-A, Vale 28168
Bryant D. Paris, Jr., (BME) (919-876-3885)
P.O. Box 26808, Raleigh 27611
Ruth Patterson, Ed.D., CMA (NCSMA) (919-833-6752)
NCSU, Box 7801, Raleigh 27695
John H. Rhoades (NC Medical Group Managers) (704-372-3300)
1600 E. Third St., Charlotte 28204

18. Health Insurance Companies & Plans Committee IV-2 (33) (4 Consultants)

Howard Holderness, Jr., M.D.⁴¹ (PS/GS) (919-275-0919)
Chairman
200 E. Northwood St., Ste. 400, Greensboro 27401
Robert W. Carter, M.D.¹ (IM/CD) (919-227-3621) **Vice-Chairman**
Kernodle Clinic, Burlington 27215
James D. Anderson, M.D.⁶⁰ (OBG) (704-373-1541)
1023 Edgehill Rd., S., Charlotte 28207
William S. Bost, Jr., M.D.⁷⁴ (OTO) (919-752-5227)
P.O. Box 5007, Greenville 27834
John Cashman, M.D.⁶⁵ (U) (919-763-6251)
1905 Glen Meade Rd., Wilmington 28403
Douglas H. Clark, M.D.⁷⁸ (GS) (919-738-8556)
295 W. 27th St., Lumberton 28358
James P. Culley, M.D.⁶² (GS) (919-572-3737)
506 Wood St., Troy 27371
John T. Daly, M.D.³² (PTH/FOP) (919-477-6742)
P.O. Box 15337, Durham 27704
James C. Gaither, M.D.¹⁸ (IM) (704-322-1128)
Rt. 2, Box 199, Conover 28613
Frederick W. Glass, M.D.³⁴ (EM/GS) (919-784-4626)
Bowman Gray Sch. of Med., Winston-Salem 27103
H. Gerard Hartzog, III, M.D.⁹² (GS) (919-781-0710)
3814 Browning Pl., Raleigh 27609
William R. Hudson, M.D.³² (OTO) (919-684-3834)
Duke Medical Center, Durham 27710
George Johnson, Jr., M.D.³² (VS/CDS) (919-966-3391)
UNC, Dept. of Surgery, CB #7050, Chapel Hill 27599
Lyndon K. Jordan, M.D.⁵¹ (FP) (919-934-7687)
P.O. Box 760, Smithfield 27577
Frederic R. Kahl, M.D.³⁴ (CD/IM) (919-748-4261)
300 S. Hawthorne Rd., Winston-Salem 27103
Bruce L. Kihlstrom, M.D.³² (NS/GS) (919-383-5531)
1830 Hillandale Rd., Durham 27705
Stephen N. Lang, M.D.³² (ORS) (919-684-3949)
Duke Medical Center, Box 2919, Durham 27704
John D. Larson, Jr., M.D.⁶⁷ (EM/OBG) (919-577-2240)
Onslow Memorial Hospital, Dept. EM, Jacksonville 28540
H. Maxwell Morrison, Jr., M.D.⁶³ (OPH) (919-295-6809)
P.O. Box 460, Pinehurst 28374
Duncan Morton, Jr., M.D.⁶⁰ (PDS/GS) (704-377-3900)
2104 Randolph Rd., Charlotte 28207
Joseph A. Moylan, M.D.³² (GS/VS) (919-684-2237)
Duke Medical Center, Box 3947, Durham 27710
John F. Munroe, Jr., M.D.²⁴ (IM/END) (919-642-2230)
Baldwin Woods, SW, Box 1249, Whiteville 28472
Harold C. Pollard, III, M.D.³⁴ (OBG) (919-765-9350)
2927 Lyndhurst Ave., Winston-Salem 27103
Edwin T. Preston, M.D.³² (ORS) (919-942-3171)
101 Conner Dr., Ste. 200, Chapel Hill 27514
Robert E. Price, Jr., M.D.³² (NS) (919-383-5531)
1830 Hillandale Rd., Durham 27705
James G. Scanlan, M.D.⁹² (CD/IM) (919-872-8920)
3400 Executive Dr., Ste. 201, Raleigh 27609
Phillip A. Sellers, M.D.⁴⁵ (IM) (704-692-2231)
510 7th Ave., W., Hendersonville 28739
Wilbur T. Shearin, Jr., M.D.⁶⁵ (U) (919-763-6251)
1905 Glen Meade Rd., Wilmington 28403

Hal M. Stuart, M.D.⁸⁶ (FP) (919-835-3613)
180-C Parkwood Dr., Elkin 28621
Shahane R. Taylor, Jr., M.D.⁴¹ (OPH) (919-274-4626)
348 N. Elm St., Greensboro 27401
Henry A. Unger, M.D.⁹² (U) (919-467-3203)
101 S. W. Cary Pkwy., Ste. 200, Cary 27511
Andrew W. Walker, M.D.⁶⁰ (PS/HS) (704-372-6846)
2215 Randolph Rd., Charlotte 28207
William H. White, Jr., M.D.⁵³ (OBG) (919-775-2304)
109-A S. Vance St., Sanford 27330

Consultants:

William W. Eller, Jr. (919-547-4382)
Jefferson-Pilot Life Insurance Co., P.O. Box 20727,
Greensboro 27420
Paul E. Durham, Jr. (704-541-9550)
Equicor-Equitable HCA Corp., 7400 Carmel Executive Pk.,
Charlotte 28226
Preston Williams (919-288-0611)
Aetna Life & Casualty Insurance Co., 3300 Battleground Ave.,
Greensboro 27402
Daniel J. Butler (919-489-7431)
Blue Cross Blue Shield of NC, P.O. Box 2291, Durham 27702

19. Department of Human Resources Liaison Committee IV-3 (21) (7 Consultants)

John L. McCain, M.D.⁹⁸ (RHU/IM) (919-291-7001) **Chairman**
Wilson Clinic, Wilson 27893
George Johnson, Jr., M.D.³² (VS/CDS) **Vice-Chairman**
(919-966-3391)
UNC, Dept. of Surgery, CB #7050, Chapel Hill 27599
Robert G. Brame, M.D.⁷⁴ (OBG) (919-551-4662)
ECU School of Med., Dept. of OB-GYN, Greenville 27834
Thomas E. Castelloe, M.D.⁹² (ORS) (919-781-5600)
P.O. Box 10707, Raleigh 27605
M. Robert Cooper, M.D.³⁴ (ON/HEM) (919-748-4300)
300 S. Hawthorne Rd., Winston-Salem 27103
Raphael J. Dinapoli, Jr., M.D.³² (PH/AM) (919-733-2833)
1985 Umstead Dr., Raleigh 27603
Hector H. Henry, II, M.D.¹³ (U/PD) (704-786-5133)
102 Lake Concord Rd., N.E., Concord 28025
Hervy B. Kornegay, Sr., M.D.⁹⁶ (FP) (919-658-4954)
238 Smith Chapel Rd., Mt. Olive 28365
Donald T. Lucey, M.D.⁹² (U) (919-781-7113)
2800 Blue Ridge Blvd., Ste. 403, Raleigh 27607
Angus M. McBryde, Jr., M.D.⁶⁰ (ORS) (704-372-0743)
120 Providence Rd., Charlotte 28207
Charles R. Martin, M.D.⁶⁷ (PD) (919-353-0581)
120 Memorial Dr., Jacksonville 28540
Campbell W. McMillan, M.D.³² (PHO/PD) (919-966-3133)
UNC, Dept. of Pediatrics, CB #7220, Chapel Hill 27599
Joseph A. Moylan, M.D.³² (GS/VS) (919-684-2237)
Duke Medical Center, Box 3947, Durham 27710
James S. Parsons, M.D.⁹² (IM) (919-832-5125)
704 W. Jones St., Raleigh 27603
Jessica S. Saxe, M.D.⁶⁰ (FP) (704-338-3084)
2216 Dilworth Rd., W., Charlotte 28203
Charles K. Scott, M.D.¹ (PD/ADL) (919-228-8316)
530 W. Webb Ave., Burlington 27215
Phillip E. Stover, M.D.³⁵ (FP) (919-496-5774)
519 N. Bickett Blvd., Louisville 27549
Charles R. Vernon, M.D.⁶⁵ (P) (919-256-4106)
7230 Wrightsville Ave., Wilmington 28403
Eugene H. Wade, M.D.¹ (FP) (919-229-4791)
723 Edith St., Burlington 27215
W. Samuel Yancy, M.D.³² (PD/ADL) (919-688-6349)
306 S. Gregson St., Durham 27701
Thad B. Wester, M.D.⁷⁸ (PP/PH) (919-733-3446)
1001-101 Brighthurst Dr., Raleigh 27605

Consultants:

James D. Bernstein (919-733-2040)
Dept. of Human Resources, Health Resources Development
Section, 701 Barbour Dr., Raleigh 27603
Mrs. John C. Faris (Ann) (Auxiliary) (919-723-0564)
2720 Bitting Rd., Winston-Salem 27104
Jesse Goodman (919-733-2173)
Department of Human Resources, Governmental Liaison
Services, 325 N. Salisbury St., Raleigh 27611

Elizabeth P. Joyner (Health Director) (919-663-4121)
P.O. Box 1390, New Bern 28560
Barbara D. Matula, Director (919-733-2060)
Div. of Medical Assistance, 1985 Umstead Dr., Raleigh 27603
Pam Silberman (919-821-0042)
P.O. Box 27343, Raleigh 27611
Lillian J. Todd, R.N., Nursing Consultant (919-733-2833)
Div. of Medical Assistance, 1985 Umstead Dr., Raleigh 27603

20. Legislation Committee V-4 (45)

H. David Bruton, M.D.⁶³ (PD) (919-692-2444) **Chairman**
195 W. Illinois Ave., Southern Pines 28387
Edwin W. Monroe, M.D.⁷⁴ (IM) (919-551-2983) **Vice-Chairman**
ECU School of Medicine, Greenville 27834
Stephen G. Anderson, M.D.³⁴ (OBG) (919-765-9350)
2927 Lyndhurst Ave., Winston-Salem 27103
Neil C. Bender, M.D.²⁵ (IM) (919-633-1010)
P.O. Box 68, Pollocksville 28573
Henry J. Carr, Jr., M.D.⁸² (IM) (919-592-6114) (Past-President)
603 Beaman St., Clinton 28328
Don C. Chaplin, M.D.¹ (IM/CD) (919-227-3621)
Kernodle Clinic, 316 Graham-Hopedale Rd., Burlington 27215
Bertram W. Coffey, M.D.⁹² (AN) (919-781-7420)
P.O. Box 18139, Raleigh 27619
John E. Cook, M.D.⁷⁰ (AN) (919-338-1542)
P.O. Box 96, Camden 27921
John T. Dees, M.D.⁶⁵ (FP/PH) (919-259-2161)
Courthouse Ave., P.O. Box 815, Burgaw 28425
W. Otis Duck, M.D.⁵⁷ (FP) (704-689-2411)
Drawer 729, Mars Hill 28754
Henry (Sandy) A. Easley, III, M.D.⁷⁴ (OB/GYN) (919-758-4181)
101 Bethesda Dr., Greenville 27834
J. Ronald Edwards, M.D.⁹² (PTH) (919-755-8260)
Rt. 7, Box 210E, Raleigh 27614
John A. Fagg, M.D.³⁴ (PS) (919-765-8620)
2901 Maplewood Ave., Winston-Salem 27103
Malcolm Fleishman, M.D.²⁶ (IM/CD) (919-484-0144)
P.O. Box 35126, Fayetteville 28303
Edgar C. Garrabrant, M.D.⁹² (OTO) (919-787-7171)
P.O. Box 18946, Raleigh 27619
H. William Gillen, M.D.⁶⁵ (N) (919-762-8501)
1301 Cypress Grove Dr., Wilmington 28401
Mrs. Daniel Gottovi (Karen) (Auxiliary, Leg. Com. Chmn.)
(919-256-4849)
116 Martingale Lane, Wilmington 28403
T. Reginald Harris, M.D.²³ (PUD/IM) (704-482-1482)
(President-Elect)
808 Schenck St., Shelby 28150
Mrs. Hugh H. Hayes, Jr. (Imogene) (Auxiliary President-Elect)
(704-366-5621)
5033 Gorham Dr., Charlotte 28226
John A. Henderson, M.D.¹¹ (GS) (704-254-2341)
117 Rathfarnham Cir., Asheville 28803
John T. Henley, Jr., M.D.²⁶ (OTO) (919-323-1463)
3314 Melrose Rd., Ste. 100, Fayetteville 28304
Hector H. Henry, II, M.D.¹³ (U/PD) (704-786-5133)
102 Lake Concord Rd., NE, Concord 28025
Charles A. Hoffman, Jr., M.D.²⁶ (U) (919-485-8801)
513 Owen Dr., Fayetteville 28304
Edna M. Hoffman, M.D.²⁶ (OBG) (919-485-4755)
348 Valley Rd., Fayetteville 28305
H. Slade Howell, M.D.⁴⁰ (GS/CDS) (919-886-4552)
624 Quaker Ln., Ste. 116-B, High Point 27262
Lynn A. Hughes, M.D.¹³ (OTO) (704-788-1103)
11 Ardsley Ave., N.E., Concord 28025
William M. Johnstone, Jr.⁷⁴ (ST) (ECU) (919-355-2594)
1608 Beaumont Dr., Greenville 27858
Christopher Jones⁷⁴ (ST) (ECU) (919-752-5110)
408 Rotary Ave., Greenville 27858
Elizabeth P. Kanof, M.D.⁹² (D) (919-878-0310)
3400 Executive Dr., Ste. 207, Raleigh 27609
Hervy B. Kornegay, Sr., M.D.⁹⁶ (FP) (919-658-4954)
238 Smith Chapel Rd., Mt. Olive 28365
Frank W. Leak, M.D.⁸² (FP) (919-592-6011)
Clinton Medical Clinic, Clinton 28328
Ronald H. Levine, M.D.⁹² (PH/PD) (919-733-3446)
2404 White Oak Rd., Raleigh 27609

John D. Matthews, M.D.⁴¹ (OPH) (919-282-5000)
3312 Battleground Ave., Greensboro 27410
F. Maxton Mauney, Jr., M.D.¹¹ (CDS/TS) (704-258-1121)
257 McDowell St., Asheville 28803
Angus M. McBryde, Jr., M.D.⁶⁰ (ORS) (704-372-0743)
120 Providence Rd., Charlotte 28207
John L. McCain, M.D.⁹⁸ (RHU/IM) (919-291-7001)
Wilson Clinic, Wilson 27893
Assad Meymandi, M.D.²⁶ (P/N) (919-485-6166)
1212 Walter Reed Rd., Fayetteville 28304
Robert E. Miller, M.D.⁶⁰ (ORS) (704-373-0544)
1822 Brunswick Ave., Charlotte 28207
Mrs. Charles J. Niemeyer (Carolyn) (Auxiliary President)
(704-867-8180)
3421 Country Club Dr., Gastonia 28054
Robert H. Shackelford, M.D.⁹⁶ (FP) (919-658-4954)
238 Smith Chapel Rd., Mt. Olive 28365
Dale R. Shaw, M.D.⁹² (DR) (919-787-8199)
P.O. Box 19366, Raleigh 27619
Frank Sohmer, M.D.³⁴ (GE/IM) (919-924-0857)
9808 Reynolda Rd., Tobaccoville 27050
Ernest B. Spangler, M.D.⁴¹ (R) (919-854-6546) (President)
Drawer X-3, Greensboro 27402
John S. Stevenson, M.D.⁷⁷ (R/NM) (919-997-2595)
926 Biggs Blvd., Rockingham 28379
Louis R. Wilkerson, M.D.⁹² (OBG) (919-832-5529)
100 S. Boylan Ave., Raleigh 27603

21. Maternal Health Committee VI-3 (21) (1 Consultant) (6-yr. term)

Robert G. Brame, M.D.⁷⁴ (OBG) (1991) **Chairman**
(919-551-4662)
ECU School of Med., Dept. of OB-GYN, Greenville 27834
Mary Susan Fulghum, M.D.⁹² (GYN) (6th) (1991) **Vice-Chairman**
(919-832-5529)
100 S. Boylan Ave., Raleigh 27603
(1st) (1989)
John H. Tinga, M.D.²⁵ (OBG) (2nd) (1993) (919-633-4005)
903 Pine Tree Dr., New Bern 28560
John W. Nance, M.D.⁸² (FP) (3rd) (1990) (919-592-6011)
403 Fairview St., Clinton 28328
Talbot F. Parker, Jr., M.D.⁹⁶ (OBG) (4th) (1988) (919-734-3344)
2400 Wayne Memorial Dr., Ste. K, Goldsboro 27530
John C. Rozier, Jr., M.D.⁷⁸ (OBG) (5th) (1989) (919-738-9601)
4300 Fayetteville Rd., Lumberton 28358
L. Clayton Harrell, III, M.D.⁶⁰ (OBG) (7th) (1991) (704-377-0461)
150 Providence Rd., Charlotte 28207
Harold C. Pollard, III, M.D.³⁴ (OBG) (8th) (1989) (919-765-9350)
2927 Lyndhurst Ave., Winston-Salem 27103
Deborah S. Lenahan, M.D.²⁹ (OPH) (9th) (1994) (704-243-2436)
2 Hospital Dr., Lexington 27292
A. Sherman Morris, Jr., M.D.¹¹ (OBG) (10th) (1987)
(704-255-8900)
80 Victoria Rd., Asheville 28801
C. Christopher Bremer, M.D.⁷⁴ (FP) (ECU) (1990) (919-551-2604)
317 Pinewood Rd., Greenville 27858
Ann B. Brown³⁴ (ST) (BG) (919-722-2275)
2055-A Academy St., Winston-Salem 27103
J. Michele Cherry³² (ST)(UNC) (919-968-0846)
805-A W. Main St., Carrboro 27510
Thomas F. Henley, M.D.⁴¹ (OBG) (919-273-2563)
1309 N. Elm St., Greensboro 27401
William P. Herbert, M.D.³² (OBG/NPM) (UNC) (1991)
(919-966-1601)
UNC, 214 MacNider Bldg., CB #7570, Chapel Hill 27599
Thomas W. Littlejohn, III, M.D.³⁴ (FP) (919-768-8890)
2805 Lyndhurst Ave., Winston-Salem 27103
W. Joseph May, M.D.³⁴ (GYN/OBG) (BG) (1988) (919-748-4595)
300 S. Hawthorne Rd., Winston-Salem 27103
Richard R. Nugent, M.D.³² (GPM/OBG) (1990) (919-733-3816)
Division of Health Services, P.O. Box 2091, Raleigh 27602
John M. Falletta, M.D.³² (PHO) (DUKE) (1991)
(919-684-3401)
Duke Medical Center, Box 2916, Durham 27710
Douglas D. Sheets, M.D.⁸¹ (OBG) (704-287-7383)
Tryon Rd., P.O. Box 1208, Rutherfordton 28139

Thad B. Wester, M.D.⁷⁸ (PD/PH) (919-733-3446)
1001-101 Brighthurst Dr., Raleigh 27605

Consultant:

Mrs. John C. Faris (Ann) (Auxiliary) (919-723-0564)
2720 Bitting Rd., Winston-Salem 27104

22. Mediation Committee (5) (Five Immediate Past-Presidents)

Jack Hughes, M.D.³² (U) (919-489-9504) **Chairman**
30 Kimberly Dr., Durham 27707
John W. Foust, M.D.⁶⁰ (OT) (704-356-0711) **Secretary**
3535 Randolph Rd., Charlotte 28211
Henry J. Carr, Jr., M.D.⁸² (IM) (919-592-6114)
603 Beaman St., Clinton 28328
Kenneth E. Cosgrove, M.D.⁴⁵ (IM/CD) (704-693-4963)
145 Cliff Terrace, Hendersonville 28739
Thomas B. Dameron, Jr., M.D.⁹² (ORS) (919-781-5600)
P.O. Box 10707, Raleigh 27605

23. Medical Aspects of Sports Committee V-5 (24) (3 Consultants)

Frank W. Clippinger, Jr., M.D.³² (ORS) (919-684-4229) **Chairman**
Duke Medical Center, Box 3935, Durham 27710
James D. Hundley, M.D.⁶⁵ (ORS) (919-763-7344) **Vice-Chairman**
2001 S. 17th St., Wilmington 28401
Wallace F. Andrew, Jr., M.D.⁹² (ORS/HS) (919-781-5600)
P.O. Box 10707, Raleigh 27605
Edwin C. Bartlett, M.D.⁷⁴ (ORS) (919-752-4613)
622 Medical Drive, Greenville 27834
Frank H. Bassett, III, M.D.³² (ORS) (919-684-4378)
Duke Medical Center, Box 3004, Durham 27710
Basil M. Boyd, Jr., M.D.⁶⁰ (ORS) (704-373-0544)
1822 Brunswick Ave., Charlotte 28207
Harvey E. Christensen, M.D.¹⁸ (GS/TS) (704-322-9105)
Rt. 2, Box 190, Conover 28613
Howard G. Dawkins, Jr., M.D.⁷⁴ (PS/GS) (919-752-1406)
2577 Stantonsburg Rd., Greenville 27834
Joseph L. DeWalt, M.D.³² (IM/ORS) (919-966-2281)
Iris Lane, Chapel Hill 27514
K. Bertrand Fields, M.D.⁴¹ (FP) (919-379-4133)
1411 Garland Dr., Greensboro 27408
A. Tyson Jennette, M.D.⁹⁸ (ORS) (919-291-1300)
1700 S. Tarboro St., Wilson 27893
David R. Jones⁷⁴ (ST) (ECU) (919-758-1841)
425 W. Long Meadow Rd., Greenville 27858
Hervy B. Kornegay, Sr., M.D.⁹⁶ (FP) (919-658-4954)
238 Smith Chapel Rd., Mt. Olive 28365
Joseph T. McLamb, M.D.⁹⁶ (ORS) (919-736-2157)
2701 Medical Office Pl., Goldsboro 27530
Joe M. McWhorter, M.D.³⁴ (NS) (919-748-4020)
300 S. Hawthorne Rd., Winston-Salem 27103
James M. Poole, M.D.⁹² (PD/ADL) (919-782-5273)
3803 Computer Dr., Ste. 207, Raleigh 27609
Thomas L. Presson, M.D.⁴¹ (ORS) (919-275-0724)
P.O. Box 14580, Greensboro 27415
Donald B. Reibel, M.D.⁹² (ORS) (919-781-5600)
P.O. Box 10707, Raleigh 27605
Donald A. Riopel, M.D.⁶⁰ (PDC) (704-373-1503)
1960 Randolph Rd., Charlotte 28207
George D. Rovere, M.D.³⁴ (ORS) (919-748-3946)
300 S. Hawthorne Rd., Winston-Salem 27103
Thomas C. Spangler, M.D.³² (RES) (ORS) (919-226-6586)
1066 Arthur Dr., Graham 27253
Samuel A. Sue, Jr., M.D.⁴¹ (ORS) (919-275-0724)
P.O. Box 14580, Greensboro 27415
Timothy N. Taft, M.D.³² (ORS) (919-966-2039)
UNC, 237 Burnett-Womack Bldg., Chapel Hill 27599
Wayne B. Venters, M.D.⁶⁷ (ORS) (919-353-1412)
200 Doctors Dr., Ste. J., Jacksonville 28540

Consultants:

Robbie Lester, Chief Consultant (919-733-3822)
Sports Medicine Program, NC Dept. of Education,
116 W. Edenton St., Raleigh 27611
Mrs. Charles J. Niemeyer (Carolyn) (Auxiliary President)
(704-867-8180)
3421 Country Club Dr., Gastonia 28054

Al Proctor, Ph.D. (919-782-6455)
NC Sports Medicine Foundation, 2724 Riddick Dr., Raleigh
27609

24. Medical Education Committee III-6 (20) (1 Consultant) (3-yr. term)

Preston A. Walker, M.D.⁹² (CHP/P) **Chairman**
(919-733-5130) (1991)
Dorothea Dix Hospital, Taylor Hall, Raleigh 27611
William B. Hunt, Jr., M.D.²⁵ (PUD/IM) **Vice-Chairman**
(919-633-8608) (1990)
P.O. Box 2157, New Bern 28560
J. Michele Cherry³² (ST) (UNC) (919-968-0846) (1989)
805-A W. Main St., Carrboro 27510
Mary Ann Contogiannis, M.D.³⁶ (Chmn., Res. Phy. Sec.)
(919-748-2011) (1989)
3529 Spicebush Tr., Greensboro 27410
James B. Ebert, Jr.⁷⁴ (ST) (ECU) (919-756-6093) (1989)
#4 Carriage House, Greenville 27834
Harry A. Gallis, M.D.³² (ID/IM) (DUKE) (919-648-3279) (1991)
Duke Medical Center, Box 3306, Durham 27710
Susan Hazzard³² (ST) (DUKE) (919-688-7347)
500 N. Duke St., Apt. 53-308, Durham 27701
Charles M. Howell, Jr., M.D.³⁴ (D) (919-725-8422) (1991)
340 Pershing Ave., Winston-Salem 27103
Christopher Jones⁷⁴ (ST) (ECU) (Chmn., Med. Student Sec.)
(919-752-5110) (1989)
408 Rotary Ave., Greenville 27858
Eugene S. Mayer, M.D.³² (GPM) (UNC) (919-966-2461) (1990)
UNC, Wing C, CB #7165, Box 3, Chapel Hill 27599
Susan D. McLendon³⁴ (ST) (BG) (919-760-4458)
2000-J Falcon Wood Ct., Winston-Salem 27107
Emery C. Miller, Jr., M.D.³⁴ (END/IM) (BG) (919-748-3630) (1990)
300 S. Hawthorne Rd., Winston-Salem 27103
Edwin W. Monroe, M.D.⁷⁴ (IM) (ECU) (919-551-2983) (1991)
ECU School of Medicine, Greenville 27834
John W. Nance, M.D.⁸² (FP) (NCAFP) (919-592-6011) (1990)
403 Fairview St., Clinton 28328
Rafael C. Sanchez, M.D.⁷⁴ (FP/ADL) (919-551-2608) (1989)
ECU School of Medicine, Dept. EM, Brody 4N72, Greenville
27834
Donald D. Smith, M.D.⁴¹ (PD) (919-379-4025) (1991)
1200 N. Elm St., Greensboro 27401
Thomas A. Will, M.D.³⁶ (GP) (704-922-3106) (1991)
P.O. Box 515, Dallas 28034
William B. Wood, M.D.³² (IM/PUD) (919-962-2118) (1990)
UNC, 231 MacNider Bldg., CB #7000, Chapel Hill 27599
Jerry C. Woodard, M.D.⁹⁸ (GE/IM) (919-291-1300) (1990)
1700 S. Tarboro St., Wilson 27893
Judith S. Yongue, M.D.⁷⁴ (P/FP) (919-355-2768) (1991)
107-C Commerce St., Greenville 27858

Consultant:

Mrs. Stuart K. Todd (Kathy) (Auxiliary) (919-443-4361)
509 Avondale Ave., Rocky Mount 27801

25. Medical-Legal Committee V-6 (15) (1 Consultant)

Joseph M. Jenkins, M.D.⁷ (U) (919-946-0136) **Chairman**
604 E. 12th St., Washington 27889
Warner L. Hall, Jr., M.D.⁹² (OBG) (919-782-1273) **Vice-Chairman**
P.O. Box 18568, Raleigh 27619
Preecha Bhotiwihok, M.D.⁵⁴ (AN) (919-522-7800)
P.O. Box 1043, Kinston 28501
Walter S. Feldman, M.D.⁶⁰ (P/LM) (704-375-3575)
501 Billingsley Rd., Charlotte 28211
Frederick W. Glass, M.D.³⁴ (EM/GS) (919-748-4626)
Bowman Gray Sch. of Med., Winston-Salem 27103
Julius Howell, M.D.³⁴ (PS/OTO) (919-760-1727)
1900 S. Hawthorne Rd., Ste. 480, Winston-Salem 27103
Mark K. LaVigne⁷⁴ (ST) (ECU) (919-758-1822)
Doctor's Park Apts., C-5, Greenville 27834
Victor H. MacIntosh, M.D.⁵³ (FP) (919-774-6282)
207 E. Main St., Sanford 27330
Robert J. Noecker³² (ST) (UNC) (919-781-0707)
P.O. Box 884, Chapel Hill 27514
Doug Picton⁷⁴ (ST) (ECU) (919-756-9538)
Rt. 8, Box 330-L, Greenville 27834
Ronald Riefkohl, M.D.³² (PS/GS) (919-684-2854)
Duke Medical Center, Box 3098, Durham 27710

Robert L. Rollins, Jr., M.D.⁹² (P) (919-733-5525)
2500 Wake Dr., Raleigh 27608
Lary A. Schulhof, M.D.¹¹ (NS) (704-255-7776)
7 McDowell St., Asheville 28801
Thomas G. Thurston, III, M.D.⁸⁰ (OBG) (704-636-9270)
315 Mocksville Ave., Salisbury 28144
Abe Walston, II, M.D.³² (CD/IM) (919-682-5561)
306 S. Gregson St., Durham 27701

Consultant:

Arlene J. Diosegy, J.D. (919-489-9001)
P.O. Box 51729, Durham 27717

26. Membership Committee I-4 (12) (4 Consultants)

Charles L. Garrett, Jr., M.D.⁶⁷ (PTH/FOP) (3rd-C) **Chairman**
(919-353-3498)
Onslow Memorial Hospital, Jacksonville 28540
Shahane R. Taylor, Jr., M.D.⁴¹ (OPH) **Vice-Chairman**
(919-274-4626)
348 N. Elm St., Greensboro 27401
Denis I. Becker, M.D.⁹² (END/IM) (919-876-7692)
3410 Executive Dr., Ste. 205, Raleigh 27609
W. Grimes Byerly, Jr., M.D.¹⁸ (GS) (9th-VC) (704-328-2231)
24 Second Ave., N.E., Hickory 28601
Mary Ann Contogiannis, M.D.⁴¹ (Chmn., Res. Phy. Sec.)
(919-748-2011)
3529 Spicebush Tr., Greensboro 27410
Kenneth E. Cosgrove, M.D.⁴⁵ (IM/CD) (704-693-4963)
145 Cliff Terrace, Hendersonville 28739
Robert G. Deyton, Jr., M.D.⁷⁴ (OBG) (Chmn., OBG Sec.)
(919-758-4181)
101 Bethesda Dr., Greenville 27834
Clifford R. Guy, M.D.³⁴ (CD/IM) (8th-C) (919-768-4730)
250 Charlois Blvd., Winston-Salem 27103
Christopher Jones⁷⁴ (ST) (Chmn., Med. Stud. Sec.)
(919-752-5110)
408 Rotary Ave., Greenville 27858
John M. Harrelson, M.D.³² (ORS/PTN)(Chmn. ORS Sec.)
(919-684-5304)
Duke Medical Center, Box 3023, Durham 27710
Charles A. Hoffman, Jr., M.D.²⁶ (U) (5th-C) (919-485-8801)
513 Owen Dr., Fayetteville 28304
Elizabeth P. Kanof, M.D.⁹² (D) (6th-VC) (919-878-0310)
3400 Executive Dr., Ste. 207, Raleigh 27609

Consultants:

Mrs. Edward Boyette (Helen) (Auxiliary) (919-285-2721)
P.O. Box 65, Chinquapin 28521
Mrs. Kenneth E. Cosgrove (Eleanor) (Auxiliary) (704-693-4963)
145 Cliff Terrace, Hendersonville 28739
Mrs. Neil M. DeStefano (Beverly) (Auxiliary) (919-838-6182)
P.O. Drawer 780, Reidsville 27320
Mrs. Charles F. Willson (Wendy) (Auxiliary) (919-756-7775)
Rt. 1, Box 486, Winterville 28590

27. Membership Services & Benefits Committee I-5 (11)

T. Reginald Harris, M.D.²³ (PUD/IM) (704-482-1482) **Chairman**
808 Schenck St., Shelby 28150
Lawrence M. Cutchin, M.D.³³ (IM/PD) **Vice-Chairman**
(919-828-1789)
Rt. 3, Box 325, Tarboro 27886
Jack W. Bonner, III, M.D.¹¹ (P) (704-254-3201)
Highland Hospital, P.O. Box 1101, Asheville 28802
John T. Dees, M.D.⁶⁵ (FP/PH) (919-259-2161)
Courthouse Ave., P.O. Box 815, Burgaw 28425
John A. Henderson, M.D.¹¹ (GS) (704-254-2341)
117 Rathfarnham Circle, Asheville 28803
Carl J. Hiller, M.D.²⁵ (ORS) (919-633-3256)
Drawer 1694, New Bern 28560
George W. James, M.D.³⁴ (D) (919-722-6155)
205 S. Hawthorne Rd., Winston-Salem 27103
Angus M. McBryde, Jr., M.D.⁶⁰ (ORS) (704-372-0743)
120 Providence Rd., Charlotte 28207
Thomas F. O'Brien, Jr., M.D.⁷⁴ (GE/IM) (919-551-2149)
ECU School of Medicine, Greenville 27834
Carl S. Phipps, M.D.³⁴ (END/IM) (919-765-1640)
3333 Silas Creek Parkway, Winston-Salem 27103
Kenneth S. Piech, M.D.²⁴ (PTH) (919-642-8011)
1211 Pinkney St., Whiteville 28472

28. Mental Health Committee VI-4 (19) (4 Consultants)

Charles R. Vernon, M.D.⁶⁵ (P) (919-256-4106) **Chairman**
 7230 Wrightsville Ave., Wilmington 28403
 Jack W. Bonner, III, M.D.¹¹ (P) (704-254-3201) **Vice-Chairman**
 Highland Hospital, P.O. Box 1101, Asheville 28802
 Wilmer C. Betts, M.D.⁹² (P) (919-847-2624)
 901-F Paverstone Dr., Raleigh 27615
 Jascha W. Danoff, M.D.⁷⁴ (CHP/P) (919-551-2660)
 ECU, Dept. of Psy. Med., Greenville 27858
 A. Eugene Douglas, Jr., M.D.⁷⁸ (P) (919-738-8230)
 207 W. 29th St., Lumberton 28358
 A. Ray Evans, M.D.⁷⁴ (P) (919-758-4810)
 1705 W. 6th St., Bldg. H, Greenville 27834
 George E. Hamilton, Jr., M.D.³⁴ (P) (919-725-7777)
 908 Arbor Rd., Winston-Salem 27104
 Paul T. Kayye, M.D.⁹² (P/CHP) (919-733-7011)
 Dept. of Human Resources, 325 N. Salisbury St., Raleigh 27611
 Charles E. Llewellyn, Jr., M.D.³² (P) (919-493-7298)
 3308 Chapel Hill Blvd., #110, Durham 27707
 Donald E. MacDonald, M.D.⁹⁰ (P) (704-289-5431)
 1310 McCray St., Monroe 28110
 Philip G. Nelson, M.D.⁷⁴ (P) (919-758-3145)
 1211 E. Rock Spring Rd., Greenville 27834
 Barry S. Ostrow, M.D.⁹² (P) (919-787-7125)
 3900 Browning Pl., Ste. 201, Raleigh 27609
 George E. Prince, M.D.³⁶ (PD) (704-866-3222)
 3709 St. Regis Dr., Gastonia 28054
 Billy W. Royal, M.D.³² (P) (919-733-5540)
 P.O. Box 2387, Chapel Hill 27514
 Richard D. Selman, M.D.¹¹ (P) (704-254-3201)
 Highland Hospital, P.O. Box 1101, Asheville 28802
 Ray G. Silverthorne, M.D.⁷ (OBG) (919-946-5168)
 Rt. 2, Box 35, Washington 27889
 Nicholas E. Stratas, M.D.⁹² (P/HYP) (919-787-7125)
 3900 Browning Pl., Ste. 201, Raleigh 27609
 Sean White ⁷⁴ (ST) (ECU) (919-756-6352)
 E-23 Yorktown Square, Greenville 27834
 Judith S. Yongue, M.D.⁷⁴ (P/FP) (919-355-2768)
 107-C Commerce St., Greenville 27858

Consultants:

Sally Johnson, M.D. (919-575-4541)
 617 Downpatrick Lane, Raleigh 27615
 Mrs. William F. Harriss (Jane)
 (Auxiliary, Men. Health Com. Chmn.) (919-883-0035)
 1500 Crestlin Rd., High Point 27260
 Mrs. Wymene Valand (919-833-6076)
 706 Woodburn Rd., Raleigh 27605
 Richard H. Williams, Ph.D. (919-756-5346)
 111 Cardinal Dr., Greenville 27834

29. Nominating Committee (10) (3-yr. term)

Edna Hoffman, M.D.²⁶ (OBG) (5th) (1989) **Chairman**
 (919-485-4755)
 348 Valley Rd., Fayetteville 28305
 Edward S. Beason, M.D.³⁴ (PS) (8th) (919-765-3540)
 1732 S. Hawthorne Rd., Winston-Salem 27103
 Thomas E. Goodin, III, M.D.¹⁸ (AN) (9th) (1989) (704-322-0870)
 701 5th Ave., N.E., Conover 28613
 Ira M. Hardy, II, M.D.⁷⁴ (NS) (2nd) (1990) (919-752-5156)
 125 Moye Blvd., Greenville 27834
 N. Neil Howell, M.D.⁶⁰ (OTO/HNS) (7th) (1989) (704-365-0711)
 3535 Randolph Rd., Charlotte 28211
 Colin D. Jones, M.D.⁸ (FP) (1st) (1991) (919-332-6138)
 Academy St., Ahoskie 27910
 John R. Kernodle, M.D.¹ (GYN) (6th) (1990) (919-584-7075)
 2465 Edgewood Ave., Burlington 27215
 Charles T. McCullough, Jr., M.D.¹¹ (ORS) (10th) (1990)
 (704-258-8800)
 129 McDowell St., Asheville 28801
 Charles L. Nance, Jr., M.D.⁶⁵ (ORS) (3rd) (1989) (919-763-7344)
 2001 S. 17th St., Wilmington 28401
 Julian M. Warren, M.D.⁶⁴ (FP) (4th) (919-478-4600)
 P.O. Box 1120, Spring Hope 27882

30. N.C. Industrial Commission Liaison Committee IV-4 (29)

Thomas E. Castelloe, M.D.⁹² (ORS) (919-781-5600) **Chairman**
 P.O. Box 10707, Raleigh 27605

John T. Daniel, Jr., M.D.³² (GS) (919-682-7378) **Vice-Chairman**
 415 Dunstan St., Durham 27707

Kent T. Anderson, M.D.⁹⁸ (IM) (919-291-7001)
 1704 S. Tarboro St., Wilson 27893
 Howard G. Dawkins, Jr., M.D.⁷⁴ (PS/GS) (919-752-1406)
 2577 Stantonsburg Rd., Greenville 27834
 Michael J. Dimeo, M.D.¹ (PUD/IM) (919-226-7300)
 1604 Memorial Dr., Burlington 27215
 James S. Fulghum, III, M.D.⁹² (NS) (919-832-4448)
 P.O. Box 14027, Raleigh 27610
 Edgar C. Garrabrant, M.D.⁹² (OTO) (787-7171)
 P.O. Box 18946, Raleigh 27619
 J. Stuart Gaul, Jr., M.D.⁶⁰ (ORS) (704-372-9820)
 2600 E. 7th St., Charlotte 28204
 Gregory S. Georgiade, M.D.³² (PS/GS) (919-684-3039)
 Duke Medical Center, Box 3960, Durham 27710
 Benjamin W. Goodman, M.D.¹⁸ (FP) (704-328-2231)
 24 Second Ave., NE, Hickory 28601
 Ralph L. Greene, Jr., M.D.⁶⁰ (IM) (704-365-0760)
 3535 Randolph Rd., Charlotte 28211
 Paul P. Gwyn, Jr., M.D.³⁴ (PS/GS) (919-765-8620)
 2901 Maplewood Ave., Winston-Salem 27103
 Donald M. Hayes, M.D.³⁴ (OM/IM) (919-744-3708)
 P.O. Box 2760, Winston-Salem 27102
 Carl J. Hiller, M.D.²⁵ (ORS) (919-633-3256)
 P.O. Drawer 1694, New Bern 28560
 Thomas C. Kerns, Jr., M.D.³² (OPH) (919-682-9341)
 1110 W. Main St., Durham 27701
 Thomas J. Koontz, M.D.³⁴ (GS) (919-765-5221)
 4250 Allistair Rd., Winston-Salem 27104
 Paul D. Long, M.D.⁴¹ (ORS) (919-275-0927)
 1505 Westover Terrace, Greensboro 27408
 Charles R. Mann, M.D.³² (OTO) (919-682-9341)
 110 S. Main St., Durham 27701
 Sidney A. Martin, M.D.⁹² (OM/FP) (919-782-0911)
 3141 Essex Circle, Raleigh 27608
 Richard S. Myers, M.D.⁹² (GS/TS) (919-748-7414)
 2800 Blue Ridge Blvd., Raleigh 27607
 Charles L. Nance, Jr., M.D.⁶⁵ (ORS) (919-763-7344)
 2001 S. 17th St., Wilmington 28401
 Van B. Noah, M.D.⁹² (OPH) (919-872-3242)
 3900 Old Wake Forest Rd., Ste. 104, Raleigh 27609
 J. Flint Rhodes, M.D.⁹² (U) (919-781-7113)
 2800 Blue Ridge Blvd., Ste. 403, Raleigh 27607
 Helen M. Stinson, M.D.⁴¹ (PS) (919-272-3169)
 1021 E. Wendover Ave., Ste. 303, Greensboro 27405
 David T. Tayloe, Jr., M.D.⁹⁶ (PD) (919-734-4736)
 2704 Medical Office Place, Goldsboro 27530
 Robert L. Timmons, M.D.⁷⁴ (NS) (919-752-5156)
 125 Moye Blvd., Greenville 27834
 James R. Urbaniak, M.D.³² (ORS/HS) (919-684-2476)
 Duke Medical Center, Box 2912, Durham 27710
 Charles R. Vernon, M.D.⁶⁵ (P) (919-256-4106)
 7230 Wrightsville Ave., Wilmington 28403
 Michael F. Yarborough, M.D.⁹² (GS/TS) (919-876-2732)
 P.O. Box 17200, Raleigh 27619

31. Physicians Health & Effectiveness Committee VI-5 (25) (3 Consultants)

Wilmer C. Betts, M.D.⁹² (P) (919-847-2624) **Chairman**
 901-F Paverstone Dr., Raleigh 27615
 Robert A. Fleury, M.D.⁶³ (P/ALD) (919-692-6471) **Vice-Chairman**
 P.O. Box 56, Southern Pines 28387
 Charles S. Betts, M.D.⁷⁶ (IM) (919-629-7710)
 220-A Foust St., Asheboro 27203
 Robert A. Blackburn, M.D.²⁶ (OTO/P) (919-485-7181)
 1262 Oliver St., Fayetteville 28304
 Frederick A. Blount, M.D.³⁴ (PD) (919-724-3072)
 2390 Coliseum Dr., Winston-Salem 27106
 Martin L. Brooks, M.D.⁷⁸ (GP) (919-521-4221)
 P.O. Box 37, Pembroke 28372
 Stanley S. Burns, Jr., M.D.⁶⁰ (OTO) (704-372-3300)
 1600 E. Third Ave., Charlotte 28204
 Mary Ann Contogiannis, M.D.⁷⁴ (Chmn., Res. Phy. Sec.)
 (919-748-2011)
 3529 Spicebush Tr., Greensboro 27410
 James K. Daly, M.D.⁵⁴ (DR/P) (919-522-3443)
 2711 Westbrooke Dr., Kinston 28501

A. Eugene Douglas, Jr., M.D.⁷⁸ (P) (919-738-8230)
207 W. 29th St., Lumberton 28358
William Gough, III, M.D.¹¹ (RHU/IM) (704-258-9533)
445 Biltmore Center, Ste. 306, Asheville 28801
John H. Greig, M.D.⁶⁰ (AN) (704-366-9408)
4401 Colwick Rd., #702, Charlotte 28211
Philip S. Herbert, Jr., M.D.⁷ (P) (919-946-8061)
1308 Highland Rd., Washington 27889
Carl W. Hoffman, M.D.⁷⁸ (R) (919-739-9788)
P.O. Box 1527, Lumberton 28358
Christopher Jones⁷⁴ (ST) (ECU) (Chmn., Med. Stud. Sec.)
(919-752-5110)
408 Rotary Ave., Greenville 27858
Julian Keith, Jr., M.D.³⁴ (ALD/FP) (919-346-5030)
192 Village Dr., Jacksonville 28540
Andrew Ku, M.D.³² (RES) (DR) (919-681-2711)
311 S. LaSalle St., Apt. 36G, Durham 27705
Tracy J. T. Latz³⁴ (ST) (BG) (919-723-5305)
1322 Madison Ave., Winston-Salem 27103
Jonnie H. McLeod, M.D.⁶⁰ (PD) (704-547-2171)
1504 Biltmore Dr., Charlotte 28207
Charles T. Medlin, M.D.⁹² (FP) (919-772-3266)
2000 Highway 70 W., Garner 27529
Brian R. Nagy, M.D.⁶⁰ (P) (704-375-3575)
501 Billingsley Rd., Charlotte 28211
John S. Noell, M.D.¹¹ (FP) (704-584-0956)
Rt. 2, Box 630A, Nebo 28761
James H. Sanders, Jr., M.D.⁸⁸ (FP/GER) (704-884-9362)
P.O. Box 389, Brevard 28712
J. Dale Simmons, M.D.⁸⁶ (PH/FP) (919-374-2131)
P.O. Box 1062, Dobson 27017
Charles R. Vernon, M.D.⁶⁵ (P) (919-256-4106)
7230 Wrightsville Ave., Wilmington 28403

Consultants:

Mrs. Charles J. Niemeyer (Carolyn) (Auxiliary President)
(704-867-8180)
3421 Country Club Dr., Gastonia 28054
Mrs. Edward Boyette (Helen) (Auxiliary) (919-285-2721)
P.O. Box 65, Chinquapin 28521
Mrs. Hugh H. Hayes, Jr., (Imogene) (Auxiliary) (704-366-5621)
5033 Gorham Dr., Charlotte 28226

32. Practice Pattern Variation Committee IV-5 (17) (7 Consultants)

Lawrence M. Cutchin, M.D.³³ (IM/PD) (919-828-1789) **Chairman**
Rt. 3, Box 325, Tarboro 27886
Robert H. Bilbro, M.D.⁹² (IM/CD) (919-782-1806) **Vice-Chairman**
3521 Haworth Dr., Raleigh 27609
Gary O. Bean, M.D.⁹² (FP) (919-872-4900)
1109 Dresser Ct., Raleigh 27609
Don C. Chaplin, M.D.¹ (IM/CD) (919-227-3621)
Kernodle Clinic, 316 Graham-Hopedale Rd., Burlington 27215
John T. Dees, M.D.⁶⁵ (FP/PH) (919-259-2161)
Courthouse Ave., P.O. Box 815, Burgaw 28425
J. Dewey Dorsett, Jr., M.D.⁶⁰ (IM/CD) (704-333-4175)
1851 E. Third St., Charlotte 28204
Monroe T. Gilmour, M.D.⁶⁰ (IM) (704-375-0287)
1300 Baxter St., Ste. 163, Charlotte 28204
John Glasson, M.D.³² (ORS) (919-471-8431)
2609 N. Duke St., Ste. 301, Durham 27704
Warner L. Hall, Jr., M.D.⁹² (OBG) (919-782-1273)
P.O. Box 18568, Raleigh 27619
Frank Leak, M.D.⁸² (FP) (919-592-6011)
Clinton Medical Clinic, Clinton 28328
Carl B. Lyle, Jr., M.D.³² (IM) (919-966-5945)
UNC, 145-A MacNider Bldg., 202-H, Chapel Hill 27514
E. Thomas Marshburn, Jr., M.D.⁶⁵ (IM) (919-762-9621)
(Chmn., PRO Com.)
1906 Meeting Ct., Wilmington 28401
Philip L. Martin, M.D.⁹² (OPH) (919-872-0572)
3320 Executive Dr., Ste. 210, Raleigh 27609
Eugene S. Mayer, M.D.³² (GPM) (919-966-2461)
UNC, Wing C, CB #7165, Box 3, Chapel Hill 27599
Edwin W. Monroe, M.D.⁷⁴ (IM) (919-551-2983)
ECU School of Medicine, Greenville 27834

Sarah T. Morrow, M.D.⁹² (PH/PD) (919-851-9305)
3304 Wade Ave., Raleigh 27607
Thad B. Wester, M.D.⁷⁸ (PD/PH) (919-733-3446)
1001-101 Brighthurst Dr., Raleigh 27605

Consultants:

James D. Bernstein, Executive Director (919-821-0485)
NC Foundation for Alternative Health Programs, Inc., P.O. Box
10245, Raleigh 27605
Julian D. Bobbitt, Legal Counsel (919-821-1220)
P.O. Box 12807, Raleigh 27605
Janis Curtis, Director (919-733-7141)
N.C. Database Commission, 3901 Barrett Dr., Ste. 204,
Raleigh 27609
Sandra Greene, Ph.D. (919-489-7431)
BCBSNC, P.O. Box 2291, Durham 27702
Paul R. Perruzzi (919-733-2060)
Div. of Med. Assistance, 1985 Umstead Dr., Raleigh 27603
Charles Riddick, Executive Director (919-851-2955)
Medical Review of NC, Inc., P.O. Box 37309, Raleigh 27627
Wyatt (Pete) Royce, Director, Management Services
(919-832-9550)
N.C. Hospital Association, P.O. Box 10937, Raleigh 27605

33. Procedures and Policies Committee I-6 (5)

Josephine E. Newell, M.D.⁹⁶ (FP) (919-733-7611) **Chairman**
Raleigh Towne, Apt. 47, 525 Wade Ave., Raleigh 27605
Rose Pully, M.D.⁵⁴ (FP) (919-523-2569) **Vice-Chairman**
805 Rountree St., Kinston 28501
Jesse Caldwell, Jr., M.D.³⁶ (GYN) (704-865-0968)
1307 Park Lane, Gastonia 28052
Jack Hughes, M.D.³² (U) (919-489-9504)
30 Kimberly Drive, Durham 27707
Thomas F. O'Brien, Jr., M.D.⁷⁴ (GE/ADM) (919-551-2149)
(Secretary-Treasurer)
ECU School of Medicine, Greenville 27834

34. Professional Insurance Committee I-7 (15)

Julius A. Green, Jr., M.D.⁹² (R) (919-787-8221) **Chairman**
P.O. Box 19366, Raleigh 27615
David H. Jones, M.D.⁹² (OPH) (919-787-2758) **Vice-Chairman**
3900 Browning Pl., Raleigh 27609
Richard H. Ames, M.D.⁴¹ (NS) (919-288-0421)
2316 Princess Ann St., Greensboro 27408
Paul L. Burroughs, Jr., M.D.⁹² (ORS) (919-872-5296)
3410 Executive Dr., Raleigh 27609
William W. Farley, M.D.⁹² (PD) (919-782-8326)
3814 Browning Pl., Raleigh 27609
W. Blake Garside, M.D.⁹² (PS) (919-872-2616)
1112 Dresser Ct., Raleigh 27609
Lewis J. Gaskin, M.D.⁹² (AN) (919-781-7420)
P.O. Box 18139, Raleigh 27619
Charles M. Hassell, Jr., M.D.⁴¹ (PTH/DMP) (919-379-4074)
1200 N. Elm St., Greensboro 27401
Willis E. Mease, M.D.⁸⁷ (FP) (919-324-3105)
209 S. Church St., Richlands 28574
John M. Roberts, Jr., M.D.⁹² (OBG) (919-592-1414)
400 Cooper Dr., Clinton 28328
Frank Sabiston, Jr., M.D.⁵⁴ (GS/TS) (919-522-1626)
P.O. Box 1316, Kinston 28501
Nathaniel L. Sparrow, M.D.⁹² (OTO) (919-787-7171)
P.O. Box 18946, Raleigh 27619
Nicholas E. Stratas, M.D.⁹² (P/HYP) (919-787-7125)
3900 Browning Pl., Ste. 201, Raleigh 27609
Robert J. Sullivan, Jr., M.D.³² (IM/FP) (919-684-2248)
Duke Medical Center, Box 3003, Durham 27710
Peter R. Young, M.D.⁴¹ (GS) (919-274-8444)
P.O. Box 10037, Greensboro 27404

35. Professional Review Organization Monitoring Committee IV-6 (8)

E. Thomas Marshburn, Jr., M.D.⁶⁵ (IM) (919-762-9621) **Chairman**
1906 Meeting Ct., Wilmington 28401
William B. Costenbader, Jr., M.D.¹¹ (OTO/HNS) **Vice-Chairman**
(704-254-3517)
131 McDowell St., Asheville 28801

E. Stephen Edwards, M.D.⁹² (PD) (919-781-7490)
2800 Blue Ridge Blvd., Ste. 501, Raleigh 27607

James C. Gaither, M.D.¹⁸ (IM) (704-322-1128)

Rt. 2, Box 199, Conover 28613

David P. Grove, M.D.⁴¹ (IM) (919-373-1184)

1511 Westover Terrace, Greensboro 27408

Douglas E. Henley, M.D.²⁶ (FP) (919-424-0123)

4092 Professional Dr., Hope Mills 28348

E. Rodney Hornbake, III, M.D.²⁵ (IM) (919-633-0363)

1700 St. Delight Church Rd., New Bern 28560

Edwin W. Monroe, M.D.⁷⁴ (IM) (919-551-2983)

ECU School of Medicine, Greenville 27834

36. Rehabilitation Medicine Committee IV-7 (14)

Angus M. McBryde, Jr., M.D.⁶⁰ (ORS) (704-372-0743) **Chairman**
120 Providence Rd., Charlotte 28207

John W. Denham, M.D.³⁴ (IM/FP) (919-760-5782) **Vice-Chairman**

3415 Thoresby Ct., Winston-Salem 27104

Ulrich K. Alsentzer, M.D.⁷⁴ (PM) (919-551-4440)

P.O. Box 6028, Greenville 27834

Frank W. Clippinger, Jr., M.D.³² (ORS) (919-684-4229)

Duke Medical Center, Box 3935, Durham 27710

Ronald C. Demas, M.D.⁶⁰ (N/PM) (704-372-3714)

2115 E. 7th St., Ste. 101, Charlotte 28204

James R. Harper, M.D.³² (IM/CD) (919-942-5123)

891 W. Willow Dr., Chapel Hill 27514

David L. Jarrett, M.D.¹¹ (ORS) (704-252-7180)

53 S. French Broad St., Asheville 28801

Charles E. Llewellyn, Jr., M.D.³² (P) (919-493-7298)

3308 Chapel Hill Blvd., #110, Durham 27707

James M. Love, M.D.⁴¹ (N/IM) (919-275-0779)

2007 Lafayette Dr., Greensboro 27408

Robert E. Miller, M.D.⁶⁰ (ORS) (704-373-0544)

1822 Brunswick Ave., Charlotte 28207

S. J. Pelligra, M.D.⁴¹ (PM) (919-379-3667)

1200 N. Elm St., Greensboro 27401

Christian F. Siewers, M.D.²⁶ (ORS/PM) (919-323-6036)

Southeastern Reg. Rehab. Ctr., P.O. Box 2000, Fayetteville 28302

Terry E. White, M.D.¹¹ (PM) (704-274-2400)

P.O. Box 15025, Asheville 28813

John B. Winfield, M.D.³² (RHU/IM) (919-966-4191)

UNC, 932 FLOB, CB #7280, Chapel Hill 27599

37. Sexually Transmitted Diseases & AIDS Committee VI-6 (19) (5 Consultants)

Jared N. Schwartz, M.D.⁶⁰ (PTH) (704-371-4814) **Chairman**
P.O. Box 33549, Charlotte 28233

Timothy W. Lane, M.D.⁴¹ (ID/IM) (919-379-4062) **Vice-Chairman**
1200 N. Elm St., Greensboro 27401

Don C. Chaplin, M.D.¹ (IM/CD) (919-227-3621)

Kernodle Clinic, 316 Graham-Hopedale Rd., Burlington 27215

Myron S. Cohen, M.D.³² (ID) (919-966-2536)

UNC, 547 Burnett-Womack Bldg., 229-H, Chapel Hill 27514

Russel C. Cook, M.D.⁷ (PD) (919-946-4134)

608 E. 12th St., Washington 27889

Harry E. Dascomb, M.D.⁹² (IM/ID) (919-755-8520)

3000 New Bern Ave., Raleigh 27610

William S. Farabow, M.D.⁴⁰ (OBG) (919-889-4353)

400 N. Elm St., High Point 27260

Robert H. Farley, M.D.⁴¹ (GS) (919-275-8415)

311 W. Wendover Ave., Greensboro 27408

Harry A. Gallis, M.D.³² (ID/IM) (919-684-3279)

Duke Medical Center, Box 3306, Durham 27710

Doreen L. Hughes³⁴ (ST) (BG) (919-755-8520)

664 N. Spring St., Apt. 4, Winston-Salem 27101

John E. Latz³⁴ (ST) (BG) (919-723-5305)

1322 Madison Ave., Winston-Salem 27103

Donald R. Lannin, M.D.⁷⁴ (GS) (919-551-5418)

ECU, Dept. of Surgery, Greenville 27858

William F. Milam, M.D.²³ (PTH) (704-487-3147)

P.O. Box 1268, Shelby 28150

P. Samuel Pegram, Jr., M.D.³⁴ (ID/IM) (919-748-4246)

2332 Elizabeth Ave., Winston-Salem 27103

Richard L. Rumley, M.D.⁷⁴ (IM/ID) (919-757-2550)

ECU, Dept. of Medicine, Greenville 27834

Hugh H. Tilson, M.D.⁹² (GPM/PH) (919-248-4354)

3030 Cornwallis Rd., Research Triangle Park 27709

Leo E. Waivers, M.D.⁷⁴ (IM) (919-551-4633)

ECU School of Med., Dept. of Med., Greenville 27834

Thad B. Wester, M.D.⁷⁸ (PD/PH) (919-733-3446)

1001-101 Brighthurst Dr., Raleigh 27605

Catherine M. Wilfert, M.D.³² (PD/ID) (919-684-6610)

Duke Medical Center, Box 2951, Durham 27710

Consultants:

James R. Fowler, Jr. (919-733-3039)

STD Branch, Div. of Health Services, P.O. Box 2091, Raleigh 27602

Sandra E. Hendrickson, FNP (919-828-9882)

Biomedical Home Care, 516 N. Bloodworth St., Raleigh 27601

Charles H. Livengood, III, M.D. (919-684-2195)

Duke Medical Center, Box 3291, Durham 27710

Rebecca Meriwether, M.D. (919-733-3039)

STD Control Branch, Div. of Health Services, P.O. Box 2091, Raleigh 27602

Mrs. Marguerite Tracy Trexler (Auxiliary) (704-338-9230)

223 Perrin Pl., Charlotte 28207

38. Traffic Safety Committee II-4 (13) (6 Consultants)

George Johnson, Jr., M.D.³² (VS/CDS) (919-966-3391) **Chairman**

UNC, Dept. of Surgery, CB #7050, Chapel Hill 27599

Paul P. Gwyn, Jr., M.D.³⁴ (PS/GS) **Vice-Chairman**

(919-765-8620)

2901 Maplewood Ave., Winston-Salem 27103

Harry W. Barrick, Jr., M.D.⁹² (FP) (919-787-4429)

1900 Highland Pl., Raleigh 27607

Tyndall P. Harris, M.D.³² (IM) (919-489-7371)

P.O. Box 3118, Chapel Hill 27514

James D. Hundley, Jr., M.D.⁶⁵ (ORS) (919-763-7344)

2001 S. 17th St., Wilmington 28401

A. Thomas May, III⁷⁴ (ST) (ECU) (919-355-5287)

25-G Courtney Square, Greenville 27858

Jeff C. Payne³⁴ (ST) (BG) (919-724-6286)

938 Madison Ave., Winston-Salem 27103

John O. Reynolds, Jr., M.D.⁶⁰ (OPH) (704-637-0158)

410 Mocksville Ave., Salisbury 28144

Billy W. Royal, M.D.³² (P) (919-733-5540)

P.O. Box 2387, Chapel Hill 27514

Marvin P. Rozear, M.D.³² (N) (919-684-8111)

Duke Medical Center, Box 3849, Durham 27710

Robert W. Schafermeyer, M.D.⁶⁰ (EM/PD) (704-338-3181)

Charlotte Mem. Hospital, P.O. Box 32861, Charlotte 28232

Robert L. Timmons, M.D.⁷⁴ (NS) (919-752-5156)

125 Moyer Blvd., Greenville 27834

Steven F. Wiegand, M.D.⁹² (EM/FP) (919-848-9471)

10305 Whitestone Rd., Raleigh 27609

Consultants:

Mrs. John A. Fagg (Nancy) (Auxiliary) (919-725-2800)

403 Arbor Rd., Winston-Salem 27104

Mr. William S. Hiatt, Commissioner (919-733-2403)

Division of Motor Vehicles, 1100 New Bern Ave., Raleigh 27697

Cpt. F. L. Overby, Director (919-733-7952)

Research & Planning, N.C. Dept. of Crime Control & Public Safety, P.O. Box 27687, Raleigh 27611

Patricia F. Waller, Ph.D., Assoc. Director (919-962-2202)

UNC, Injury Prevention Research Center, CB #3430, Chapel Hill 27599

Myron Wolbarsht, Ph.D. (919-684-2032)

Duke University, Dept. of Psychology, Durham 27706

Douglas Wooten (919-733-3222)

Highway Safety Branch, Div. of Health Services, P.O. Box 2091, Raleigh 27602

39. North Carolina Society of Medical Assistants Advisors (4) (2-yr. term)

Carol A. LaCroix, M.D.⁸⁴ (FP) (NCSMA) (1989) (704-982-9144) **Chairman**

320 Yadkin St., Albemarle 28001

Gary B. Copeland, M.D.²⁶ (OPH) (NCSMA) (1990)

(919-484-6141)

1629 Owen Dr., Fayetteville 28304

William F. Crutchley, Jr., M.D.⁷⁰ (GS) (1989) (919-338-3909)
1134 N. Road St., Elizabeth City 27909

Douglas J. Harben, M.D.⁶⁰ (D/IM) (NCMS/NCMSA) (1990)
(704-364-6110)
3535 Randolph Rd., Ste. 101-W, Charlotte 28211

**JOINT PRACTICE COMMITTEE OF THE NORTH CAROLINA MEDICAL SOCIETY
AND THE NORTH CAROLINA NURSES ASSOCIATION (3-yr. term)**

E. Harvey Estes, Jr., M.D. (IM/CD) (1990) **Co-Chairman**
407 Crutchfield St., Durham 27704
(919-471-2571)

Robert H. Bilbro, M.D. (IM/CD) (1990)
3521 Haworth Dr., Raleigh 27609
(919-782-1806)

Henry J. Carr, Jr., M.D. (IM) (1989)
NCMS Immediate Past-President
603 Beaman St., Clinton 28328
(919-592-6114)

Neil M. DeStefano, M.D. (GS/GYN) (1991)
P.O. Box 780, Reidsville 27320
(919-349-8484)

T. Reginald Harris, M.D. (PUD/IM) (1991)
NCMS President-Elect
808 Schenck St., Shelby 28150
(704-482-1482)

Robert S. Lackey, M.D. (R/FP) (1991)
2118 Pinewood Circle, Charlotte 28211
(704-365-0343)

Eugene S. Mayer, M.D. (GPM) (1989)
UNC School of Medicine, Wing C, CB #7165, Box 3,
Chapel Hill 27599
(919-966-2461)

Ernest B. Spangler, M.D. (R) (1990)
NCMS President
Drawer X-3, Greensboro 27402
(919-854-6546)

Eldora H. Terrell, M.D. (IM) (1990)
624 Quaker Ln., Ste. 211-C, High Point 27262
(919-841-4233)

Sarah Pike Brown, R.N. (1989) **Co-Chairman**
7316 Lake Tree Dr., Raleigh 27609
(919-848-1049)

Joanne Deans-Hums, R.N. (1989)
4415 Forest Walk Dr., Greensboro 27408
(919-288-1953)

Hettie Garland, R.N. (1990)
22 Woodbury Rd., Asheville 28804
(704-258-0881)

Vicky Healey, R.N. (1990)
6 Sweetbriar Ln., Chapel Hill 27514
(919-929-6110)

Ronald K. Jandebour, R.N. (1988)
8405 Herb House Court, Charlotte 28212
(704-399-2501)

Jennifer Lang-Kummer, R.N. (1988)
136 Paddlewheel Ct., Washington 27889
(919-551-4629)

Joan Mackie, R.N. (1989)
4504 Yadkin Dr., Raleigh 27609
(919-755-5239)

Peggy Norton, R.N. (1990)
1522 Clermont Rd., Durham 27713
(919-966-3650)

Sharon Rupp, R.N. (1988)
603 Starmount Dr., Durham 27704
(919-684-5322)

Ex Officio:

George E. Moore, Executive Vice-President,
North Carolina Medical Society
P.O. Box 27167, Raleigh 27611
(919-833-3836)

Jo Franklin, R.N., President
North Carolina Nurses Association
Rt. 8, Box 376B, Salisbury 28144
(704-627-7634)

The image of success

B & B X-Ray, Inc., serving the radiographic industry since 1970, has become the leader for x-ray products and services in North Carolina. That's a distinction we're proud of and we fight to keep every single day. We represent the Bennett line of x-ray equipment with systems from general radiographic to orthopedic to the Micro-Fine Mammography System with its unsurpassed image quality. And, of course, we offer a wide range of film, chemistry, accessories, and supplies. Call us at 800/447-XRAY today. We promise to give you the same service that made us the industry leader.

B & B XRAY

working for the end result—optimum quality radiographs
P.O. Box 802 Matthews, NC 28105 1-800-447-XRAY
704/847-8521

BOARD OF MEDICAL EXAMINERS OF STATE OF NC
(3-yr. term) (Term begins Nov. 1)

Eben Alexander, Jr., M.D. (1990) **President**
Bowman Gray Sch. of Med., Winston-Salem 27103
John T. Daniel, M.D. (1989) **Secretary**
415 Dunstan St., Durham 27707
Harold L. Godwin, M.D. (1991)
1601-B Owen Dr., Fayetteville 28304
Hector H. Henry, II, M.D. (1989)
102 Lake Concord Rd., NE, Concord 28025
John W. Nance, M.D. (1991)
403 Fairview St., Clinton 28328
F. M. Simmons Patterson, Jr., M.D. (1989)
P.O. Box 519, Pinehurst 28374
Nicholas E. Stratas, M.D. (1990)
3900 Browning Pl., Ste. 201, Raleigh 27609
Kathryn H. Willis (1990)
Rt. 1, Box 330, Zirconia 28790

Executive Secretary:

Mr. Bryant D. Paris, Jr.
1313 Navaho Dr., P.O. Box 26808
Raleigh, N.C. 27601
(919-876-3885)

NORTH CAROLINA MEDICAL CARE COMMISSION
(Division of Facility Services)
(Physician Members) (4-yr. term)

John L. Lynch, M.D. (1991)
905 Arbordale Dr., High Point 27260
F. Maxton Mauney, Jr., M.D. (1990)
257 McDowell St., Asheville 28803
David T. Tayloe, Sr., M.D. (1989)
608 E. 12th St., Washington 27889

COMMISSION FOR HEALTH SERVICES
(Division of Health Services)
(Physician Members) (4-yr. term)

Jesse H. Meredith, M.D., **Chairman** (1989)
Bowman Gray, Dept. of Surgery,
Winston-Salem 27103
George W. Brown, M.D. (1991)
102 Brown Ave., Hazelwood 28738
William D. Rippey, M.D. (1991)
1610 Vaughn Rd., Burlington 27215
G. Earl Trevathan, M.D. (1989)
ECU, Dept. of Ped., Greenville 27834

NORTH CAROLINA MEDICAL JOURNAL
EDITORIAL BOARD
(4-yr. term)

Chairman: Charles W. Styron, M.D. (1991)
615 St. Mary's St., Raleigh 27605
Editor: Eugene A. Stead, Jr., M.D.
Duke Medical Center, Box 3910, Durham 27710
Managing Editor: Laurel Ferejohn
Duke Medical Center, Box 3910, Durham 27710
Business Manager: George E. Moore
P.O. Box 27167, Raleigh 27611
Jay Arena, M.D. (1991)
Duke Hospital, Box 3024, Durham 27710

William B. Blythe, M.D. (1990)
UNC, Dept. of Med., Chapel Hill 27514
Margaret N. Harker, M.D. (1991)
P.O. Drawer 897, Morehead City 28557
Jack Hughes, M.D. (1991)
30 Kimberly Dr., Durham 27707
Edwin W. Monroe, M.D. (1990)
ECU Sch. of Medicine, Greenville 27834
Robert W. Prichard, M.D. (1990)
300 S. Hawthorne Rd., Winston-Salem 27103
Louis deS. Shaffner, M.D. (1991)
740 N. Pine Valley Rd., Winston-Salem 27106

COUNCILOR DISTRICTS
Constitution and Bylaws of the
North Carolina Medical Society

Article VI — Section and District Societies

The House of Delegates may divide the scientific work of The Society into appropriate sections, and organize such councilor district societies composed of members of component societies, as will promote the interests of the profession.

Chapter VII — Councilor Districts

Section 1. To facilitate the organization of the medical profession, the State of North Carolina hereby is divided by counties into ten councilor districts as follows:

First District — Bertie-Gates-Hertford, Chowan-Perquimans, and Pasquotank-Camden-Currituck-Dare.

Second District — Beaufort-Hyde-Martin-Washington-Tyrrell, Carteret, Craven-Pamlico-Jones, Lenoir-Greene and Pitt.

Third District — Bladen, Brunswick, Columbus, Duplin, New Hanover-Pender, Onslow and Sampson.

Fourth District — Edgecombe, Halifax, Johnston, Nash, Northampton, Warren, Wayne, and Wilson.

Fifth District — Cumberland, Harnett, Hoke, Lee, Moore, Richmond, Robeson, and Scotland.

Sixth District — Alamance-Caswell, Chatham, Durham-Orange, Franklin, Granville, Person, Vance, and Wake.

Seventh District — Anson, Cabarrus, Cleveland, Gaston, Lincoln, Mecklenburg, Montgomery, Rutherford, Stanly, and Union.

Eighth District — Alleghany, Ashe, Forsyth-Stokes-Davie, Guilford, Randolph, Rockingham, Surry-Yadkin, and Wilkes.

Ninth District — Alexander, Avery, Burke, Caldwell, Catawba, Davidson, Iredell, McDowell, Rowan, and Watauga.

Tenth District — Buncombe, Cherokee(Graham), Haywood, Henderson, Jackson, Macon-Clay, Madison, Mitchell-Yancey, Polk, Swain, and Transylvania.

CODING SYMBOLS

ALPHABETICAL SECTION

† DOE, JOHN M., MD IM/GE 32
DEPT. OF MED. A P * AC
DUKE UNIVERSITY MEDICAL CENTER
DURHAM, NC 27710 919-684-0000

† IM/GE DECEASED
PRIMARY/SECONDARY
SPECIALTY (SEE KEY BELOW)
32 COMPONENT SOCIETY CODE
(SEE KEY BELOW)
A AMA MEMBER
P MEDPAC MEMBER
* ATTENDED ANNUAL MEETING
AC TYPE OF MEMBERSHIP (SEE
KEY BELOW)

COMPONENT SOCIETY SECTION

† DOE, JOHN M., MD IM/GE AC
DEPART. OF MED. 59 60 64
DUKE UNIVERSITY MEDICAL CENTER
DURHAM, NC 27710 YALE
919-684-0000

† IM/GE DECEASED
PRIMARY/SECONDARY SPE-
CIALTY (SEE KEY BELOW)
AC TYPE OF MEMBERSHIP (SEE KEY
BELOW)
59 YEAR GRADUATED
60 YEAR LICENSED
64 YEAR JOINED SOCIETY
YALE MEDICAL SCHOOL

KEY TO SPECIALTIES

A Allergy
ABS Abdominal Surgery
ADL Adolescent Medicine
ADM Administrative Medicine
AI Allergy & Immunology
ALD Alcohol & Drug Abuse
AM Aerospace Medicine
AN Anesthesiology
BE Broncho-Esophagology
BLB Bloodbanking
CD Cardiovascular Diseases
CDS Cardiovascular Surgery
CHN Child Neurology
CHP Child Psychiatry
CLP Clinical Pathology
CRS Colon & Rectal Surgery
D Dermatology
DIA Diabetes
DMP Dermatopathology
DR Diagnostic Radiology
EM Emergency Medicine
END Endocrinology
FOP Forensic Pathology
FP Family Practice
FPY Forensic Psychiatry
GE Gastroenterology
GER Geriatrics
GP General Practice
GPM General Preventive Medicine
GS General Surgery
GYN Gynecology
HEM Hematology
HNS Head & Neck Surgery
HS Hand Surgery
HYP Hypnosis
ID Infectious Diseases
IG Immunology
IM Internal Medicine
IND Industrial Medicine
LAR Laryngology
LM Legal Medicine
MFS Maxillofacial Surgery
N Neurology
NA Neuropathology

ND Neoplastic Diseases
NEP Nephrology
NM Nuclear Medicine
NPM Neonatal-Perinatal Medicine
NR Nuclear Radiology
NS Neurological Surgery
NTR Nutrition
OBG Obstetrics & Gynecology
OBS Obstetrics
OM Occupational Medicine
ON Oncology
OPH Ophthalmology
ORS Orthopaedic Surgery
OS Other Specialty
OT Otolaryngology
OTO Otorhinolaryngology
P Psychiatry
PA Clinical Pharmacology
PD Pediatrics
PDA Allergy Pediatrics
PDC Cardiology Pediatrics
PDE Endocrinology Pediatrics
PDR Pediatric Radiology
PDS Pediatric Surgery
PH Public Health
PHO Pediatric Hematology-Oncology
PM Physical Med. & Rehabilitation
PNP Pediatric Nephrology
PS Plastic Surgery
PSF Facial Plastic Surgery
PTH Pathology
PUD Pulmonary Diseases
PYA Psychoanalysis
PYM Psychosomatic Medicine
R Radiology
RHI Rhinology
RHU Rheumatology
RIP Radioisotopic Pathology
SM Sports Medicine
TS Therapeutic Radiology
TRS Traumatic Surgery
TS Thoracic Surgery
U Urological Surgery
VS Vascular Surgery

COMPONENT SOCIETY CODES

1 ALAMANCE-CASWELL
2 ALEXANDER
3 ALLEGHANY
4 ANSON
5 ASHE
6 AVERY
7 BEAUFORT-HYDE-MARTIN-
WASHINGTON-TYRRELL
8 BERTIE-GATES-HERTFORD
9 BLADEN
10 BRUNSWICK
11 BUNCOMBE
12 BURKE
13 CABARRUS
14 CALDWELL
CAMDEN (SEE #70)
16 CARTERET
CASWELL (SEE #1)
18 CATAWBA
19 CHATHAM
20 CHEROKEE
21 CHOWAN-PERQUIMANS
CLAY (SEE #56)
23 CLEVELAND
24 COLUMBUS
25 CRAVEN-PAMLICO-JONES
26 CUMBERLAND
CURRITUCK (SEE #70)
DARE (SEE #70)
29 DAVIDSON
DAVIE (SEE #34)
31 DUPLIN
32 DURHAM-ORANGE
33 EDGEcombe

34 FORSYTH-STOKES-DAVIE
35 FRANKLIN
36 GASTON
GATES (SEE #8)
GRAHAM (SEE #20)
39 GRANVILLE
GREENE (SEE #54)
40 HIGH POINT
41 GREENSBORO
42 HALIFAX
43 HARNETT
44 HAYWOOD
45 HENDERSON
HERTFORD (SEE #8)
47 HOKE
HYDE (SEE #7)
49 IREDELL
50 JACKSON
51 JOHNSTON
JONES (SEE #25)
53 LEE
54 LENOIR-GREENE
55 LINCOLN
56 MACON-CLAY
57 MADISON
MARTIN (SEE #7)
59 MCDOWELL
60 MECKLENBURG
61 MITCHELL-YANCEY
62 MONTGOMERY
63 MOORE
64 NASH
65 NEW HANOVER-PENDER
66 NORTHAMPTON
67 ONSLOW
ORANGE (SEE #32)
PAMLICO (SEE #25)
70 PASQUOTANK-CAMDEN-
CURRITUCK-DARE
PENDER (SEE #65)
PERQUIMANS (SEE #21)
PERSON
73
74 PITT
75 POLK
76 RANDOLPH
77 RICHMOND
78 ROBESON
79 ROCKINGHAM
80 ROWAN
81 RUTHERFORD
82 SAMPSON
83 SCOTLAND
84 STANLY
STOKES (SEE #34)
86 SURRY-YADKIN
87 SWAIN
88 TRANSYLVANIA
TYRRELL (SEE #7)
90 UNION
91 VANCE
92 WAKE
93 WARREN
WASHINGTON (SEE #7)
95 WATAUGA
96 WAYNE
97 WILKES
98 WILSON
YADKIN (SEE #86)
YANCEY (SEE #61)

TYPE OF MEMBERSHIP CODES

AC ACTIVE
AF AFFILIATE
AS ASSOCIATE
H HONORARY
S STUDENT
R RESIDENT
L LIFE
L/RT LIFE/RETIRED
RT RETIRED

NORTH CAROLINA PHYSICIANS'

Comprehensive Major Medical

\$1,000,000 MAXIMUM

Choice of deductibles: Pays 80% of first \$5000; 100% over \$5,000
Employees eligible for coverage

In Hospital Indemnity Insurance

Term Life Insurance

Business Overhead Expense Insurance

Each of the above plans may qualify for use by professional corporations.

We have been working with physicians in North Carolina for more than FORTY-FIVE years.

Mrs. Gladys Madden — Office Manager

WRITE OR CALL FOR FURTHER INFORMATION

GOLDEN-BRABHAM INSURANCE AGENCY, INC.

108 East Northwood St., Box 14788

Greensboro, N.C. 27415

Tel: (919) 275-3400 or 275-5035

Winchester

"SERVICE SINCE 1919"

Winchester Surgical Supply Company

P.O. Box 35488 Charlotte, NC 28235

704/372-2240 or 800-868-5588

Winchester Home Healthcare

Medical supplies and equipment for your patients at home

Charlotte, N.C. Greensboro, N.C. Hickory, N.C.

704/332-1217 919/275-0319 704/324-0336

704/547-0708

Serving the Medical Profession and their patients

Our salesmen are located in all parts of North Carolina.

**We have DISPLAYED at every N.C. State Medical Society Meeting since 1921
and advertised CONTINUOUSLY in the N.C. Journal since January 1940 issue.**



(ciprofloxacin HCl/Miles)



A REVOLUTIONARY ORAL ANTIMICROBIAL WITH THE POWER OF PARENTERALS

- Highly active *in vitro* against a broad range of gram-positive and gram-negative pathogens, including methicillin-resistant *Staphylococcus aureus* and *Pseudomonas aeruginosa**
- For treatment of infections in the:
 - lower respiratory tract[†]
 - urinary tract[†]
 - skin/skin structure[†]
 - bones and joints[†]
- Convenient *B.I.D.* dosage – 250 mg, 500 mg and 750 mg tablets

**In vitro* activity does not necessarily imply a correlation with *in vivo* results.

[†]Due to susceptible strains of indicated pathogens. See indicated organisms in Brief Summary.

CIPRO® SHOULD NOT BE USED IN CHILDREN OR PREGNANT WOMEN.

A history of hypersensitivity to ciprofloxacin is a contraindication to its use. A history of hypersensitivity to other quinolones may also contraindicate the use of ciprofloxacin.



Miles Inc.
Pharmaceutical Division
400 Morgan Lane
West Haven, CT 06516

Please see adjacent page of this advertisement for Brief Summary of Prescribing Information.

Cipro[®] TABLETS (ciprofloxacin HCl/Miles)

■ **500 mg B.I.D. for most infections;**
750 mg B.I.D. for severe or complicated infections.

BRIEF SUMMARY CONSULT PACKAGE INSERT FOR FULL PRESCRIBING INFORMATION INDICATIONS AND USAGE

Cipro[®] is indicated for the treatment of infections caused by susceptible strains of the designated microorganisms in the conditions listed below:

Lower Respiratory Infections caused by *Escherichia coli*, *Klebsiella pneumoniae*, *Enterobacter cloacae*, *Proteus mirabilis*, *Pseudomonas aeruginosa*, *Haemophilus influenzae*, *Haemophilus parainfluenzae*, and *Streptococcus pneumoniae*.

Skin and Skin Structure Infections caused by *Escherichia coli*, *Klebsiella pneumoniae*, *Enterobacter cloacae*, *Proteus mirabilis*, *Proteus vulgaris*, *Providencia stuartii*, *Morganella morganii*, *Citrobacter freundii*, *Pseudomonas aeruginosa*, *Staphylococcus aureus* (penicillinase and nonpenicillinase-producing strains), *Staphylococcus epidermidis*, and *Streptococcus pyogenes*.

Bone and Joint Infections caused by *Enterobacter cloacae*, *Serratia marcescens*, and *Pseudomonas aeruginosa*.

Urinary Tract Infections caused by *Escherichia coli*, *Klebsiella pneumoniae*, *Enterobacter cloacae*, *Serratia marcescens*, *Proteus mirabilis*, *Providencia rettgeri*, *Morganella morganii*, *Citrobacter diversus*, *Citrobacter freundii*, *Pseudomonas aeruginosa*, *Staphylococcus epidermidis*, and *Streptococcus faecalis*.

Infectious Diarrhea caused by *Escherichia coli* (enterotoxigenic strains), *Campylobacter jejuni*, *Shigella flexneri*,^{*} and *Shigella sonnei*,^{*} when antibacterial therapy is indicated.

^{*}Efficacy for this organism in this organ system was studied in fewer than 10 infections.

Appropriate culture and susceptibility tests should be performed before treatment in order to isolate and identify organisms causing infection and to determine their susceptibility to ciprofloxacin. Therapy with Cipro[®] may be initiated before results of these tests are known; once results become available appropriate therapy should be continued. As with other drugs, some strains of *Pseudomonas aeruginosa* may develop resistance fairly rapidly during treatment with ciprofloxacin. Culture and susceptibility testing performed periodically during therapy will provide information not only on the therapeutic effect of the antimicrobial agent but also on the possible emergence of bacterial resistance.

CONTRAINDICATIONS

A history of hypersensitivity to ciprofloxacin is a contraindication to its use. A history of hypersensitivity to other quinolones may also contraindicate the use of ciprofloxacin.

WARNINGS

CIPROFLOXACIN SHOULD NOT BE USED IN CHILDREN OR PREGNANT WOMEN. The oral administration of ciprofloxacin caused lameness in immature dogs. Histopathological examination of the weight-bearing joints of these dogs revealed permanent lesions of the cartilage. Related drugs such as nalidixic acid, cinoxacin, and norfloxacin also produced erosions of cartilage of weight-bearing joints and other signs of arthropathy in immature animals of various species (SEE ANIMAL PHARMACOLOGY SECTION IN FULL PRESCRIBING INFORMATION).

PRECAUTIONS

General:

As with other quinolones, ciprofloxacin may cause central nervous system (CNS) stimulation, which may lead to tremor, restlessness, lightheadedness, confusion, and very rarely to hallucinations or convulsive seizures. Therefore, ciprofloxacin should be used with caution in patients with known or suspected CNS disorders, such as severe cerebral arteriosclerosis or epilepsy, or other factors which predispose to seizures (SEE ADVERSE REACTIONS).

Crystals of ciprofloxacin have been observed rarely in the urine of human subjects but more frequently in the urine of laboratory animals. Crystalluria related to ciprofloxacin has been reported only rarely in man, because human urine is usually acidic. Patients receiving ciprofloxacin should be well hydrated, and alkalinity of the urine should be avoided. The recommended daily dose should not be exceeded. Alteration of the dosage regimen is necessary for patients with impairment of renal function (SEE DOSAGE AND ADMINISTRATION SECTION IN FULL PRESCRIBING INFORMATION).

Drug Interactions:

Concurrent administration of ciprofloxacin with theophylline may lead to elevated plasma concentrations of theophylline and prolongation of its elimination half-life. This may result in increased risk of theophylline-related adverse reactions. If concomitant use cannot be avoided, plasma levels of theophylline should be monitored and dosage adjustments made as appropriate.

Antacids containing magnesium hydroxide or aluminum hydroxide may interfere with the absorption of ciprofloxacin, resulting in serum and urine levels lower than desired; concurrent administration of these agents with ciprofloxacin should be avoided.

Probenecid interferes with the renal tubular secretion of ciprofloxacin and produces an increase in the level of ciprofloxacin in the serum. This should be considered if patients are receiving both drugs concomitantly.

As with other broad-spectrum antibiotics, prolonged use of ciprofloxacin may result in overgrowth of nonsusceptible organisms. Repeated evaluation of the patient's condition and microbial susceptibility testing is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Information for Patients:

Patients should be advised that ciprofloxacin may be taken with or without meals. The preferred time of dosing is two hours after a meal. Patients should also be advised to drink fluids liberally and not take antacids containing magnesium or aluminum concomitantly or within two hours after dosing. Ciprofloxacin may cause dizziness or lightheadedness; therefore patients should know how they react to this drug before they operate an automobile or machinery or engage in activities requiring mental alertness or coordination.

Carcinogenesis, Mutagenesis, Impairment of Fertility

Eight *in vitro* mutagenicity tests have been conducted with ciprofloxacin and the test results are listed below:

- Salmonella/Microsome Test (Negative)
- E. coli* DNA Repair Assay (Negative)
- Mouse Lymphoma Cell Forward Mutation Assay (Positive)
- Chinese Hamster V₇₉ Cell HGPRT Test (Negative)
- Syrian Hamster Embryo Cell Transformation Assay (Negative)
- Saccharomyces cerevisiae* Point Mutation Assay (Negative)
- Saccharomyces cerevisiae* Mitotic Crossover and Gene Conversion Assay (Negative)
- Rat Hepatocyte DNA Repair Assay (Positive)

Thus, two of the eight tests were positive, but the following three *in vivo* test systems gave negative results:

- Rat Hepatocyte DNA Repair Assay
- Microclonucleus Test (Mice)
- Dominant Lethal Test (Mice)

Long-term carcinogenicity studies in animals have not yet been completed.

Pregnancy—Pregnancy Category C:

Reproduction studies have been performed in rats and mice at doses up to six times the usual daily human dose and have revealed no evidence of impaired fertility or harm to the fetus due to ciprofloxacin. In rabbits, as with most antimicrobial agents, ciprofloxacin (30 and 100 mg/kg orally) produced gastrointestinal disturbances resulting in maternal weight loss and an increased incidence of abortion. No teratogenicity was observed at either dose. After intravenous administration, at doses up to 20 mg/kg, no maternal toxicity was produced, and no embryotoxicity or teratogenicity was observed. There are, however, no adequate and well-controlled studies in

CONVENIENT B.I.D. DOSAGE

Recommended dosage schedule

Infection Site*	Severity of Infection	Dosage
Respiratory Tract*	Mild/Moderate	500 mg B.I.D.
Bone and Joint*		
Skin/Skin Structure*	Severe/Complicated	750 mg B.I.D.
Urinary Tract*	Mild/Moderate	250 mg B.I.D.
	Severe/Complicated	500 mg B.I.D.
Infectious Diarrhea*	Mild/Moderate/Severe	500 mg B.I.D.

pregnant women. SINCE CIPROFLOXACIN, LIKE OTHER DRUGS IN ITS CLASS, CAUSES ARTHROPATHY IN IMMATURE ANIMALS, IT SHOULD NOT BE USED IN PREGNANT WOMEN (SEE WARNINGS).

Nursing Mothers:

It is not known whether ciprofloxacin is excreted in human milk; however, it is known that ciprofloxacin is excreted in the milk of lactating rats and that other drugs of this class are excreted in human milk. Because of this, and because of the potential for serious adverse reactions from ciprofloxacin in nursing infants, a decision should be made to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.

Pediatric Use:

Ciprofloxacin should not be used in children because it causes arthropathy in immature animals (SEE WARNINGS).

ADVERSE REACTIONS

Ciprofloxacin is generally well tolerated. During clinical investigation, 2,799 patients received 2,868 courses of the drug. Adverse events that were considered likely to be drug related occurred in 7.3% of courses, possibly related in 9.2%, and remotely related in 3.0%. Ciprofloxacin was discontinued because of an adverse event in 3.5% of courses, primarily involving the gastrointestinal system (1.5%), skin (0.6%), and central nervous system (0.4%).

The most frequently reported events, drug related or not, were nausea (5.2%), diarrhea (2.3%), vomiting (2.0%), abdominal pain/discomfort (1.7%), headache (1.2%), restlessness (1.1%), and rash (1.1%).

Additional events that occurred in less than 1% of ciprofloxacin courses are listed below. Those typical of quinolones are italicized.

GASTROINTESTINAL: (See above), painful oral mucosa, oral candidiasis, dysphagia, intestinal perforation, gastrointestinal bleeding.

CENTRAL NERVOUS SYSTEM: (See above), dizziness, lightheadedness, insomnia, nightmares, hallucinations, manic reaction, irritability, tremor, ataxia, convulsive seizures, lethargy, drowsiness, weakness, malaise, anorexia, phobia, depersonalization, depression, paresthesia.

SKIN/HYPERSENSITIVITY: (See above), pruritus, urticaria, photosensitivity, flushing, fever, chills, angioedema, edema of the face, neck, lips, conjunctivae or hands; cutaneous candidiasis, hyperpigmentation, erythema nodosum.

SPECIAL SENSES: blurred vision, disturbed vision, (change in color perception, overbrightness of lights), decreased visual acuity, diplopia, eye pain, tinnitus, bad taste.

MUSCULOSKELETAL: joint or back pain, joint stiffness, achiness, neck or chest pain, flare-up of gout, RENEAL/UROGENITAL: interstitial nephritis, renal failure, polyuria, urinary retention, urethral bleeding, vaginitis, acidosis.

CARDIOVASCULAR: palpitations, atrial flutter, ventricular ectopy, syncope, hypertension, angina pectoris, myocardial infarction, cardiopulmonary arrest, cerebral thrombosis.

RESPIRATORY: epistaxis, laryngeal or pulmonary edema, hiccough, hemoptysis, dyspnea, bronchospasm, pulmonary embolism.

Most of these events were described as only mild or moderate in severity, abated soon after the drug was discontinued, and required no treatment.

In several instances, nausea, vomiting, tremor, restlessness, agitation, or palpitations were judged by investigators to be related to elevated plasma levels of theophylline possibly as a result of a drug interaction with ciprofloxacin.

Adverse Laboratory Changes: Changes in laboratory parameters listed as adverse events without regard to drug relationship:

Hepatic—Elevations of: ALT (SGPT) (1.9%), AST (SGOT) (1.7%), alkaline phosphatase (0.8%), LOH (0.4%), serum bilirubin (0.3%).

Hematologic—eosinophilia (0.6%), leukopenia (0.4%), decreased blood platelets (0.1%), elevated blood platelets (0.1%), pancytopenia (0.1%).

Renal—Elevations of: Serum creatinine (1.1%), BUN (0.9%).

CRYSTALLURIA, CYLINORURIA, AND HEMATURIA HAVE BEEN REPORTED.

Other changes occurring in less than 0.1% of courses were: Elevation of serum gamma-glutamyl transferase, elevation of serum amylase, reduction in blood glucose, elevated uric acid, decrease in hemoglobin, anemia, bleeding diathesis, increase in blood monocytes, and leukocytosis.

OVERDOSAGE

Information on overdosage in humans is not available. In the event of acute overdosage, the stomach should be emptied by inducing vomiting or by gastric lavage. The patient should be carefully observed and given supportive treatment. Adequate hydration must be maintained. In the event of serious toxic reactions from overdosage, hemodialysis or peritoneal dialysis may aid in the removal of ciprofloxacin from the body, particularly if renal function is compromised.

DOSAGE AND ADMINISTRATION

The usual adult dosage for patients with urinary tract infections is 250 mg every 12 hours. For patients with complicated infections caused by organisms not highly susceptible, 500 mg may be administered every 12 hours.

Respiratory tract infections, skin and skin structure infections, and bone and joint infections may be treated with 500 mg every 12 hours. For more severe or complicated infections, a dosage of 750 mg may be given every 12 hours.

The recommended dosage for infectious diarrhea is 500 mg every 12 hours.

In patients with renal impairment, some modification of dosage is recommended (SEE DOSAGE AND ADMINISTRATION SECTION IN FULL PRESCRIBING INFORMATION).

HOW SUPPLIED

Cipro[®] (ciprofloxacin HCl/Miles) is available as tablets of 250 mg, 500 mg, and 750 mg in bottles of 50, and in Unit-Ose packages of 100 (SEE FULL PRESCRIBING INFORMATION FOR COMPLETE INFORMATION).

^{*} Due to susceptible strains of indicated pathogens. See indicated organisms in Brief Summary.

For further information, contact the Miles Information Service:
1-800-642-4776. In VA, call collect: 703-391-7888.

COMMITTED TO THERAPEUTIC EFFICIENCY



Miles Inc.
Pharmaceutical Division
400 Morgan Lane
West Haven, CT 06516

A Picture Is Worth A Thousand Words? Not Always...

Some Plain Talk on Physician Dispensing

Q. What is Physician Dispensing?

A. It is the resurgence of a time honored service that once included all doctors. It is that service that can save your patients' time and allow you to conveniently dispense the prescriptions you write in your own office. In short Physician Dispensing combines income enhancement with increased patient convenience.

Q. How do I really know my patients will like this service?

A. Extensive surveys and the experience of thousands of doctors have shown that many patients prefer the convenience of purchasing their medications directly from their physicians. With our recommended prices, your patients will usually SAVE money and time.

Q. Is Physician Dispensing ethical?

A. Yes, just as other physician's services — lab, x-ray, diagnostic procedure. Physician Dispensing is ethical since patients have the choice to drive to the pharmacy or let you fill their prescriptions.

Q. Will dispensing affect my insurance?

A. In the view of most insurers, you are already dispensing when you give sample drugs to the patient or administer injections, so dispensing represents no change.

Q. How much staff time is involved in dispensing and is there much extra paperwork?

A. Our computerized labeling and record keeping system is very efficient. *All needed reports are automatically*

generated. It only takes about 60 seconds to dispense a prescription ... frequently less time than calling back and forth to the drug store.

Q. May I try the system in my office without obligation?

A. You can order a 30 day supply and get acquainted with the system. We will come in and help you get started. If you should find that dispensing is just "not for my practice", *You may return any unused medication within 30 days, without any further obligation.*

Q. Why should I choose CompuMed as my dispensing system?

A. CompuMed's System has been designed to meet the individual Physician's specific needs...designed after thousands of hours of hands on experience actually helping physicians dispense in their practices...designed from the inside of the physician's office up — not from the warehouse or the board room down:

- We Can Provide Any of Over 13,000 Medications.
- Including All Brand Names.
- Full Line of Bioequivalent Generics.
- Custom Packaged in the Exact Size You Prefer.
- Packaging Meets or Exceeds FDA & DEA Requirements.
- Your Choice of Computerized or Manual Dispensing Systems.
- Local Service Representatives.

Q. Is an investment required to get started?

A. Nothing, CompuMed can structure terms so no cash investment is needed.

COMPUMED[®] Inc.

PHARMACEUTICALS
HELPING PHYSICIANS REVIVE
A TIME HONORED SERVICE

Combining Income Enhancement With Increased Patient Convenience
CompuMed makes filling a prescription as easy as writing one

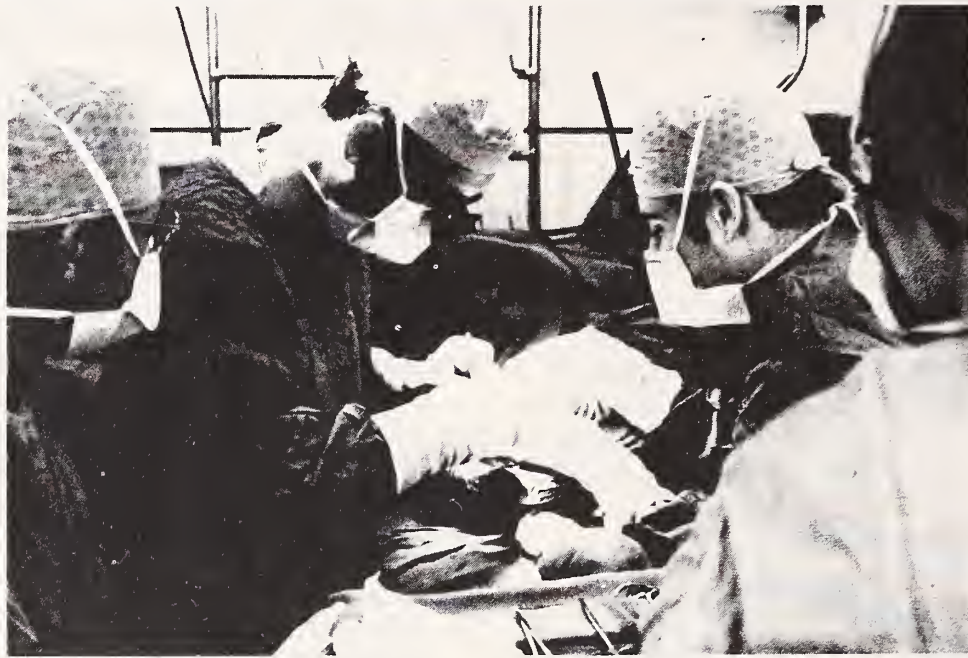
MAYBE IT'S TIME YOU LOOKED INTO PHYSICIAN DISPENSING
Call: 1-800-443-9218

MAIL TO: **CompuMed, Inc.**, P.O. Box 23706, 1517 Edwards Ave., New Orleans, LA 70183

Free Physician Dispensing Videotape Available. Circle one: VHS BETA

DR./CLINIC _____ MEDICAL SPECIALTY: _____
ADDRESS _____ CITY _____
STATE _____ ZIP _____ PHONE () _____

THE ARMY RESERVE OFFERS NEW FINANCIAL INCENTIVES FOR RESIDENTS.



If you are a resident in Anesthesiology or Surgery*, the Army Reserve has a new and exciting opportunity for you. The new Specialized Training Assistance Program will provide you with financial incentives while you're training in one of these specialties.

Here's how the program can work for you. If you qualify, you may be selected to participate in the Specialized Training Program. You'll serve in a local Army Reserve medical unit with flexible scheduling so it won't interfere with your residency

training, and in addition to your regular monthly Reserve pay, you'll receive a stipend of \$644 a month.

You'll also have the opportunity to practice your specialty for two weeks a year at one of the Army's prestigious Medical Centers.

Find out more about the Army Reserve's new Specialized Training Assistance Program.

Call or write your US Army Medical Department Reserve Personnel Counselor:

**Army Reserve Health Care Team
2634 Chapel Hill Blvd.
Suite 205
Durham, NC 27707-2875
(919) 493-1364 Collect**

* General, Orthopaedic, Neuro, Colon/Rectal, Cardio/Thoracic, Pediatric, Peripheral/Vascular, or Plastic Surgery.

ARMY RESERVE MEDICINE. BE ALL YOU CAN BE.

The number in small type following each name indicates the component society under which the member is listed in the Roster by component societies.

Cole, Warren Henry	704 254-4475	8 W. Kensington Road, Asheville, NC 28804
Jones, Frank Collins, Jr.	704 586-6665	Kilimanjaro Med. Ctr. The Good Samaritan Foundation, Moshi, Tanzania, E. Africa
McConnachie, Charles C.	704 692-5781	1027 Fleming Street, Hendersonville, NC 28739
Rambo, V. Birch		1200 Aurora Blvd., Brandon, FL 34202
Rice, Edmond Lee		United Christian Hospital, Lahore, West Pakistan
Wilson, Frank Elmore	615 986-6315	Route #3, Leona Road, Lenoir City, TN 37771

(See Page 31 for Key to Specialties)

ABBOTT, THOMAS DEAN	FP	029	ADAMS, MELANIE	034	AHDIEH, MASOUD	PD	077
RIPPLE BLDG. PO BOX 120	AC		300 S. HAWTHORNE RD., BOX 447	A S	302 HYLAN AVENUE	A P	AC
WELCOME 27374	704 731-4006		WINSTON-SALEM 27103	919 760-2292	HAMLET 28345	919 997-7180	
ABDA, SANDRA MARIE	ORS	090	ADAMS, PATRICIA LEE	NEP /IM	034	IM	032
701 ROOSEVELT BLVD., BLDG 600	A P	AC	300 S. HAWTHORNE RD.	AC	601 JONES FERRY RD. A-15	A	R
MONROE 28110	704 289-4595		WINSTON-SALEM 27103	919 748-4538	CARRBORO 27510	919 968-6626	
ABELL, JAMES CURTIS	PD	049	ADAMS, RICHARD WESLEY	ORS	049	PD	025
925 THOMAS STREET	AC		770 HARTNESS ROAD	AC	707 PROFESSIONAL DRIVE	AC	
STATESVILLE 28677	704 872-9595		STATESVILLE 28677	704 873-1851	NEW BERN 28560	919 633-2900	
ABERNATHY, DAVID SMITH	/IM	012	ADAMS, SIMEON HUEY	GS	036	IM	036
341 E. PARKER ROAD	AC		902-G COX ROAD	A	AC	A *	AC
MORGANTON 28655	704 433-0225		GASTONIA 28054	704 864-7821	GASTONIA 28054	704 861-0210	
ABERNETHY, HENRY WALTER	FP /IM	018	ADAMS, WILLIAM CHAMBLISS	PD	078	IM	036
221 13TH AVE. PL. NW-FP	A P	AC	103 W. 27TH ST.	AC	1349-B E. GARRISON BLVD.	A *	AC
HICKORY 28601	704 322-5800		LUMBERTON 28358	919 739-3318	GASTONIA 28054	704 861-0210	
ABERNETHY, PAUL MCBEE	OPH	001	ADAMSON, WM. TALBOT	032	AINSLEY, THELLIE RUPERT, JR.	IM	053
1214 VAUGHN ROAD	A *	AC	3222 COACHMAN'S WAY	A S	1007 CARTHAGE ST.	AC	
BURLINGTON 27215	919 228-0254		DURHAM 27705	919 489-7372	SANFORD 27330	919 774-4343	
ABERNETHY, WILLIAM BORDEN, JR.	PD	036	ADCOCK, JIMMIE WARREN	IM	060	OBG	076
610 DEERWOOD	A	AC	217 TRAVIS AVE.	A	AC	P	AC
GASTONIA 28052	704 864-4298		CHARLOTTE 28204	704 372-3350	1800 BACK CREEK CT.	919 626-2184	
ABRAHAMS, STUART JOEL	GYN	041	ADELMAN, JAMES U.	N	041		032
200 E. NORTHWOOD ST., STE. 216	A	AC	1910 N. CHURCH STREET	A P	AC	A	S
GREENSBORO 27401	919 275-5391		GREENSBORO 27405	919 273-2511	308 BRIARBRIDGE VALLEY RD.	919 929-7833	
ABRAMS, MURRAY STANLEY	GS	041	ADELMAN, RICHARD D.	FP	092	FP	036
311 W. WENDOVER AVE.	A	AC	7320 SIX FORKS RD. STE. 260	AC	79 MCADENVILLE ROAD	A	AC
GREENSBORO 27408	919 275-8415		RALEIGH 27615	919 846-9292	BELMONT 28012	704 825-3101	
ABRAMSON, MURRAY A.	032		ADER, OTTIS LADEAU	PH	032	OPH	036
3007 GLENDALE AVE.	A	S	PO BOX 507	A	L/RT	A	AC
DURHAM 27704	919 477-3869		WALKERTOWN 27051	919 595-2251	GASTONIA 28054	704 864-7789	
ACKER, JEFFREY CHARLES	032		ADERHOLDT, MARCUS LAFAYETTE	PD	040	U	040
2209 MOREHEAD AVE., APT. #2	A	S	624 QUAKER LANE, SUITE 100-A	A	L	A	AC
DURHAM 27707	919 493-1678		HIGH POINT 27262	919 882-4187	624 QUAKER LN., D-100	919 886-5151	
ACKERMAN, JAYNE A.	IM /ADL	041	ADICKES, GEORGE CARTWRIGHT	IM	060	TS /VS	025
GOVE HEALTH CENTER	AC		1100 BLYTHE BOULEVARD	A	AC	AC	
UNCG, GRAY DR.			CHARLOTTE 28203	704 338-4330	PO BOX 306	919 633-1688	
GREENSBORO 27412	919 334-5340		ADKINS, HENRY THOMAS, JR.	R	060	919 633-1688	
ADAIR, WILLIAM EDWARD, JR.	GP /GS	043	2114 MARRYAT COURT	A	AC	OM /IM	032
P. O. BOX 578	L		CHARLOTTE 28211	704 371-4056	AKWARI, ANNE MICHEAUX	A P *	AC
ERWIN 28339	919 897-5521		ADKINS, NEAL ASHLEY	OBG	064	IBM CORPORATION 657/205	
ADAMS, B. JEANNE S.	PSF /HNS	032	132 FOY DRIVE	A	AC	P. O. BOX 12195	
1110 W. MAIN STREET	A P	AC	ROCKY MOUNT 27801	919 443-6622	RESEARCH TRIANGLE PK	27709 919 543-5508	
DURHAM 27701	919 682-9341		AGAYOFF, JOHN D., JR.	GE	092	GS	032
ADAMS, CHARLES HUBERT	FP	023	3320 EXECUTIVE DR. STE. 119	AC		A	AC
103 WATTERSON STREET	A	AC	RALEIGH 27609	919 878-9465	BOX 3076, DUMC	919 684-5509	
KINGS MOUNTAIN 28086	704 739-3681		AGEE, ROBERT NELSON	GS	007	ALBERGOTTI, JULIAN S., JR.	OM /FP
ADAMS, HARLEY STEWART	R	034	302 S. MCCASKEY RD.	AC		SOUTHERN BELL MED. DEPT.	060
2710 ST. CLAIRE ROAD	A	L/RT	WILLIAMSTON 27892	919 792-1055	ROOM 414 SNC-PO BOX 30188	A	AC
WINSTON-SALEM 27106	919 768-3555		AGNER, MARSHAL EDWARD	FP	036	CHARLOTTE 28230	704 378-7320
ADAMS, HARRY GLENN	IM /ID	074	609 E. ACADEMY ST.	A	AC	ALBERS, CHARLES ALLEN	GS
DEPT. OF MEDICINE	A	AC	PO BOX 159			835 FLEMING STREET	045
ECU SCHOOL OF MEDICINE			CHERRYVILLE 28021	704 435-6058	HENDERSONVILLE 28739	A	AC
GREENVILLE 27834	919 551-2550		AGNER, ROY AUGUSTA, JR.	IM	080	704 692-0238	
ADAMS, HARVEY	GYN	076	611 MOCKSVILLE AVENUE	A *	AC	GS	034
230 FOUST STREET	AC		SALISBURY 28144	704 633-7220	BOWMAN GRAY	A	AC
ASHEBORO 27203	919 625-6128		AGNER, ROY CHRISTOPHER	IM	080	DEPT. OF SURGERY	919 748-4442
ADAMS, LARRY LEE	DR	025	611 MOCKSVILLE AVENUE	A	AC	WINSTON-SALEM 27103	IM
PO BOX 2038			SALISBURY 28144	704 636-9820	1896 REMOUNT ROAD	A	036
NEW BERN 28560	919 638-1158		AGSTEN, JOSEPH EDWARD	FP	054	GASTONIA 28054	AC
ADAMS, LEON ASHBY	OTO	098	107 AIRPORT ROAD	A P	AC	704 867-0735	
1700 S. TARBORO ST.	A	AC	KINSTON 28501	919 527-4146	ALBRIGHT, HAROLD DOWE, III	IM	060
WILSON 27893	919 291-1300				1851 E. THIRD ST., SW #101	A	AC
					CHARLOTTE 28204	704 333-4175	

ALCINI, JOHN JOSEPH, JR. SCOTLAND MEMORIAL HOSPITAL LAURINBURG 28352	DR /NM 083 AC 919 276-2121	ALLEN, GLADSTONE WESLEY P. O. BOX 552 FAYETTEVILLE 28301	OBG /OBS 026 AC 919 488-1865	ALSENTZER, ULRICH KARL REGIONAL REHABILITATION CTR. A P. O. BOX 6028 GREENVILLE 27834	PM 074 AC 919 551-4440
ALDERMAN, ALLISON M., JR. 242 BRYAN BLDG. CAMERON VILLAGE RALEIGH 27605	FP 092 A AC 919 832-1205	ALLEN, JAMES LATHAN 1821 GREEN STREET DURHAM 27705	OBG 032 A P AC 919 286-1258	ALSON, ROY LEE 162 HUNTER'S RIDGE RD. WINSTON-SALEM 27103	EM 034 R
ALDERMAN, EDWARD HATCHER P. O. BOX 278 FOUR OAKS 27524	IM /FP 051 A AC 919 963-3148	ALLEN, JOANNE BELL PO BOX 448 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	A S 919 777-8288	ALSPAUGH, JAMES A., II 211 MELVILLE LOOP #13 CHAPEL HILL 27514	032 A S 919 929-0152
ALDERMAN, JAMES F. 101 W. T. HARRIS BLVD. #201C CHARLOTTE 28213	PD 060 A AC 704 547-9568	ALLEN, JOHN O. HENRY 31 STATE ST. PO BOX 1189 MARION 28752	FP /IM 059 AC 704 652-5251	ALSTON, MICHAEL CURTIS 405 HOLLY HILL RD. MURFREESBORO 27855	FP 008 AC 919 398-5167
ALDRICH, HARRY RANDOLPH BOX 31264, DUMC DURHAM 27710	032 A R 919 684-6761	ALLEN, LEE F. 5519 WESCOTT PLACE DURHAM 27712	032 A R 919 383-4409	ALSUP, ROBERT MARTIN 175 CHARLOIS BLVD., STE. 101 WINSTON-SALEM 27103	OTO 034 A AC 919 768-3361
ALEXANDER, BRIAN A. 217-B NEW DR. APT. D WINSTON-SALEM 27103	034 A S 919 722-7946	ALLEN, LEROY 3009 NEW BERN AVE. PO BOX 14027 RALEIGH 27620	NS 092 A AC 919 832-4448	ALSUP, WILLIAM BYRN, JR. 261 WESTVIEW DR. SW WINSTON-SALEM 27104	OTO 034 A L/RT 919 724-0487
ALEXANDER, EBEN, JR. BOWMAN GRAY SCH. OF MED. WINSTON-SALEM 27103	NS 034 A P * L 919 748-4082	ALLEN, LOUIS DAVID 3001 ESSEX CIRCLE RALEIGH 27608	PD 092 A AC 919 782-0021	ALTANY, FRANKLIN EDWARD 2027 RANDOLPH ROAD CHARLOTTE 28207	PS 060 A AC 704 377-3091
ALEXANDER, H. ANTHONY 309 PINEWOOD RD. THOMASVILLE 27360	IM 029 A AC 919 475-8121	ALLEN, MOLLY VIRGINIA 1120 MEDICAL CENTER DR. WILMINGTON 28401	OPH 065 A AC 919 763-7316	ALTMEIER, MICHAEL D. 1022 PROFESSIONAL VILL. GREENSBORO 27401	END /IM 041 A AC 919 378-1074
ALEXANDER, HENCY C., JR. 5136 STRAWBERRY HILL DR. CHARLOTTE 28211	IM /PUD 060 A RT 704 366-6499	ALLEN, ROBERT LEE 3009 NEW BERN AVE. PO BOX 14027 RALEIGH 27620	NS 092 A AC 919 832-4448	ALTSHULLER, LILLIS FLATMAN 1301 FAYETTEVILLE ST. DURHAM 27707	PD 032 AC 919 683-1316
ALEXANDER, JAMES FROSST 3535 RANDOLPH ROAD CHARLOTTE 28211	IM /GE 060 A AC 704 365-0760	ALLEN, RODNEY H. 14736 VALIANT TERR. BURTONSVILLE, MD 20866	OBG /END 032 A P * S 919 929-5745	ALVA, JUAN 609 VICKERS AVENUE DURHAM 27701	GE /IM 032 AC 919 688-4748
ALEXANDER, JAMES MOSES 255 COLVILLE RD. CHARLOTTE 28207	IM 060 A L/RT 704 365-0760	ALLEYNE, GRANT LIVINGSTONE P. O. BOX 64838 FAYETTEVILLE 28306	OBG 026 A P AC 919 323-2767	ALVARADO, TERESA LOIS 200 MEMORIAL DR. JACKSONVILLE 28540	OBG 067 A AC 919 353-2115
ALEXANDER, JAMES PORTER DUKE POWER COMPANY P. O. BOX 33189 CHARLOTTE 28242	IM /OM 060 A AC 704 373-4329	ALL, BRYAN EWING 3120 OXFORD DR. DURHAM 27707	OPH 032 A R 919 292-2196	ALVERSON, LISA KAY 101 HOMESTEAD RD. APT. 1107 CHAPEL HILL 27514	032 A S 919 967-8574
ALEXANDER, JOSEPH BLACK 395 W. 27TH STREET LUMBERTON 28358	IM 078 A AC 919 739-7551	ALLGOOD, JOHN WILLIAM, JR. 1503 PEBBLE DR. GREENSBORO 27410	IM 041 A L/RT 919 723-6041	ALYEA, EDWIN PASCAL, III 13 PINNACLE RD. DURHAM 27705	032 A S 919 495-5608
ALEXANDER, LAWRENCE MELTON 555 CARTHAGE STREET SANFORD 27330	FP 053 A AC 919 774-6518	ALLGOOD, DAVID BLAIR 1821 ELIZABETH AVE. WINSTON-SALEM 27103	034 S 919 756-8423	AMATO, MARY THERESA 822 LANCASTER ST. APT. #2 DURHAM 27701	032 A S 919 286-4983
ALEXANDER, MARGARET C. C/O MERCY HOSPITAL 2001 VAIL AVE. CHARLOTTE 28207	R 060 A AC 704 327-6342	ALLGOOD, GILBERT R., JR. 1110 ARLINGTON BLVD. GREENVILLE 27834	IM /PD 074 A R 919 946-4176	AMAYA, MARCELINO 2928 FRIENDSHIP ROAD DURHAM 27705	CHP /P 032 A AC 919 575-7621
ALEXANDER, WILLIAM MCKINLEY P. O. BOX 627 HENDERSONVILLE 28739	IM 045 L/RT 704 692-7201	ALLGOOD, TOBY RAY 1110 HIGHLAND DRIVE WASHINGTON 27889	D /IM 007 AC 919 332-6444	AMEEN, WILLIAM OTIS, JR. P. O. BOX 9925 2304 CANNONBALL ROAD GREENSBORO 27408	FP /EM 001 A AC 919 282-1164
ALFORD, JAMES DAVID 427 E. STATESVILLE AVENUE MOORESVILLE 28115	GS /TS 049 A P AC 704 663-4065	ALLINSON, PETER G. PO BOX 266 SOUTHERN PINES 28387	AN 063 AC 919 692-7671	AMES, DAVID ANTHONY 313 LONGMEADOW ROAD GREENVILLE 27834	P 074 AC 919 752-7151
ALFORD, PETER T. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	PUD /IM 034 AC 704 663-4065	ALLISON, E. JACKSON, JR. ECU, DEPT. OF EMERG.MED. GREENVILLE 27834	EM 074 A AC 919 551-4757	AMES, RICHARD HAIGHT 2316 PRINCESS ANN ST. GREENSBORO 27408	NS 041 A L/RT 919 288-0421
ALI, SHAMSHAD 1200 MEDICAL CTR. #B MARION 28752	PD /NPM 059 AC 704 652-6386	ALMARIO, JOSELITO 500 N. ACADEMY ST. AHOSKIE 27910	U 008 AC 919 332-6444	AMMAR, MOHAMED IBRAHIM P. O. BOX 468 KENANSVILLE 28349	OBG 031 A P AC 919 296-1666
ALKHALDI, AOUS SALIM 104 TRANQUIL CIRCLE OXFORD 27565	R 039 A P AC 919 693-5115	ALMIRALL, PETER DAVID OAK ISLAND MEDICAL CENTER 307 YAUPON DR. YAUPON BEACH 28461	FP /OM 010 AC 919 278-3316	AMSELLEM, DAVID GOOD HOPE HOSPITAL PO BOX 668, DENIM DR. ERWIN 28339	P 043 A P AC 919 897-6151
ALLAN, JAMES THOMAS, JR. 3705 PRINCETON DRIVE GASTONIA 28054	R 036 A AC 704 866-2948	ALMKUIST, RALPH DURWOOD, II 1302 MEDICAL CENTER DRIVE WILMINGTON 28401	NEP /IM 065 A P AC 919 763-3651	ANAGNOST, JOHN WILLIAM 1515 DOCTORS CIRCLE WILMINGTON 28401	IM /HEM 065 AC 919 763-5182
ALLEN, CYRIL ANTHONY P. O. BOX 14005 RALEIGH 27620	IM /HEM 092 AC 919 828-3466	ALMOND, CHARLES MALCOLM 1602 DOCTOR'S CIRCLE WILMINGTON 28401	FP 065 A AC 919 251-9955	ANAND, RAKESH TARLOK LENOIR MEMORIAL HOSPITAL KINSTON 28501	AN 054 A P AC 919 522-7373
ALLEN, DAVID GEOFFREY PINEHURST MEDICAL CLINIC PO BOX 551 PINEHURST 28374	ON /IM 063 A AC 919 295-5511	ALMQUIST, PERRY F. 1700 ABBEY PLACE CHARLOTTE 28209	PD 060 A AC 704 523-7232	ANDERSON, DONNA GREY 3900 BROWNING PL. RALEIGH 27609	PD 092 AC 919 787-0266
ALLEN, DAVID HENRY 1334 ASHLEY SQUARE WINSTON-SALEM 27103	CHP /P 034 AC 919 765-1866	ALPERT, ERIC DAVID 3535 RANDOLPH ROAD CHARLOTTE 28211	R 060 AC 704 365-0343	ANDERSON, DUDLEY BUIST 1700 S. TARBORO ST. WILSON 27893	ON /HEM 098 A AC 919 291-1300
ALLEN, ELIZABETH 3333 CHAPEL HILL BOULEVARD DURHAM 27707	P 032 AC 919 489-3889	ALPHIN, ROBERT S. BOX 319, 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	ON 074 A AC 919 551-2900	ANDERSON, EDWARD EVERETT DUKE UNIVERSITY MEDICAL CTR. A DURHAM 27710	U 032 A AC 919 684-3448
ALLEN, ELMS LEACH 3314 HEALY DR. STE. 107 WINSTON-SALEM 27103	HEM /ON 034 A AC 919 768-2521	ALQAISI, MUNTHER E. ECU SCHOOL OF MED. DEPT. OF RADIATION ONCOLOGY GREENVILLE 27834		ANDERSON, ELBERT CARL 5224 CLEAR RUN DR. WILMINGTON 28403	OPH 065 A L/RT 919 763-6265
ALLEN, FRED HUNTLEY, JR. 2608 E. SEVENTH ST. CHARLOTTE 28204	N 060 A AC 704 377-9323			ANDERSON, JACK D. 1937 DEMBRIGH LANE CHARLOTTE 28213	PD 060 AC 704 372-3383
				ANDERSON, JAMES DICK 1023 EDGEHILL ROAD, SOUTH CHARLOTTE 28207	OBG 060 A AC 704 373-1541

ANDERSON, JAY ARTHUR UNC BURNETT-WOMACK 229H DEPT. OF ANES,CB #7010 CHAPEL HILL 27599	AN 032 A AC 919 966-5131	ANEJA, BELA LAROIA PO BOX 658 SNOW HILL 28580	IM 054 A AC 919 747-2921	ARMSTRONG, BRUCE GRIFFEY 1 DOCTOR'S PARK ASHEVILLE 28801	U 011 A AC
ANDERSON, JOHN B., JR. 1018 COLLEGE STREET OXFORD 27565	FP 039 AC 919 693-3972	ANGELILLO, JOHN CHARLES DUKE MEDICAL CENTER DIV. OF PLASTIC SURGERY DURHAM 27710	MFS 032 A AC 919 684-2943	ARMSTRONG, MICHAEL, JR. 4335-B AMERICAN DR. DURHAM 27705	032 A S 919 383-6974
ANDERSON, JOSEPH R. 300 S. HAWTHORNE RD. BOX 184 WINSTON-SALEM 27103	034 A * S 919 761-8051	ANGELO, JEAN NICHOLAS BOWMAN GRAY, DEPT. OF PTH WINSTON-SALEM 27103	NA /PTH 034 A AC 919 748-4311	ARNEY, GERALD WAYNE GASTON RAD.MED. BLDG. P. O. BOX 1495 GASTONIA 28052	DR 036 A AC 704 864-4378
ANDERSON, KENT THOMAS 1704 S. TARBORO ST. WILSON 27893	IM 098 A AC 919 291-7001	ANIXTER, WILLIAM L. PO BOX 1101 HIGHLAND HOSPITAL ASHEVILLE 28802	P 011 A AC 704 254-3201	ARNOLD, GORDON BRUCE 624 QUAKER LANE, STE. 213-B HIGH POINT 27262	IM 040 A AC 919 883-4132
ANDERSON, LONDON BUTLER 1222 MEDICAL CENTER DRIVE WILMINGTON 28401	ORS 065 A AC 919 763-2977	ANLYAN, WILLIAM GEORGE BOX 3701, DUMC DURHAM 27710	GS 032 A AC 919 684-3438	ARNOLD, ROBERT EDGAR 10724 PARK RD. CHARLOTTE 28210	FP 060 AC 704 542-6577
ANDERSON, LARRY GLENN 2203 STERLING ST. MORGANTON 28655	ORS 012 A P AC 704 437-6500	ANSCHER, MITCHELL S. BOX 3085, DUMC DURHAM 27710	TR /IM 032 A AC 919 684-3742	ARNOLD, TERRY VINCENT 13 MEDICAL PARK DR. LEXINGTON 27292	IM 029 A AC 704 249-7051
ANDERSON, PAGE ALBERT WILLIS BOX 3218, DUKE MEDICAL CTR. DURHAM 27710	PDC 032 AC 919 684-2538	ANTHONY, DOUGLAS C. BOX 3712, DUMC DURHAM 27710	PTH 032 A AC 919 684-3300	ARONSON, PHILIP R. BOX 631 BERMUDA RUN 27006	IM 034 AC 919 765-3471
ANDERSON, PAULINE M. RT. #2, BOX 441 ROANOKE RAPIDS 27870	OBG 042 A AC 919 535-1099	ANTHONY, LUTHER LESLIE, JR. 1896 REMOUNT ROAD GASTONIA 28054	IM /CD 036 A AC 704 867-0736	ARRINGTON, JOHN HODGE, III 1608 VALLEYMEDE GREENSBORO 27410	PTH /DMP 041 A AC 919 379-4073
ANDERSON, RICHARD DAWSON 2001 VAIL AVE. CHARLOTTE 28207	R /NM 060 A AC 704 379-5860	ANTLEY, RAY M., SR. 2201 S. STERLING ST. MORGANTON 28655	R 012 A AC	ARROWOOD, JOHN P., JR. 2307-D CLOVERDALE AVE. WINSTON-SALEM 27103	034 A S 919 724-7794
ANDERSON, ROBERT LOUIS 301 CENTRAL ROAD CLEMMONS 27012	OBG 034 AC 919 760-0444	ANTONAKOS, THEODORE P. O. BOX 8 DANBURY 27016	GS 034 A L 919 593-8276	ARTHUR, ROBERT KEY P. O. BOX 5128 HIGH POINT 27262	OBG 040 A AC 919 887-3011
ANDERSON, STEPHEN GRIFFITH 2927 LYNTHURST AVENUE WINSTON-SALEM 27103	OBG 034 A AC 919 765-9350	ANTONY, JOSE KANDANATT 238 OLD FARM ROAD PO BOX 1175 ROANOKE RAPIDS 27870	CD /IM 042 AC 919 537-9268	ARTIS, ISAAC AMOS, JR. 114 ROANOKE PLACE P. O. BOX 7304 GREENVILLE 27834	IM 074 AC 919 756-6986
ANDERSON, WILLIAM BANKS, JR. DUKE UNIVERSITY EYE CENTER DURHAM 27710	OPH 032 A * AC 919 684-3343	ANTOSZYK, ANDREW NICHOLAS 3116 STANFORD DRIVE DURHAM 27707	OPH 032 A R 919 489-3937	ASHBURN, PHILIP EUGENE 3100 BLUE RIDGE RD. #300 RALEIGH 27612	IM /GE 092 A P AC 919 781-7500
ANDERSON,TERESA T. 104 SILO COURT CARY 27511	032 A S 919 481-1752	APLINGTON, JAMES PAGE PO BOX 14580 315 W. WENDOVER AVE. GREENSBORO 27415	ORS 041 A AC	ASHFORD, CHARLES H., JR. 800 HOSPITAL DRIVE NEW BERN 28560	CDS /VS 025 AC
ANDRACCHIO, VINCENT CHARLES 3709 WESTRIDGE CIRCLE DR. ROCKY MOUNT 27804	AN 064 P AC 919 443-8038	APPERT, ROBERT ALBERT 1700 S. TARBORO STREET WILSON 27893	ORS 098 A AC 919 291-1300	ASHLEY, GALE JACKSON DOCTOR'S OFFICE BUILDING SPARTA 28675	FP 003 AC 919 372-4644
ANDRESEN, JEFFRY JOHN UNC, CB #7160, WING C. DEPT. OF PSYCHIATRY CHAPEL HILL 27599	PYA /P 032 A AC 919 966-3378	APPLER, MARK LEE 1006 OLD ROCKFORD ST. MT. AIRY 27030	GE /IM 086 A P AC 919 786-9088	ASKARY, NASSER AGHA PO BOX 1715 ROCKINGHAM 28379	OBG /END 077 A AC 919 997-3151
ANDREW, RAYMOND HALL 779 OAKLAWN AVE. WINSTON-SALEM 27104	P 034 A AC 919 768-4730	AQUADRO, CHARLES FRASURE 326 FRONT STREET BEAUFORT 28516	GP /OM 016 * AC 919 728-5141	ASKEW, ANNE PRESTON 4016 BARRETT DR., STE. 101 RALEIGH 27609	PD 092 A AC 919 781-2438
ANDREW, WALLACE F., JR. 3515 GLENWOOD AVE. PO BOX 10707 RALEIGH 27605	ORS /HS 092 A AC 919 781-5600	ARANA, GUILLERMO FERNANDO 975 WALNUT ST., STE. 255 CARY 27511	FP /PTH 092 AC 919 467-4141	ASRAEL, GERSON 1350 KINGS DRIVE CHARLOTTE 28207	U 060 P AC 704 372-8750
ANDREWS, BOB BARCUS P. O. BOX 847 LUMBERTON 28359	PTH 078 A AC 919 738-6441	ARCHIE, JOSEPH PATRICK, JR. 3020 NEW BERN AVE. #560 RALEIGH 27610	VS 092 A AC 919 833-8404	ASSEVERO, MICHAEL LAWRENCE 1502 PRINCESS ST. WILMINGTON 28401	OBG /GYN 065 A P AC 919 762-8662
ANDREWS, D. SCOTT 301 HAWTHORNE LANE CHARLOTTE 28204	CDS /TS 060 A AC 704 375-8413	ARENA, JAY MORRIS DUKE HOSPITAL, BOX 3024 DURHAM 27710	PD 032 A * L 919 684-6138	ASSIMOS, DEAN GEORGE BOWMAN GRAY SCH. OF MED. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	U 034 A P AC 919 748-4131
ANDREWS, ELLEN PO BOX 1749 PINEHURST 28374	N /P 063 A AC 919 295-6868	AREDALE, STEPHEN SYDNES STE. 301, 445 BILTMORE CENTER ASHEVILLE 28801	DR /NM 011 A AC 704 254-2371	ATASSI, INAD BADREDDIN 101 ROBESON ST. STE. 410 FAYETTEVILLE 28301	NS 026 A AC 919 483-5050
ANDREWS, LEON POLK 1902 DRUID LANE WILMINGTON 28403	IM 065 A RT 919 343-0167	AREY, JOHN VINCENT 1054 BURRAGE ROAD, N. E. CONCORD 28025	GYN 013 A AC 704 788-4151	ATCHLEY, WILLIAM D. 109 AIRPORT RD. KINSTON 28501	IM 054 A AC 919 522-3661
ANDREWS, PAUL STEPHEN 2609 N. DUKE ST. STE. 204 DURHAM 27704	OBG 032 A AC 919 471-8402	ARI, ABDULLAH NECIP 300 LABANS LANE LINCOLNTON 28092	OBG 055 A AC 704 732-0777	ATKINS, JAMES NORMAN 201 COX BOULEVARD GOLDSBORO 27530	ON /IM 096 AC 919 734-9455
ANDREWS, ROBERT JACKSON 5305 WRIGHTSVILLE AVENUE WILMINGTON 28403	IM 065 A AC 919 791-2626	ARIAIL, JERRY NOLAN 390 S. FRENCH BROAD AVE. ASHEVILLE 28801	D 011 A AC 704 252-3576	ATKINS, WILLIAM SHAFFER 907 STATE FARM ROAD BOONE 28607	OPH 095 P AC 704 262-1554
ANDREWS, ROBERT WILLIAM 923 BROAD ST. DURHAM 27705	U 032 A AC 919 286-1297	ARKIN, ROY MARC 721 GREEN VALLEY RD. GREENSBORO 27408	GS 041 A AC 919 275-2889	ATKINSON, ALVAN WILLIAM 3400 EXECUTIVE DR. STE. 102 RALEIGH 27609	CDS /TS 092 A AC 919 872-8080
ANDREWS, THOMAS J. 1612 ASHEVILLE HWY, STE. 4 HENDERSONVILLE 28739	P 045 AC 704 697-2673	ARMISTEAD, HOWARD LACY, JR. 2108 S. SEVENTEENTH STREET WILMINGTON 28401	FP /OM 065 A AC 919 762-7776	ATKINSON, SAMUEL MARVIN, JR. ECU, DEPT. OF OB-GYN GREENVILLE 27858	OBG 074 A P * AC 919 551-4669
ANDRINGA, RICHARD CORNELL 1816 PEMBROKE RD., STE. #2 GREENSBORO 27408	AN 041 A AC 919 272-3720	ARMISTEAD, RAY BAXTER 1315 S. GLENBURNIE RD. STE. 7 NEW BERN 28562	ORS 025 A AC 919 633-3256	ATSTUPENAS, ELIOT ANTHONY STRATFORD HILLS APTS. 12-D CHAPEL HILL 27514	032 A S 919 929-9907
ANDRINOPOULOS, GEORGE C. 1900 RANDOLPH RD. STE. 804 CHARLOTTE 28207	OBG /NPM 060 A P AC 704 372-5800	ARMSTRONG, BEVERLY WELER 3034 HAMPTON RD. CHARLOTTE 28207	OT 060 A L/RT 704 377-2267	ATTEBERRY, LINDA ROSE 300 S. HAWTHORNE RD. BOX 185 WINSTON-SALEM 27103	034 A S 919 723-5736

ATWATER, JOHN SPENCER, JR. 390 S. FRENCH BROAD AVE. ASHEVILLE 28801	A /PD 011 A * AC 704 254-5366	BAGGETT, JOHN ROBERT 702 NEWMAN ROAD MCCARTHY SQUARE NEW BERN 28560	IM 025 AC 919 633-5333	BAKER, LENOX DIAL BOX 3706, DUMC DURHAM 27710	ORS 032 A * L/RT 919 684-2628
AU, VICTOR K. 1214 VAUGHN RD., STE. B BURLINGTON 27215	PS 001 * AC 919 227-5440	BAGGETT, JOSEPH WOODROW P. O. BOX 53514 FAYETTEVILLE 28305	OBG 026 L 919 485-1837	BAKER, LINNY MARSHALL 40 ARDSLEY AVENUE, N.E. CONCORD 28025	PD /A 013 A AC 704 782-1918
AUL, CHRISTOPHER TAYLOR 4092 PROFESSIONAL DR. HOPE MILLS 28348	FP 026 AC 919 424-0123	BAGLEY, CARTER SNOW 131 MCDOWELL STREET ASHEVILLE 28801	OTO /HNS 011 A AC 704 254-3517	BAKER, MARK EARLY DUMC, BOX 3808 DURHAM 27710	DR 032 A AC 919 681-2711
AUMAN, EDWIN LEWIS 624 QUAKER LANE, SUITE 210-A HIGH POINT 27262	IM 040 A P AC 919 841-8822	BAHNSON, EDWARD REID 2725 WINDSOR ROAD WINSTON-SALEM 27104	IM /OM 034 A L/RT 919 768-7784	BAKER, MARVIN I. PO BOX 1047 EDENTON 27932	R /NM 021 A P AC 919 482-8446
AUMAN, GEORGE LOUIS 3900 BROWNING PLACE RALEIGH 27609	PD 092 AC 919 787-0266	BAHRANI, KHOSROW H. 3080 TRENWEST DRIVE WINSTON-SALEM 27103	P 034 A AC 919 768-2162	BAKERMAN, SEYMOUR 2902 MEMORIAL DRIVE GREENVILLE 27834	PTH 074 A AC 919 551-2801
AUSTIN, ERLE HARRIS, III DIV. OF CARDIAC SURGERY ECU SCHOOL OF MEDICINE GREENVILLE 27834	CDS /TS 074 A AC 919 551-4822	BAILEY, CLARENCE ALMON, JR. 1824 HILLDALE ROAD DURHAM 27705	PD /AI 032 A AC 919 286-2202	BAKEWELL, WILLIAM ERNEST, JR. N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514	P 032 A AC 919 966-4551
AUSTIN, FREDERICK DA COSTA, III 615 E. 12TH STREET WASHINGTON 27889	IM /ID 007 AC 919 946-2101	BAILEY, CLAUDE FLETCHER 403 E. FEARING ST. ELIZABETH CITY 27909	OBG 070 A L/RT	BALDWIN, MARIE PO BOX 173 DUE WEST, SC 29639	P /PN 011 A L/RT
AUSTIN, HENRY VANN PINEHURST MEDICAL CLINIC PO BOX 551 PINEHURST 28374	RHU 063 AC 919 295-5511	BAILEY, GEORGE TILLMAN 212 OLD COLONY WAY ROCKY MOUNT 27801	DR 064 AC 919 443-8083	BALES, DONALD WEESNER, JR. PO BOX 7828 ROCKY MOUNT 27804	IM 064 A AC 919 977-6746
AUSTIN, ROBERT GRAY, JR. 1410 FRANKLIN ST., EAST MONROE 28110	OPH 090 A AC 704 289-5455	BAILEY, HILDA HART 102 MOCKSVILLE AVENUE SALISBURY 28144	PD 080 A AC 704 633-3727	BALL, FRANK JERVEY, JR. 601 LAUCHWOOD DR. LAURINBURG 28352	IM 083 A AC 919 276-7727
AUSTIN, STEPHEN BRAWNER 414 N. CHURCH STREET HENDERSONVILLE 28739	IM 045 A AC 704 693-1768	BAILEY, JOHN BENNETT 131 MCDOWELL STREET ASHEVILLE 28801	PD 011 AC 704 254-4337	BALL, JAMES DALE DIV. OF NUCLEAR MEDICINE WINSTON-SALEM 27103	NM /R 034 A AC 919 748-3520
AUSTIN, WALTER KENNETH, JR. 1960 RANDOLPH ROAD CHARLOTTE 28207	CD /IM 060 A AC 704 373-1503	BAILEY, JOHN RICHARD 205 W. 29TH STREET LUMBERTON 28358	OPH 078 A AC 919 738-4856	BALL, MARSHALL RAY BOWMAN GRAY, DEPT. OF RAD. WINSTON-SALEM 27103	DR 034 A AC 919 748-4435
AUSTIN, WILLIAM ELLIOT 1830 HAWTHORNE ROAD WINSTON-SALEM 27103	GE /IM 034 A AC 919 765-0463	BAILEY, LLOYD W. 109 FOY DRIVE ROCKY MOUNT 27804	OPH 064 * AC 919 443-5164	BALLANCE, JULIA B. 13 MEDICAL PARK MOREHEAD CITY 28557	PD 016 AC 919 726-0511
AVERETT, LELAND STANLEY, JR. 700 N. ELM STREET HIGH POINT 27262	FP 040 AC 919 882-1324	BAILEY, ROBERT WOODWARD 611 FIFTH AVE. WEST HENDERSONVILLE 28739	FP 045 AC 704 697-1508	BALLARD, HARRY HAMPTON 800 HOSPITAL DR. STE. #6 NEW BERN 28560	GS /VS 025 AC 919 633-2081
AVERY, ELEANOR ELIZABETH RT. #2, BOX 305 GREENVILLE 27834	074 A S 919 752-0569	BAIRD, HARRY HAYNES 1012 KINGS DRIVE CHARLOTTE 28283	CD 045 A AC 704 684-1046	BALLEN, PATRICK LASELVE 1511 WESTOVER TERR., STE. 103 GREENSBORO 27408	GS 041 A AC 919 378-1583
AVERY, FRANK WALTON RALEIGH COMMUNITY HOSP. PO BOX 28280 RALEIGH 27611	PTH 092 A AC 919 872-4800	BAINES, EDWARD F. 1673 BANBURY DR. FAYETTEVILLE 28304	AN 026 A AC 919 323-5491	BALLENGER, CLARENCE EUGENE, III 227 MEMORIAL DRIVE. JACKSONVILLE 28540	N 067 A AC 919 353-3625
AYCOCK, PERRY WILLIAM, JR. 1896 REMOUNT ROAD GASTONIA 28054	IM /GE 036 A * AC 704 867-0735	BAIRD, ROBERT WOODWARD 611 FIFTH AVE. WEST HENDERSONVILLE 28739	U 060 A L 704 334-6449	BALLENGER, CLAUDE NEWTON, JR. 1003 N. SIXTH STREET ALBEMARLE 28001	PD 084 AC 704 982-2133
AYCOCK, WILLIAM GLENN 202 S. FIFTH STREET MEBANE 27302	FP 001 A AC 919 563-9341	BAIRD, HAYNES WALLACE 1200 N. ELM STREET GREENSBORO 27401	PTH /CLP 041 A P AC 919 379-4074	BALLENTINE, KINCHEN WHITAKER 486 WINDWOOD ON SKYE FAYETTEVILLE 28305	R 026 AC 919 323-2012
AYERS, JAMES SALISBURY 113 FINCH ST. CLINTON 28328	FP 082 A L/RT 919 592-2541	BAIRD, JAMES HAMILTON 1624 MEMORIAL DRIVE BURLINGTON 27215	OBG 001 A AC 919 226-7386	BALLENTYNE, KEITH PO BOX 36351 1620 SCOTT AVE. CHARLOTTE 28236	AN 060 A P AC 704 377-5772
AYSCUE, LANIER HASTY 813 EMORY DR. CHAPEL HILL 27514	032 A S 919 968-0516	BAKER, BERNIE BALLINGTON, SR. EDENTON OB-GYN CENTER, PA P. O. BOX 990 EDENTON 27932	OBG 021 A AC 919 782-7407	BALLOCH, MOHAMMAD HAROON 2800 BLUE RIDGE BLVD. STE. 402 RALEIGH 27607	FP 092 A AC 919 787-0486
AZZATO, JOHN ANTHONY 112 N. HOWE STREET SOUTHPORT 28461	ORS 010 A AC 919 457-4789	BAKER, CHARLES SCOTT, III RT. #1, BOX 93 GREENVILLE 27834	FP 074 AC 919 747-2921	BALSLEY, ROBERT EUGENE 825 CRESCENT DRIVE REIDSVILLE 27320	EM /PD 079 A AC 919 349-6335
BAAGIL, HASAN MOHAMAD 1315 E. GARRISON BOULEVARD GASTONIA 28052	FP 036 AC	BAKER, DAVID STANFORD, II 2600 E. 7TH ST. PO BOX 35228 CHARLOTTE 28235	HS /ORS 060 A AC 704 372-9820	BALTIMORE, CHAS. LITTLEBURG, JR 211 N. MARKET STREET WASHINGTON 27889	OPH 007 P AC 919 946-2171
BACH, PHILIP JOHN 120 PROVIDENCE ROAD CHARLOTTE 28207	ORS 060 A AC 704 377-0351	BAKER, EDGAR 510-A FLEMING STREET HENDERSONVILLE 28739	FP 045 AC 704 693-9973	BANDY, LAWRENCE C. ECU SCHOOL OF MED. DEPT. OF OB-GYN GREENVILLE 27834	GYN /ON 074 AC 919 551-4201
BACHL, FREDERICK JOSEPH 720 GROVE STREET SALISBURY 28144	PD 080 AC 704 636-5576	BAKER, HERBERT MARVIN 258 THE BOULEVARD ST. EDEN 27288	FP 079 A AC 919 627-1129	BANKOV, ROBERT WILLIAM PO BOX 2366 SHELBY 28150	EM 023 A AC 704 872-3339
BACON, DAVID SCOTT 4138 DEEPWOOD CIR. DURHAM 27707	032 A S 919 286-7883	BAKER, HORACE MITCHELL, JR. P. O. BOX 1171 LUMBERTON 28358	GS 078 L/RT 919 738-8571	BARADA, FRANC A., JR. 2609 N. DUKE ST. DURHAM 27704	RHU /IM 032 A AC 919 477-5179
BACON, HAROLD LYLE 948 RICHMOND BRYSON CITY 28713	GP 087 A L 704 488-2438	BAKER, JOAN MARGO 105 AIRPORT RD. KINSTON 28501	OBG 054 AC 919 523-8383	BARBEE, JOYCE E. 407 HILLSBOROUGH ST. CHAPEL HILL 27514	032 A S 919 872-3793
BADAWI, RAOUF FAHMY 522 N. ELAM AVE., STE. 203 GREENSBORO 27403	P 041 AC 919 854-2391	BAKER, JOHN WOODWARD CHARLOTTE MEMORIAL HOSPITAL P. O. BOX 32861 CHARLOTTE 28232	EM /IM 060 AC 704 338-3181	BARBER, LEWIS ELISHA 4928 SYLVANGLADE ROAD MCLEANSVILLE 27301	GP 041 A P AC 919 375-3434
BAGGETT, HENRY CLIFFORD 2420 PROFESSIONAL DR. P. O. BOX 7099 ROCKY MOUNT 27804	OTO 064 A P AC 919 937-4100	BAKER, KRISTIN D. 516 CHATEAU APTS. CARRBORO 27510	032 A S 919 968-1260	BARBER, ALFRED JOSEPH 1134 N. ROAD STREET ELIZABETH CITY 27909	IM /HEM 070 A AC 919 338-5183
				BARBER, JOHN FRANCIS 157 WINDSOR RD. ASHEVILLE 28804	GYN 011 A L/RT 704 253-7209

BARBORIAK, PETER N. 2748 MIDDLETON #14B DURHAM 27705	A S 919 383-8849	032	BARRINGER, ARCHIBALD LIPE BOX 278 MOUNT PLEASANT 28124	FP 013 A P L/RT 704 436-9929	BATE, DAVID SOULE, JR. 1812 HENDERSONVILLE RD. ASHEVILLE 28803	FP 011 AC 704 684-0011
BARDELAS, JOSE ANTONIO, JR. 100 WESTWOOD AVE. HIGH POINT 27262	A /PD 040 AC 919 883-1393		BARRINGER, MICHAEL LYNN 904 MEADOWBROOK LANE SHELBY 28150	GS 023 A P AC 704 482-6359	BATEMAN, WALLACE BRYSON, JR. 309 WALNUT CREEK DRIVE GOLDSBORO 27530	EM 096 AC 919 778-6205
BARDEN, GRAHAM ARTHUR, III 707 PROFESSIONAL DR. NEW BERN 28560	PD 025 AC 919 633-2900		BARRINGER, PHIL LOUIS P. O. BOX 968 MONROE 28110	GS 090 A L 704 283-2738	BATES, HAROLD BASCOM 1610 VAUGHN ROAD BURLINGTON 27215	U 001 A AC 919 227-2761
BARDEN, GRAHAM ARTHUR, JR. 707 PROFESSIONAL DRIVE NEW BERN 28560	PD 025 AC 919 633-2900		BARRINGER, ROBERT PHILLIPS 1896 REMOUNT ROAD GASTONIA 28054	IM 036 A P AC 704 867-0730	BATES, PAUL KENNETH, JR. 240 18TH STREET CIRCLE, SE HICKORY 28602	PD 018 A AC 704 322-2550
BAREFOOT, JULIUS JACKSON, III 1404 CROSS RD. LOUISVILLE, KY 40204	EM 074 A R		BARRINGER, THAD JONES 3900 BROWNING PL., STE. 201 RALEIGH 27609	P 092 A P AC 919 787-7125	BATHAN-ABELLA, ERLINDA PO BOX 530 GRANITE QUARRY 28072	IM 080 AC 704 279-7271
BAREFOOT, VERNA YOUNG 2504 OLD CHERRY POINT ROAD NEW BERN 28560	PH 025 L 919 637-5574		BARRINGER, THADDEUS JONES, JR. 3900 BROWNING PL., STE. 201 RALEIGH 27609	P 092 A AC 919 787-7125	BATTEN, HUBERT ELMORE CAPE FEAR VALLEY HOSPITAL FAYETTEVILLE 28302	R 026 AC 919 323-2012
BAREFOOT, WILLIAM FREDERICK P. O. BOX 573 WHITEVILLE 28472	GS 024 A L/RT 919 642-3256		BARRINGER, THOMAS AVERY, III 10724 PARK ROAD CHARLOTTE 28210	FP 060 AC 704 542-6577	BATTEN, WOODROW 601-B N. EIGHTH STREET SMITHFIELD 27577	IM 051 A AC 919 934-8977
BARHAM, BERLIN FRANCIS, JR. 301 HAWTHORNE LANE CHARLOTTE 28204	CDS /TS 060 AC 704 375-8413		BARRON, BRUCE JOSEPH 901 N. THIRD ST. PO BOX 1398 ALBEMARLE 28001	GS 084 AC 919 982-0161	BATTISTONE, MICHAEL J. 886 LOUISE CIR. APT. 26F DURHAM 27705	GP /ID 032 A S 919 383-7569
BARISH, CHARLES FRANKLIN 3100 BLUE RIDGE RD., STE. 300 RALEIGH 27612	IM /GE 092 A P AC 919 781-7500		BARRON, JOHN ISAAC P. O. BOX 489 MORGANTON 28655	FP 012 A L 704 437-5641	BATTLE, CONSTANCE Y. 3613 HAWORTH DR. RALEIGH 27609	OBG 092 AC 919 781-5550
BARKER, CAROLYN E. CULBRETH PO BOX 1541 OXFORD 27565	P 039 A AC 919 693-3003		BARROW, ROY DOUGLAS 1711 TREEMONT DR. GREENVILLE 27858	074 A S 919 756-3746	BATTLE, MARGARET E. WHITE 521 PEACHTREE STREET ROCKY MOUNT 27801	GYN 064 A L 919 442-2414
BARKER, DAVID BERT 808 N. WASHINGTON ST. SHELBY 28150	U 023 A * AC 704 484-0117		BARRY, DAVID WALTER BURROUGHS WELLCOME CO. 3030 CORNWALLIS ROAD RESEARCH TRIANGLE PK 27709	IM /ID 032 A AC 919 248-4534	BATTLE, NEWSOM PITTMAN 100 NASH MEDICAL ARTS MALL ROCKY MOUNT 27801	GS 064 A L 919 442-2414
BARKER, JULIAN 408 PARKWAY GREENSBORO 27401	GYN 041 A P AC 919 378-1110		BARRY, PAUL DOUGLAS #2 WALDRON COURT GREENSBORO 27408	DR /NM 041 A AC 919 288-9346	BATTS, MARK BURREL RT. #8, BOX 269 GREENVILLE 27834	074 A S 919 752-3648
BARKER, MARSHALL JAY 400 GLENWOOD AVE. STE. #15 KINSTON 28501	OBG 054 AC 919 527-7208		BARRY, WILLIAM 3322 MELROSE ROAD FAYETTEVILLE 28304	EM /FP 026 A AC 919 323-5880	BATZER, GABRIELLE B. PO BOX 280 BUIES CREEK 27506	P 043 A AF 919 893-5727
BARKER, ROGER WILLIAM 702 HARTNESS ROAD STATESVILLE 28677	OTO /HNS 049 A AC 704 873-5224		BARTELS, GEORGE THOMAS 1201 AVERSBO ROAD GARNER 27529	FP /NTR 092 A * AC 919 779-6330	BAUCOM, MARY PADGETT PO BOX 32861 CHARLOTTE 28232	IM 060 A AC 704 338-3165
BARKER, RUDY WATKINS 2609 N. DUKE ST., STE. 204 DURHAM 27704	OBG 032 A AC 919 471-8402		BARTELT, CURTIS FREDERICK 6725 FAIRVIEW ROAD CHARLOTTE 28210	FP 060 AC 704 365-0677	BAUCOM, SANDRA SASSER RT. #7, BOX 34B WHITEVILLE 28472	PD 024 A AC 919 642-0158
BARKLEY, KARL LEE 721 GREEN VALLEY RD., SUITE 102 GREENSBORO 27408	OBG 041 A AC 919 273-2411		BARTH, GEORGE BITTMAN, II 940 FEDERAL RD. BROOKFIELD, CT 06804	FP 047 A AC	BAUER, JOHN MONTGOMERY ROUTE #2, BOX 197 CONOVER 28613	PTH 018 A AC 704 322-3821
BARNES, MAJOR RUSSELL, JR. 200 MEMORIAL DR. JACKSONVILLE 28540	OBG /GP 067 A AC 919 353-0759		BARTHOLOMEW, CYNTHIA L. 7108 PINEVILLE-MATTHEWS RD. CHARLOTTE 28226	PD 060 AC 704 542-1952	BAUGHAM, ILA EVANS DOCTOR'S BLDG., 8TH ST. PO BOX 309 NORTH WILKESBORO 28659	PD 097 AC 919 838-7466
BARNES, VICTOR RUSSELL 108 SARA LANE #B GREENVILLE 27834	074 A S 919 758-1547		BARTLETT, EDWIN CLARY 622 MEDICAL DR. GREENVILLE 27834	ORS 074 A AC 919 752-4613	BAUGHAM, LEONARD ANDREW P. O. BOX 1146 NORTH WILKESBORO 28659	GS 097 AC 919 667-4718
BARNETT, STEWART D. R-4 DOCTORS PARK APTS. GREENVILLE 27834	074 A S 919 752-6717		BARTLETT, STEPHEN RUSSELL 208 N. LONGMEADOW ROAD GREENVILLE 27834	GS 074 A L/RT 919 752-3218	BAUM, JEFFREY ALAN 250 18TH ST. CIR. SE HICKORY 28602	ORS 018 A AC 704 322-5172
BARNHARDT, ALBERT EARL 2100 S. MAIN ST., #57 KANNAPOLIS 28081	GP 013 A L/RT 704 938-4388		BARTON, FORBES MARSHALL, JR. 2115 E. 7TH ST., STE. 103 CHARLOTTE 28204	GS 060 AC 704 375-3728	BAUMRUCKER, JOHN FREDERICK P. O. BOX 1060 HIGHLANDS 28741	FP 056 AC 704 526-2125
BARNHARDT, LUTHER ERNEST, JR. 900 MEDICAL CT., STE. A 100 RANKIN DR. MARION 28752	R /NM 011 A AC 704 652-4630		BARTON, JOHN HOMER, JR. 160 SARATOGA ST. WINSTON-SALEM 27103	034 A R 919 765-7946	BAXLEY, MARY JOHN 1008 PROFESSIONAL VILLAGE GREENSBORO 27401	IM /PD 041 AC 919 272-2119
BARR, FALVY CARL, JR. 404 BUTLER DRIVE CLINTON 28328	PTH /FOP 082 A AC 919 592-8511		BARWICK, WILLIAM JAMES BOX 3098, DUMC DURHAM 27710	PS 032 A AC 919 684-3320	BAYLIN, GEORGE JAY CAROLINA MEADOWS I-305 CHAPEL HILL 27514	DR /OTO 032 A L/RT 919 489-9637
BARR, JOHN FINDLEY CLEVELAND FAMILY PRACTICE PO BOX 310 CLEVELAND 27013	FP 080 P AC 704 278-4053		BASKIN, JAYNE FRANCES 3326 LANDMARK ST. D-1 GREENVILLE 27834	074 A S 919 756-5256	BEALS, MARTIN FEARING, JR. 78 MEADS STREET ELIZABETH CITY 27909	PD 070 AC 919 338-2155
BARRETT, GEORGE CARLYLE 958 CHEROKEE ROAD CHARLOTTE 28207	R 060 A AC 704 371-4056		BASS, DAVID ALDEN BOWMAN GRAY, DEPT. OF IM WINSTON-SALEM 27103	ID /IM 034 AC 919 748-4246	BEAMER, MARK EDWARD 119 FLETCHER PL. GREENVILLE 27834	074 A S 919 758-2290
BARRETT, JOHN ALBERT, JR. 3535 RANDOLPH ROAD, #200 CHARLOTTE 28211	IM /RHU 060 A AC 704 366-8240		BASS, SPENCER PIPPEN, JR. P. O. BOX 605 TARBORO 27886	PTH 064 A AC 919 823-3114	BEAN, GARY OWEN 1109 DRESSER COURT RALEIGH 27609	FP 092 AC 919 872-4900
BARRETT, ROLLAND JOHN, II 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	GYN /ON 034 A P AC 919 748-2011		BASS, THOMAS RECTOR P. O. BOX 849 CLAYTON 27520	FP 051 A AC 919 553-7158	BEAN, VIRGIL EDWARD 605 ROSE AVE. WILMINGTON 28403	AN 065 AC 919 343-7000
BARRICK, HARRY W., JR. 1900 HIGHLAND PL. RALEIGH 27607	FP 092 A AC 919 787-4429		BASSETT, FRANK HOUSTON, III DUKE UNIV. MED. CTR. DURHAM 27710	ORS 032 A AC 919 684-4378	BEANE, SCOTT DOUGLAS 3-I COURTNEY SQUARE APTS. GREENVILLE 27858	074 A S 919 758-5617
BARRIER, CECIL LEE, SR. ROUTE #3, BOX 105 LAWNDALE 28090	GP 023 A AC 704 538-7891		BATCHELLER, EDGAR HADLEY, JR. P. O. BOX 1000 JACKSONVILLE 28540	GS /TS 067 A AC 919 353-2194	BEAR, SIGMOND AARON 3712-B RESTON COURT WILMINGTON 28403	GYN 065 AC 919 799-3103

BEARD, ELDON S. 3640-A WESTGATE CENTER CIR. WINSTON-SALEM 27103	FP 034 AC 919 768-6682	BELL, GEORGE ERICK, JR. WILSON CLINIC WILSON 27893	ORS 098 A AC 919 291-7001	BENSON, JOHN FISHER 318 WESTWOOD AVENUE HIGH POINT 27262	RHU /IM 040 A AC 919 882-2515
BEARD, JOHN NICHOLS 1350 KINGS DRIVE CHARLOTTE 28207	OM /PD 060 AC 704 372-8750	BELL, IRA EUGENE, JR. CATAWBA MEMORIAL HOSPITAL 810 FAIRGROVE CHURCH RD. SE HICKORY 28602	TR /R 018 AC 704 322-0856	BENSON, NICHOLAS HEROD 1309 FANTASIA STREET GREENVILLE 27858	EM 074 A AC 919 551-4297
BEARDSLEY, THOMAS LEWIS 495 BILTMORE AVE. ASHEVILLE 28801	OPH 011 AC 704 253-9821	BELL, JOHN DAVIS 401 SIXTH AVE., WEST HENDERSONVILLE 28739	AN 045 AC 704 693-7848	BENSON, TERRY LEE 2315 RAMA ROAD CHARLOTTE 28212	FP 060 AC 704 563-1290
BEASLEY, CHARLES BRITTON KINSTON CLINIC, NORTH KINSTON 28501	OTO 054 A AC 919 523-0687	BELL, MICHAEL JOHN 2001 VAIL AVENUE CHARLOTTE 28207	R /NM 060 A P AC 704 379-5860	BENTIVOGLIO, GIAN P. 809 GALES AVE. WINSTON-SALEM 27103	034 A S 919 725-3552
BEASLEY, CHARLES RONALD 206 W. 27TH STREET LUMBERTON 28358	IM /PUD 078 A * AC 919 738-1421	BELL, RALPH MONROE 8223 BONDS GROVE CHURCH RD. WAXHAW 28173	IM 060 A L/RT 704 377-6569	BENTLEY, RALPH LUTHER 332 N. CENTER STREET STATESVILLE 28677	PD 049 AC 704 878-2011
BEASLEY, MICHAEL EDWARD 2215 RANDOLPH RD. CHARLOTTE 28207	PS 060 A * AC 704 372-6846	BELL, WILLIAM HARRISON, JR. P. O. BOX 2065 NEW BERN 28560	R /NM 025 A AC 919 633-5057	BENTSEN, BIRGER STEVEN PO BOX 7193 WILSON 27895	P 098 A AC 919 942-8226
BEASON, EDWARD STEWART 1732 S. HAWTHORNE ROAD WINSTON-SALEM 27103	PS 034 A P * AC 919 765-3540	BELL, WILLIAM OSGOOD BOWMAN GRAY, DEPT. OF NS WINSTON-SALEM 27103	NS 034 A AC 919 748-4047	BENTZEL, CARL JOHAN ECU DEPT. OF RENAL MED. GREENVILLE 27858	IM /NEP 074 A AC 919 551-2545
BEAVER, ROBERT HOWELL 109 COUNTRY CLUB DR. CONCORD 28025	ORS 013 A AC 704 786-5122	BELL, WILLIS HARVEY, II 2027 WAWA AVENUE DURHAM 27707	IM /PUD 032 A RT 919 493-1048	BERG, TIMOTHY ARVID 1821 ELIZABETH AVE. WINSTON-SALEM 27103	034 A R 919 748-2011
BEAVERS, CHARLES LEE 100 MEADOWBROOK TERRACE GREENSBORO 27408	AN 041 A L/RT 919 273-1066	BELLAMY, WILLIAM EDWARD, JR. 3101 ESSEX CIRCLE RALEIGH 27608	IM /PUD 092 A AC 919 782-2631	BERGANT, JAMES ALLEN 2609 N. DUKE ST., SUITE 302 DURHAM 27704	U 032 A AC 919 471-8423
BEAVERS, JAMES WALLACE 2206 W. MARKET ST. GREENSBORO 27403	GP 041 A L/RT 919 272-3487	BELLOWS, ROWLAND THOMPSON 3529 PARK ROAD CHARLOTTE 28209	NS 060 A L/RT	BERGER, BRUCE R. ECU, DEPT. OF PSY, BRODY BLDG. A GREENVILLE 27858	CHP /P 074 A AC 919 551-2660
BECHTOLDT, ALBERT ARTHUR, JR. UNC, DEPT. OF ANES. CHAPEL HILL 27514	AN 032 A AC 919 966-5136	BENBOW, EDWARD PERRY, JR. PO BOX 339 ORIENTAL 28571	PD 041 A L 919 299-7057	BERGER, FREDERICK ALLEN 28 RIVERVIEW STREET, #114 FRANKLIN 28734	PD 056 AC 704 524-8474
BECK, J. MONTGOMERY 820 FOREST OAKS LANE MEBANE 27302	FP /U 001 A L/RT 919 563-2450	BENBOW, JOHN MILLER 40 ARDSLEY AVENUE, N.E. CONCORD 28025	PD 013 AC 704 786-1144	BERGER, GARY STERLING 109 CONNER DR., STE. 2104 CHAPEL HILL 27514	OBG /PH 032 A AC 919 968-4656
BECKER, DENIS I. 3410 EXECUTIVE DR., SUITE 205 RALEIGH 27609	END /IM 092 A * AC 919 876-7692	BENDER, NEIL CARMICHAEL P. O. BOX 68 POLLOCKSVILLE 28573	IM 025 A * AC 919 633-1010	BERGERON, JOSEPH CHARLES, JR. 102 WILSHIRE BOULEVARD WILSON 27893	PTH 098 A P AC 919 399-8114
BECKHAM, DAVID ROBERTSON 1762 METROMEDICAL DR. FAYETTEVILLE 28302	AN 026 A P * AC 919 323-5491	BENEDUM, JOHN LOYLE 1900 BRUNSWICK AVE. CHARLOTTE 28207	IM 060 AC 704 364-7037	BERGIN, DONALD J. 3312 BATTLEGROUND AVE. GREENSBORO 27410	OPH 041 A * AC 919 282-5000
BECKNELL, GEORGE FRANKLIN, JR. 407 S. BROADWAY FOREST CITY 28043	GP 081 A AC 704 245-4838	BENFIELD, RONALD WM. 520 BROOKDALE DR. STATESVILLE 28677	ORS /HS 049 A AC 704 872-7492	BERGLUND, LAURA H. 5605 HIDEAWAY DR. CHAPEL HILL 27516	032 A S 919 967-1928
BECKWITH, GEORGE HUGHES PO BOX 2554 702 NEWMAN RD. MCCARTHY SQ. NEW BERN 28560	CD /IM 025 AC 919 633-4046	BENJAMIN, EUGENE E. 2115 E. 7TH ST., SUITE #101 CHARLOTTE 28204	N 060 A AC	BERKELEY, SCOTT BRUCE, JR. 2400 WAYNE MEM. DR. STE. E GOLDSBORO 27530	GS 096 A AC 919 735-6021
BECKWITH, MARY KRISTINE 1821 GREEN ST. DURHAM 27705	OBG 032 A AC 919 286-1250	BENJAMIN, SANFORD PHILIP 2001 VAIL AVE. CHARLOTTE 28207	PTH /CLP 060 A AC 704 379-5982	BERKEY, WILLIAM SALDERUS, JR. PO BOX 696 SKYLAND 28776	FP 011 A AC 704 684-7801
BEDRICK, JAMES JOSEPH 1900 RANDOLPH RD., STE. 1016 CHARLOTTE 28207	OPH 060 A P AC 704 334-2020	BENNETT, CRAIG RANDALL MEDICAL ARTS BLDG. NORTH WILKESBORO 28659	ORS 097 A P AC 919 667-5039	BERKOWITZ, GERALD PHILLIP 200 HAWTHORNE LANE P. O. BOX 33549 CHARLOTTE 28233	NPM /PD 060 A AC 704 371-4025
BEDROSIAN, CAMILLE LUCIA 9-A TARAWA TERRACE DURHAM 27705	IM 032 A R 919 383-4972	BENNETT, ERNEST CLAXTON P. O. BOX 667 ELIZABETHTOWN 28337	GP 009 A L 919 866-4319	BERMAN, JEFFREY MICHAEL 750-D HARTNESS RD. STATESVILLE 28677	AN 049 A * AC 704 873-5651
BEEKER, THADDEUS ARLEN APT. 16-F, COURTNEY SQUARE GREENVILLE 27834	074 A S 919 737-8170	BENNETT, HERRON KENT P. O. BOX 5128 HIGH POINT 27262	OBG 040 A AC 919 887-3011	BERNE, FREEMAN ALBERT P. O. DRAWER 1527 LUMBERTON 28358	DR 078 A P AC 919 738-8222
BEEMER, CHARLES T. PO BOX 1169 1816 DOCTORS' DR. SANFORD 27330	ORS 053 A AC 919 775-7232	BENNETT, JERRY L. 2240 CLOVERDALE AVENUE SUITE 217, PROF. BLDG. WINSTON-SALEM 27103	PD 034 AC 919 722-7143	BERNER, THOMAS 23 PARK ROAD ASHEVILLE 28803	EM 011 AC 704 274-3592
BEGGERLY, CLAY EVANS 114 E. CONCORD DR. GREENVILLE 27834	GS 074 A R 919 551-4100	BENNETT, JOHN JOE 102 GIBBS ROAD NEW BERN 28560	GP /OM 025 AC 919 633-0709	BERNHARDT, PETER F. RT. #1 2505 HARDWOOD LN. HILLSBOROUGH 27278	PTH 032 A R 919 471-8168
BELK, ROBERT SAMUEL 322 MULBERRY ST. SW PO BOX 1020 LENOIR 28645	IM /CD 014 A P AC 704 758-5544	BENNETT, JOHN NORTHWOOD ROUTE #1, BOX 96 MORAVIAN FALLS 28654	R 097 A P AC 919 838-3896	BERNSTEIN, DANIEL MEDICAL SERVICE BLDG. RUIN CREEK ROAD HENDERSON 27536	OPH 091 A P AC 919 492-8021
BELL, CAROL ROLAND 202 DOCTOR'S BUILDING ASHEVILLE 28801	AN 011 A AC 704 254-1969	BENNETT, LAWRENCE NORTHWOOD RT. #1, BOX 76A MORAVIAN FALLS 28654	DR 097 A R 919 667-1452	BERNSTEIN, ROSLYN JULIE 4617 HOPE VALLEY RD., APT. H DURHAM 27707	IM 032 A R
BELL, DOROTHY MCFARLAND 1110 W. MAIN ST. DURHAM 27701	OPH 032 A AC 919 682-9341	BENNETT, PAUL CLIFFORD, JR. 2400 WAYNE MEM. DR., STE. B GOLDSBORO 27530	FP 096 AC 919 735-1251	BERRETTA, JEANNE SMITH PO BOX 1846 ECU SCHOOL OF MEDICINE GREENVILLE 27834	FP /GER 074 AC 919 551-4611
BELL, EDWIN LILLINGTON 702 NEWMAN RD. PO BOX 2554 NEW BERN 28560	IM /PUD 025 AC 919 633-5333	BENNETT, WILLIAM TYSON 3626 LATROBE DR. CHARLOTTE 28211	CD /IM 060 * AC 704 364-0057	BERRY, FRANCIS XAVIER 1208 COLONIAL AVE. GREENSBORO 27408	OBG 041 L/RT 919 272-2155
BELL, ELIZABETH ANNE 423 WHITEHEAD CIRCLE CHAPEL HILL 27514	032 A S 919 942-6137	BENSEN, VLADIMIR BASIL 422 ST. MARY'S STREET RALEIGH 27605	FP /GS 092 A L 919 832-6855	BERRY, WILLIAM ROSSER PO BOX 30098 RALEIGH HEM/ONCOLOGY CLI. RALEIGH 27622	ON /HEM 092 A AC 919 781-7070

ALPHABETICAL LIST OF MEMBERS

41

BERRYHILL, BRUCE HOLT 1600 E. THIRD STREET CHARLOTTE 28204	OTO 060 A AC 704 372-3300	BIGHAM, ROY STINSON, JR. 4000 MCKEE ROAD CHARLOTTE 28226	IM 060 A L/RT 704 846-2233	BLACKBURN, ROBERT ALFRED 1262 OLIVER ST. FAYETTEVILLE 28304	OTO /P 026 A AC 919 485-7181
BERTICS, GREGORY M. 3821 MERTON DR. RALEIGH 27609	N 092 A AC 919 782-3456	BILBREY, GEORGE MARVIN, JR 257 MCDOWELL STREET ASHEVILLE 28803	CDS /TS 011 A P AC 704 258-1121	BLACKBURN, THOMAS REID PO BOX 1148 SHELBY 28150	DR 023 A P AC 704 487-3141
BERTLING, MARION HENRY 2312 PRINCESS ANN STREET GREENSBORO 27408	GYN 041 A L/RT 919 288-6344	BILBRO, ROBERT HODGES 3521 HAWORTH DR. RALEIGH 27609	IM /CD 092 A AC 919 782-1806	BLACKERBY, JAMES 1807 TRYON ROAD NEW BERN 28560	GP 025 A L/RT 919 637-3424
BERTRAM, ROBERT 909 W. HENDERSON ST. SALISBURY 28144	U 080 A AC 704 633-9441	BILLICA, WILLIAM HARRY 2217 W. WINDSOR AVE. PHOENIX, AZ 85009	032 A R 602 254-8052	BLACKERBY, JAMES NICHOLAS 800 HOSPITAL DR. NEW BERN 28560	GS 025 AC 919 633-2081
BERTRAND, MARGARET LINS 112 WEDGE DALE AVE. GREENSBORO 27403	DR 041 A AC 919 379-0941	BILLINGS, JACK SMITH 540 HOLMES DRIVE RURAL HALL 27045	FP 034 A AC 919 969-9158	BLACKLEY, ROY JACKSON 4907 QUAIL HOLLOW DR. RALEIGH 27609	P /GPM 092 * AC 919 733-4506
BERTRAND, SCOTT ALAN PO BOX 10373 GREENSBORO 27404	AN 041 A AC 919 373-0372	BINDER, GEORGE ARTHUR 401 LAKESHORE DR. FAYETTEVILLE 28305	DR 026 A AC 919 484-4028	BLACKMAN, JESSE AYCOCK 109 S. SYCAMORE STREET FREMONT 27830	GP 096 AC 919 242-6171
BEST, ANDREW ARTHUR P. O. BOX 949 GREENVILLE 27834	FP 074 L 919 752-2129	BINION, GERALD RAY 110 W. GROVER STREET SHELBY 28150	OBG 023 A AC 704 487-5258	BLACKMON, BRUCE BERNARD P. O. BOX 8 BUIES CREEK 27506	FP 043 A P * AC 919 893-3543
BEST, DAVID CHARLES 600 PASTEUR DR. GREENSBORO 27403	PS /HS 041 A * AC 919 852-0300	BINION, MARK LEE 106 SCALES PL., APT. A-7 GREENVILLE 27834	074 A S 919 758-9438	BLACKWELL, BRUCE WAYNE 1601-B OWEN DR. FAYETTEVILLE 28304	FP 026 A AC 919 323-1152
BEST, JAMES ERNEST 600 PASTEUR DRIVE GREENSBORO 27403	PD /ADL 041 A L/RT 919 299-8046	BIRD, IGNACIO 207 HOMEWOOD AVENUE GREENSBORO 27403	R 041 A L/RT 919 299-8319	BLACKWELL, MICHAEL A. RT. #2, BOX 372 WINTERVILLE 28590	074 A S 919 758-7303
BEST, RANDALL MARK 3000 NEW BERN AVE. RALEIGH 27610	EM 092 A 919 755-8500	BIRD, STEVEN M. 1990 HIGHWAY 15-501 SOUTH SOUTHERN PINES 28387	FP 063 P AC 919 692-5555	BLACKWELL, OSCAR MOORE, III 309 PINEYWOOD ROAD THOMASVILLE 27360	IM /BE 029 A AC 919 475-8121
BETHEL, MILLARD BAIMBRIDGE 25 BANBURY LANE CHAPEL HILL 27514	PH 092 A L/RT 919 929-5606	BIRMINGHAM, LORRAINE FAITH 5035 HADRIAN DR. DURHAM 27703	FP 032 A AC 919 596-0430	BLAINE, DAVID ALLAN 715 S. HAWTHORNE RD. WINSTON-SALEM 27103	034 A S 919 722-8519
BETTS, CHARLES SAMUEL 220-A FOUST STREET ASHEBORO 27203	IM 076 A AC 919 629-7710	BISCARDI, FRANK H. LAUREL RIDGE APTS. #29K 54 BYPASS CHAPEL HILL 27514	032 R 919 966-4131	BLAIR, GEORGE WALKER, JR. 711 HERMITAGE ROAD BURLINGTON 27215	IM 001 A P AC 919 226-9317
BETTS, WILMER CONRAD 901-F PAVERSTONE DR. RALEIGH 27615	P 092 A * AC 919 847-2624	BISHOP, JOHN MASON, JR. 2800 BLUE RIDGE BLVD. STE. 206 RALEIGH 27607	OBG 092 AC 919 781-7450	BLAIR, JAMES SEABORN, JR. 400 E. MAIN STREET WALLACE 28466	FP 031 AC 919 285-2134
BEUTEL, WILLIAM DEAN 801 W. KING ST. KINGS MOUNTAIN 28086	GS 023 AC 704 734-0221	BISHOPRIC, ALICE 1205 N. CENTER STREET HICKORY 28601	OBG 018 AC 704 328-2901	BLAIR, JERRY RAY 14 GLEEWOOD PLACE, EAST DURHAM 27713	032 A S 919 544-5534
BEVIN, ABNER GRISWOLD, JR UNC, DIV. OF PLASTIC SURGERY CHAPEL HILL 27514	PS /GS 032 A AC 919 966-4446	BISSELL, LEWIS F. 12 ROUND OAK ROAD ASHEVILLE 28804	IM 011 AC 704 254-0663	BLAIR, ROBERT GILLESPIE, JR. P. O. DRAWER 1694 TRIANGLE PLAZA NEW BERN 28560	ORS 025 A AC 919 633-4477
BEVIS, CHARLES ALAN 1835 DAVIE AVE., STE. 415 STATESVILLE 28677	ORS 049 AC 704 872-7676	BISSRAM, GANESH 130 CARDINAL DR. ROANOKE RAPIDS 27870	ORS 042 AC 919 535-3091	BLAKE, DAMON DALTON 816 PINE VALLEY RD. WINSTON-SALEM 27106	TR 034 L/RT 919 748-4981
Bey, RICHARD DOUD 160 CHARLOIS BOULEVARD WINSTON-SALEM 27103	N 034 A AC 919 768-5834	BITTER, KARL FFOLIOTT 1 DOCTOR'S PARK ASHEVILLE 28801	U 011 A AC 704 253-5314	BLAKE, GERALD WAYNE 3521 HAWORTH DR. RALEIGH 27609	IM /ID 092 AC 919 782-1806
BEYER, ALFRED JAMES 521 BEAUMONT ROAD FAYETTEVILLE 28304	GS 026 AC 919 483-5031	BITTINGER, ISABEL 118 S. CHERRY ST., PO BOX 10668 WINSTON-SALEM 27108	ORS 034 A L 919 725-0656	BLAKE, JOHN PAUL 723 EDITH STREET BURLINGTON 27215	P 001 A AC 919 227-9818
BEYER, CATHERINE HERLIHY 1213 WALTER REED ROAD FAYETTEVILLE 28305	PD 026 AC	BLACK, BILLY GENE P. O. BOX 365 MATTHEWS 28105	919 725-0656	BLAKE, ROBERT ADAMS 902-D COX ROAD GASTONIA 28054	ORS 036 A AC 704 864-6723
BHATTI, MOHAMMAD AMJAD 719 HERMITAGE RD. BURLINGTON 27215	GS /TS 001 AC 919 226-5191	BLACK, EDWARD BARNWELL 3535 RANDOLPH RD., STE 102 CHARLOTTE 28211	OBG /AN 060 A P AC 704 847-7102	BLAKE, SIDNEY ALLEN 424 LOCKLAND AVE. WINSTON-SALEM 27103	034 S 919 788-5646
BHOTIWIHOK, PREECHA P. O. BOX 1043 KINSTON 28501	AN 054 A P AC 919 522-7800	BLACK, JAMES FRANKLIN 200 W. CAROLINA AVE. LEXINGTON 27292	R 060 A AC 704 365-0343	BLAKELY, GENE THORNTON MARGARET PARDEE HOSPITAL HENDERSONVILLE 28739	EM 045 AC 704 693-6522
BIANCHI, EDGARDO HUGO 1703 COUNTRY CLUB RD. STE. 202A JACKSONVILLE 28540	CD /IM 067 A AC 919 455-9600	BLACK, JAMES HAMPTON 125 BALDWIN AVE. CHARLOTTE 28204	OBG 029 A AC 704 243-2431	BLAKEMORE, WILLIAM STEPHEN 101 MARK DR. EDENTON 27932	OPH 021 AC 919 482-7471
BICKLEY, SAMUEL TAYLOR P. O. BOX 5168 HIGH POINT 27262	FP 040 A * AC 919 885-2118	BLACK, JOHN ALEXANDER 2106 LYNNWOOD DR. WILMINGTON 28403	IM /NEP 060 A AC 704 374-1696	BLALOCK, FLOYD ESTON, JR. VALLEY RIVER CLINIC ANDREWS 28901	065 A AC 704 321-4510
BIEHLER, DARREN FOSTER 816 E. 24TH ST. NEWTON 28658	032 A S 919 942-9519	BLACK, KYLE E., JR. 624 QUAKER LN., STE. D-200 HIGH POINT 27262	R 065 A AC 919 343-7000	BLANCHAT, TIMOTHY JOSEPH 11 13TH AVENUE, N. E. HICKORY 28601	ORS 040 AC 704 322-3541
BIESECKER, GARY LEROY 624 QUAKER LN., STE. C-101 HIGH POINT 27262	GS 040 A * AC 919 883-1348	BLACK, KYLE EMERSON ONE ACORN LANE SALISBURY 28144	GS 080 A L 704 636-5510	BLAND, RALPH WINGATE 2400 WAYNE MEM.DR., STE.J GOLDSBORO 27530	080 A * L 919 799-2226
BIGGERS, DAVID CARL MEMORIAL MISSION HOSPITAL ASHEVILLE 28801	PTH 011 A * AC 704 255-4270	BLACK, PAUL ADRIAN L. 5553 OLEANDER DRIVE WILMINGTON NC 28403	065 A * L 919 799-2226	BLAND, VEITA JOYCE 1021 E. WENDOVER AVE. STE. 202 MEDICAL ARTS BLDG. GREENSBORO 27405	GP 080 AC 704 633-5048
BIGGERS, WILLIAM PAUL 610 BURNETT-WOMACK-229H UNC SCHOOL OF MEDICINE CHAPEL HILL 27514	OTO /A 032 A * AC 919 966-3341	BLACK, WINSEL O'NEAL 601 MOCKSVILLE AVENUE SALISBURY 28144	065 A * L 919 799-2226	BLANK, ROY CRARY 335 N. CASWELL RD. CHARLOTTE 28204	080 AC 704 376-4852
BIGGS, JOHN IRVIN 1406 N. ELM ST. PO BOX 1004 LUMBERTON 28358	ORS 078 A L/RT 919 739-6093	BLACKBURN, KATHERINE S. 211-28 DALEWOOD DR. WINSTON-SALEM 27104	034 A S 919 765-5952	BLAYLOCK, RUSSELL LANE P. O. BOX 5388 HIGH POINT 27262	NS 040 AC 919 889-4810

BLEVINS, VIRGINIA KAY 250 CHARLOIS BLVD. WINSTON-SALEM 27103	IM 034 A AC 919 768-4730	BOERNER, DAVID FRANKLIN 3100 BLUE RIDGE RD. STE. 300 RALEIGH 27612	IM /PUD 092 A P AC 919 781-7500	BONNER, JACK WILBUR, III BOX 1101, HIGHLAND HOSPITAL ASHEVILLE 28802	P 011 A P AC 704 254-3201
BLIEVERNIGHT, STEPHEN WALDO 1014 PROFESSIONAL VILLAGE GREENSBORO 27401	GS 041 P AC 919 373-1078	BOERNER, ROBERT MARTIN 520 BILTMORE AVENUE ASHEVILLE 28801	ID /PUD 011 A AC 704 254-5932	BONNER, MERLE DUMONT MEADOWBROOK TERRACE 1915 BOULEVARD ST. GREENSBORO 27407	PUD /A 041 A L/RT 919 854-0947
BLOCH, EDMOND CECIL BOX 3094, DUMC DURHAM 27710	AN 032 AC 919 681-5737	BOETTE, RICHARD WALTERS 515 COLLEGE RD., STE. 11 GREENSBORO 27410	PD 041 AC 919 852-9630	BONNER, STEVEN PAUL 211 S. SHARON AMITY RD. CHARLOTTE 28211	FP 060 AC 704 663-0261
BLOCK, HARVEY S. 2608 E. 7TH ST. CHARLOTTE 28204	N 060 AC 704 377-9323	BOGARD, ANN QUINN 1901 S. HAWTHORNE RD., STE. 240 WINSTON-SALEM 27103	OTO 034 A AC 919 768-1308	BONNIN, IRVIN RAYMOND 1225 E. GARRISON BOULEVARD GASTONIA 28054	OBG 036 AC 704 867-7226
BLOMELEY, CHARLES PERRY PO BOX 608 COLUMBUS 28722	FP 075 A AC 704 894-8213	BOGARD, TERRENCE DALE 5020 KNOB VIEW TRAIL WINSTON-SALEM 27104	AN 034 A P AC 919 760-3954	BOOKER, JOHN PARKS, JR. P. O. BOX 308 HICKORY 28603	DR 018 A AC 704 322-2644
BLOMGREN, PETER FREDERICK 317 W. WENDOVER AVE. GREENSBORO 27408	FP 041 AC 919 373-1794	BOGGS, LAWRENCE KENNEDY 1012 KINGS DRIVE CHARLOTTE 28283	U 060 A P AC 704 333-3825	BOOLS, JOHN C. 18 13TH AVE. NE PO BOX 308 HICKORY 28603	DR /NM 018 A AC 704 322-2871
BLOMQUIST, GUSTAV ARTHUR, JR. 721 GREEN VALLEY RD., STE. 303 GREENSBORO 27408	NS 041 A AC 919 275-1111	BOHSACK, MICHAEL ROBERT 1803 WILDWOOD CT. WILSON 27893	AN 098 A AC 919 291-1700	BOONE, EDWARD EVERETT ROUTE #2, BOX 199 CONOVER 28613	IM 018 A AC 704 322-1128
BLOOMFIELD, ROBERT LEE 741 HIGHLAND AVENUE WINSTON-SALEM 27101	IM 034 A AC 919 727-8165	BOKESCH, CHARLES RICHARD P. O. BOX 1547 MOUNT AIRY 27030	CD /IM 086 A AC 919 786-6146	BOONE, JOHN WOODIE, JR. 120 PROFESSIONAL DRIVE ROANOKE RAPIDS 27870	FP 042 AC 919 537-9176
BLOUNT, CHARLES WHITNER, JR. 6708 ALBEMARLE ROAD CHARLOTTE 28212	FP 060 AC 704 536-4903	BOLDING, WILLIAM ROBERT 2032 THORPSHIRE DR. RALEIGH 27609	AN 092 A AC 919 755-8000	BOONE, STEPHEN CHRISTOPHER 3009 NEW BERN AVE. PO BOX 14027 RALEIGH 27620	NS /EM 092 A AC 919 832-4448
BLOUNT, FREDERICK ALEXANDER 2390 COLISEUM DRIVE WINSTON-SALEM 27106	PD 034 A * L/RT 919 724-3072	BOLESTA, MICHAEL JOSEPH 2074 ABINGTON RD. CASE WESTERN RESERVE UNIV. CLEVELAND, OH 44106	ORS 032 A R 216 844-3046	BORCHERT, LYNN GORDON 2245 STANTONSBURG RD. #A GREENVILLE 27834	GP 036 AC 704 865-2386
BLOUNT, JOHN MYERS, III 130 WOODSON ST. SALISBURY 28144	FP /OM 080 A P * AC 704 637-3207	BOLIN, LEWIS BRYANT 226 WILMOT DR. GASTONIA 28054	GP 036 AC 704 865-2386	BORDEN, RICHARD WINSTEAD PO BOX 1078 3108 ARENDELL ST. MOREHEAD CITY 28557	FP 036 AC 919 726-3127
BLOW, OSBERT 4800 UNIVERSITY DR. EXT. #20A DURHAM 27707	032 A R 919 490-1943	BOLIN, LEWIS BRYANT, JR. 226 WILMOT DRIVE GASTONIA 28054	FP 036 AC 704 865-2386	BORDER, CLINTON LARRY, JR. P. O. BOX 538 WAYNESVILLE 28786	GS 044 A RT 704 452-4500
BLOWE, RALPH BOYD, SR. 10 WEST 6TH STREET WELDON 27890	FP 042 A L 919 536-3820	BOLLINGER, RALPH RANDAL BOX 2910, DUKE HOSPITAL DURHAM 27710	GS /IG 032 A * AC 919 684-5209	BOS, JOHN FREMONT P. O. BOX 220349 CHARLOTTE 28222	PTH /CLP 060 A AC 704 846-2552
BLUE, DANIEL WILLIAM PO BOX 854 LAURINBURG 28352	AN 083 A AC 919 462-2011	BOLON, CHARLES GORDON 2711 RANDOLPH RD., STE. 512 CHARLOTTE 28207	GYN 060 AC 704 333-4104	BOSKEN, DONALD WILLIAM 400 RANDOLPH ROAD THOMASVILLE 27360	FP 029 AC 919 475-7163
BLUE, JOHN FREDERICK P. O. BOX 820 SANFORD 27330	FP 053 A * AC 919 775-7522	BOLSTAD, KARL EDWARD 14 MEDICAL PARK DR. LEXINGTON 27292	ORS 029 A AC 704 249-2978	BOSSE, HELEN HALL P. O. BOX 10502 RALEIGH 27605	AN 092 A AC 919 733-7611
BLUE, JOHN FREDERICK, JR. 4092 PROFESSIONAL DR. HOPE MILLS 28348	FP 026 AC 919 424-0123	BOLZ, EVERETT ARTHUR 1350 KINGS DRIVE CHARLOTTE 28207	OTO 060 A P * AC 704 372-8750	BOSSEN, EDWARD HECHT BOX 3712, DUMC DURHAM 27710	PTH 032 A P AC 919 684-3300
BLUM, JEFFREY CLARK 130 LAKE CONCORD ROAD, NE PO BOX 2870 CONCORD 28025	DR /IM 013 A P AC 704 788-4130	BOMBATEPE, VAMIK 204 N. HERMAN STREET GOLDSBORO 27530	FP 096 AC 919 735-7580	BOST, WILLIAM STUART, JR. 8 DOCTOR'S PARK PO BOX 5007 GREENVILLE 27834	OTO 074 A P AC 919 752-5227
BLUMENTHAL, BARRY HOWARD 3125 GLENWOOD PROF. VILLAGE RALEIGH 27608	P 092 AC 919 782-0166	BOMBENDER, JAMES JOHN ROUTE #3, BOX 774-B CONNELLY SPRINGS 28612	PUD /IM 023 AC 704 397-6147	BOSTIC, WILLIAM CHIVOUS, III SALEM ORTHOPAEDIC ASSOC. PA PO BOX 25007 WINSTON-SALEM 27114	ORS 034 AC 919 768-1270
BLYTHE, WILLIAM BREVARD UNC, DEPT. OF MEDICINE CHAPEL HILL 27514	IM /NEP 032 AC 919 966-2565	BOMBERG, ROBERT BRYAN 2609 N. DUKE STREET DURHAM 27704	IM 032 AC 919 471-8446	BOSWELL, JOHN IVERSON, JR. UNC, DEPT. OF PSYCHIATRY WING C, RM. 237, CB #7160 CHAPEL HILL 27599	CHP /P 032 AC 919 966-3379
BOARD, ROBERT JEFFREY 3320 EXECUTIVE DR. STE. 111 RALEIGH 27609	OPH 092 AC 919 876-2427	BOND, EDWARD GRIFFITH CHOWAN MEDICAL CENTER EDENTON 27932	IM /CD 021 A AC 919 482-2116	BOTERO, ERNESTO MIGUEL 200 E. NORTHWOOD ST. STE. 504 GREENSBORO 27401	NS 041 AC 919 272-4578
BOAT, THOMAS FREDERICK 2025 S. LAKESHORE DRIVE CHAPEL HILL 27514	PD /PUD 032 AC 919 966-4427	BOND, JOHN LAWRENCE, JR. P. O. BOX 1128 N. WILKESBORO 28659	GS /ORS 097 A AC 919 838-4789	BOTROS, SHERIF BOTROS 1625 DOCTOR'S CIRCLE WILMINGTON 28401	OTO 065 A AC 919 762-0234
BOATRIGHT, JAMES RICHARD 1822 BRUNSWICK AVENUE CHARLOTTE 28207	HS /ORS 060 A AC 704 373-0544	BOND, JOHN PENNINGTON 1806 FAIRFIELD DRIVE GASTONIA 28054	GS 036 A L/RT 704 865-0154	BOTWRIGHT, GENE ROBERT, JR. R-10 DOCTOR'S PARK APTS. GREENVILLE 27834	074 A S 919 830-1710
BOBBITT, JAMES DANIEL 33 LAKE CONCORD ROAD, N.E. CONCORD 28025	OPH 013 AC 704 786-2015	BOND, PAMELA EATON 869 LOUISE CIRCLE DURHAM 27705	032 A S 919 383-8354	BOUNOUS, CHRISTINE G. BOX 68 POLLOCKSVILLE 28573	IM 025 A AC 919 633-1010
BOBITT, JOHN R. 2131 S. 17TH ST. WILMINGTON 28401	OBG 065 AC 919 343-0161	BOND, THOMAS MADISON 49 MCDOWELL ST. ASHEVILLE 28801	GE /IM 011 A P AC 704 258-3870	BOUNOUS, EDWIN P., JR. BOX 68 POLLOCKSVILLE 28573	IM 025 A AC 919 224-4591
BOBZIEN, WILLIAM FREDRICK, III 100 NASH MEDICAL ARTS MALL ROCKY MOUNT 27801	HEM /IM 064 AC 919 443-9084	BOND, VERNARD FRANKLIN, JR. 318 FORSYTH MEDICAL PK. 1900 S. HAWTHORNE RD. WINSTON-SALEM 27103	IM /CD 034 A AC 919 768-1208	BOUNOUS, JUDITH FRANCES 2082 RIVERSHORE ROAD ELIZABETH CITY 27909	EM /PD 070 AC 919 335-1003
BODE, DONALD DENBY, JR. 2573 STANTONSBURG RD. GREENVILLE 27834	OPH 074 A P AC 919 752-0313	BONDURANT, STUART CB 7000, 125 MACNIDER BLDG. UNC SCHOOL OF MEDICINE CHAPEL HILL 27514	IM 032 A AC 919 966-4161	BOURGEOIS, JOHN ELLIOTT 1600 E. THIRD ST. CHARLOTTE 28204	OPH 060 A AC 704 372-3300
BODNER, WILLIAM RAYMOND, JR. 606 WALTER REED DR. GREENSBORO 27403	P 041 AC 919 299-0107	BONGARDT, HENRY F., JR. 7234 LANCER DRIVE CHARLOTTE 28226	IM /A 060 A AC 704 364-6812		

BOUZIGARD, RAY JOSEPH KINSTON CLINIC, NORTH DOCTORS DRIVE KINSTON 28501	R/TR 054 A AC 919 527-7077	BOYD, ELLEN 131 MCDOWELL STREET ASHEVILLE 28801	PD 011 AC 704 254-4337	BRADLEY, GEORGE LEE, JR. 800 E. FIRST STREET CHERRYVILLE 28021	GP/AM 036 P AC 704 435-4111
BOWEN, BENJAMIN CURETON RT. #9, BOX 183-H STATESVILLE 28677	FP 049 AC 704 878-6592	BOYD, JAMES FRANCIS 125 BALDWIN AVE. CHARLOTTE 28204	IM/ON 060 A AC 704 374-1696	BRADLEY, HAROLD JOHN, JR. 721 GREEN VALLEY RD. GREENSBORO 27408	U 041 A P AC 919 378-9176
BOWEN, EDWYN TAYLOR, JR 3001 MAPLEWOOD AVENUE WINSTON-SALEM 27103	PD 034 P AC 919 765-9170	BOYD, JOSEPH ALSTON, JR. 1909 PARKER LANE HENDERSON 27536	R 091 A L/RT	BRADLEY, HAROLD JOHN, SR. 721 GREEN VALLEY RD. GREENSBORO 27408	U 041 A L 919 274-7624
BOWEN, J. HARTLEY, III 208 CAMELOT DRIVE MORGANTON 28655	PTH 012 AC 704 438-2254	BOYD, RICHARD ARMISTEAD STATESVILLE MEDICAL GROUP PO BOX 1460 STATESVILLE 28677	OBG 049 A AC 704 878-2011	BRADSHAW, PETER H. 420 N. CENTER ST. HICKORY 28601	GS 018 A AC 704 327-9178
BOWEN, JOHN HENRY 912 CONNELLY SPRINGS ROAD P. O. BOX 1014 LENOIR 28645	FP/GP 014 AC 704 728-8224	BOYD, WILLIAM MONROE, V #1 SPRING GARDEN APTS. CHAPEL HILL 27514	032 A S 919 968-0106	BRADSHAW, PRESTON HATCHER, JR. 1200 KERSHAW DR. RALEIGH 27609	U 092 A AC 919 783-6687
BOWEN, MICHAEL LYNN P. O. BOX 310 STANTONSBURG 27883	FP 098 A AC 919 238-2101	BOYER, GEORGE NORMAN 913 CAROLINA DRIVE TRYON 28782	P 075 L 704 859-5439	BRADSHAW, ARTHUR BROWN BERTIE COUNTY MEM. HOSPITAL PO BOX 158 WINDSOR 27983	GS 008 A L 919 794-4539
BOWEN, SAMUEL T. PO BOX 490 DAVIDSON 28036	IM 049 A AC 704 664-5151	BOYER, JAY ALLEN 250 CHARLOIS BOULEVARD WINSTON-SALEM 27103	DR 034 A AC 919 768-4730	BRADSHAW, JAMES DONALD P. O. BOX 168 ROXBORO 27573	GP 073 L/RT 919 599-1611
BOWER, EDWARD BIRCH 900 SUNSET DR. MONROE 28110	GS 090 A AC 704 289-2561	BOYETTE, CHARLES OTIS P. O. BOX 310 BELHAVEN 27810	FP 007 A P * AC 919 943-2651	BRADY, JOSEPH LAWRENCE, JR. 426 CLARKSON GREEN CHARLOTTE 28202	PD/NPM 060 A AC 704 342-3430
BOWER, STEPHEN LEE 3155 MAPLEWOOD AVENUE WINSTON-SALEM 27103	DR 034 A AC 919 760-5874	BOYETTE, DEANNA MARIE 424 BROOKSIDE DR. CHAPEL HILL 27514	074 A S	BRADY, WALTER MORRIS #5 MEDICAL PARK MOREHEAD CITY 28557	FP 016 A AC 919 726-8414
BOWERS, SCOTT P. #5 SILVER LAKE VILLAS WILSON 27893	OPH 098 A * AC 919 291-1300	BOYETTE, DOUGLAS DEWITT 200 NASH MEDICAL ARTS MALL ROCKY MOUNT 27804	OBG 064 A AC 919 443-5941	BRADY, WILLIAM ALEX 201 EXECUTIVE PARK BLVD. WINSTON-SALEM 27103	N 034 AC 919 768-6347
BOWES, WATSON ALLEN, III 211 HUNTINGTON DR. CHAPEL HILL 27514	032 A S 919 929-3323	BOYETTE, DOUGLAS RAY 808 SCHENCK STREET SHELBY 28150	CD/IM 023 A P AC 704 482-1482	BRAME, ROBERT GRIFFIN DEPT. OF OB-GYN ECU SCHOOL OF MEDICINE GREENVILLE 27834	OBG 074 A P AC 919 551-4662
BOWES, WATSON ALLEN, JR. UNC, DEPT. OF OBG 214 MACNIDER BLDG. 202-H CHAPEL HILL 27514	OBG 032 AC 919 966-1601	BOYETTE, EDWARD LEE CHINQUAPIN 28521	FP/CD 031 A AC 919 285-3481	BRAMLEY, MICHAEL LAIRD 1800 W. FIFTH STREET GREENVILLE 27834	PD 074 AC 919 752-7141
BOWLES, FRANCIS NORMAN 1019 FISH CROW ROAD SANIBEL, FL 33957	OBG 032 A L/RT 813 472-4436	BOYETTE, GRAY THOMAS 2933 MAPLEWOOD AVENUE WINSTON-SALEM 27103	IM/GE 034 A P AC 919 765-1640	BRANAMAN, GUY HEWITT, JR. 915 WILLIAMSON DR. RALEIGH 27608	GYN 092 A L/RT 919 833-4080
BOWLES, RICHARD MORGAN 101 GROVER STREET SHELBY 28150	PD 023 A AC 704 482-1435	BOYLES, LARRY WAYNE 420 N. CENTER ST. HICKORY 28601	N/IM 018 A P AC 704 327-9869	BRANCH, CHARLES LEON, JR. 300 S. HAWTHORNE RD. BOWMAN GRAY, SECT. NEUROSURGERY WINSTON-SALEM 27103	NS 034 A * AC 919 748-4083
BOWLING, RICHARD FRANKLIN P. O. BOX 638 SHELBY 28150	GS 023 A AC 704 487-8591	BOYLES, WAYNE FRANCIS ROUTE #3, BOX 155 HICKORY 28601	FP 018 A AC 704 327-4745	BRANCH, JAMES DAVID 224 TOWN RUN LANE WINSTON-SALEM 27101	OPH 034 A AC 919 723-0748
BOWMAN, JAMES FREDERICK 117 MEDICAL DRIVE GREENVILLE 27834	ORS/SM 074 A P AC 919 758-1777	BOYLSTON, JAMES ALAN PRESBYTERIAN HOSP.-PTH P. O. BOX 33549 CHARLOTTE 28233	PTH 060 A AC 704 371-4814	BRANDON, DANIEL 3028 MT. VERNON DRIVE GASTONIA 28054	EM 036 A AC 919 827-0253
BOWMAN, MARJORIE ANN 300 S. HAWTHORNE RD. DEPT. OF FAMILY MEDICINE WINSTON-SALEM 27103	FP/GPM 034 A AC	BOZYMSKI, EUGENE MICHAEL UNC, DEPT. OF MEDICINE 324 CLINICAL SCI. BLDG. 229-H CHAPEL HILL 27514	GE/IM 032 * AC 919 966-2511	BRANDON, HENRY ALLEN, JR. RT. 4, BOX 130-B BOONE 28607	IM/EM 095 P AC 704 264-3308
BOWMAN, WILLIAM EDMUND, JR. PO BOX 10037 1317 N. ELM ST. GREENSBORO 27401	GS/VS 041 A P * AC 919 274-8444	BRAASCH, ERNEST R. 4114 DEEPWOOD CIRCLE DURHAM 27707	P/PYA 032 AC 919 493-2217	BRANDSPIGEL, KARL 104 W. COLONIAL AVE. ELIZABETH CITY 27909	NEP/IM 070 A P AC 919 335-1083
BOWMAN, ZEBULON LYNN 914 S. FIFTH ST. MEBANE 27320	OPH 001 A AC 919 563-1900	BRAASCH, LESLEY KRIEGMAN 4114 DEEPWOOD CIRCLE DURHAM 27707	PYA/P 032 AC 919 493-2217	BRANDT-SASIN, ILONA 714 KEIGHTLY CT. WINSTON-SALEM 27104	IM/OM 034 A AC 919 784-2476
BOWMAN, DAVID LOWELL DEPT. OF MEDICINE BOWMAN GRAY SCH. OF MEDICINE WINSTON-SALEM 27103	PUD 034 AC 919 748-4649	BRABHAM, FELICIA B. 518 SIXTH AVE. WEST HENDERSONVILLE 28739	IM 045 A AC 704 697-7805	BRANDT-HENRY, EZELL, JR. 1409 PLAZA WEST RD., STE. E WINSTON-SALEM 27103	P/HYP 034 A P AC 919 768-9393
BOWYER, ALLEN FRANK 2000 VENTURE TOWER DR., STE. 300 GREENVILLE 27834	CD 074 A AC 919 551-4651	BRABSON, JOHN ANDERSON 1900 RANDOLPH RD. STE. 1004 CHARLOTTE 28207	GS/GYN 060 A L 704 333-0611	BRANNAN, WILLIAM CHESTER 143 ASHELAND AVENUE ASHEVILLE 28801	OBG 011 A AC 704 258-9191
BOX, PATRICK 2310 RANDOLPH ROAD CHARLOTTE 28207	RHU/IM 060 A P * AC	BRACKBILL, THOMAS ANDREW 1011 PROFESSIONAL VILLAGE GREENSBORO 27401	CD/CD 041 A AC 919 272-6133	BRANTLEY, BERT ALTON, JR. 307 COLONY WOODS DRIVE CHAPEL HILL 27514	ON 032 AC 919 684-3695
BOYCE, OREN DOUGLAS 406 S. CHESTER STREET GASTONIA 28052	IM/HYP 036 A * L 704 865-3181	BRADFORD, ARTHUR LOUIS 123 E. BROAD STREET ST. PAULS 28384	FP 078 AC 919 865-5170	BRANTLEY, INGRID JEAN 3510 UNIVERSITY DRIVE DURHAM 27707	CHP/P 032 AC 919 489-1884
BOYCE, WILLIAM HENRY BOWMAN GRAY SCH. OF MED. WINSTON-SALEM 27103	U 034 A AC 919 748-4131	BRADFORD, EDWARD AYERS 201 E. MATTHEWS STREET MATTHEWS 28105	IM 060 A AC 704 365-0760	BRANTLEY, JEFFREY GARLAND 414 E. MAIN ST. DURHAM 27701	P 032 AC 919 682-9296
BOYD, BASIL MANLY, JR. 1822 BRUNSWICK AVENUE CHARLOTTE 28207	ORS 060 A AC 704 373-0544	BRADFORD, JAMES HEDRICK 738-A BRYANT ST. STATESVILLE 28677	CD/IM 049 AC 704 873-1189	BRANTLEY, JULIAN CHISOLM, JR. 1507 LAFAYETTE AVE. ROCKY MOUNT 27801	GYN 064 A L/RT 919 446-8434
BOYD, DEBORAH DAETWYLER 1704 S. TARBORO ST. WILSON 27893	GS/VS 098 A AC 919 291-7001	BRADFORD, WILLIAM STRONG PO BOX 150 REIDSVILLE 27320	GS 079 AC 919 349-4024	BRANTLEY, JULIAN CHISOLM, III 701 SHOREWOOD DRIVE WASHINGTON 27889	OBG 007 A AC 919 946-6544
		BRADFORD, WILLIAMSON Z., JR. 150 PROVIDENCE ROAD CHARLOTTE 28207	OBG 060 A AC 704 377-0461	BRANTLEY, JULIAN THWEATT 6-C FOUNTAINVIEW CIR. GREENSBORO 27405	OBG 041 AC 919 272-9840
		BRADLEY, BETTY BRUTON P. O. BOX 998 BLADENBORO 28320	FP 009 A AC 919 863-3138	BRASHEAR, HARRY ROBERT, JR. N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514	ORS 032 L/RT 919 966-2030

BRASHEAR, RALPH GUY	FP 092	BRIGGS, JOHN GLENN, JR.	PS 026	BROOKS, MARTIN LUTHER	GP 078
P. O. BOX 827	A AC	1782 METRO MEDICAL DR.	* AC	711 HIGHWAY E.	A AC
WENDELL 27591	919 365-7366	FAYETTEVILLE 28304	919 323-1203	P. O. BOX 37	
BRASWELL, WILLIAM KELLEY	GS /TS 044	BRIGHT, DON CLARK	AN 074	PEMBROKE 28372	919 521-4221
MIDWAY MEDICAL CENTER	A AC	1705 W. SIXTH STREET	A AC	BROOKS, RALPH ELBERT, JR.	U 040
P. O. BOX 1409		GREENVILLE 27834	919 752-2140	624 QUAKER LANE, SUITE D-100	A AC
CANTON 28716	704 627-2211	BRIGHT, ROBERT PAUL	032	HIGH POINT 27262	919 886-5151
BRATTON, TERESA SUE	PDA /A 041	2000 CONNECTICUT AVE., NW #716	S	BROOKS, THOMAS WILLIAM, III	R /NM 018
1021 E. WENDOVER, STE. 302	AC	WASHINGTON, DC 20008		521 THIRD AVENUE, N.W.	A AC
GREENSBORO 27405	919 275-1318	BRIGMAN, PAUL HAMER	EM 040	HICKORY 28601	704 322-2644
BRAUN, SIMON DAVID	DR 011	2807 EARLHAM PLACE	AC	BROOKS, WILLIAM LESTER, JR.	IM /RHU 060
4 HOLMWOOD RD.	AC	HIGH POINT 27263	919 434-4007	1851 E. THIRD STREET	A AC
PO BOX 2959		BRINKHOUS, KENNETH MERLE	PTH /HEM 032	CHARLOTTE 28204	704 333-4175
ASHEVILLE 28801	704 254-4617	UNC, DEPT. OF PATH., 228-H	A L	BROSKIE, NANCY ELAINE	032
BRAWLEY, BOBBY WATSON	NS 060	CHAPEL HILL 27514	919 966-1061	K-12 THE VILLAGES APTS.	A S
1010 EDGEHILL RD, NORTH	A P AC	BRINKMAN, DENNIS MICHAEL	AN 098	CARRBORO 27510	919 966-0615
CHARLOTTE 28207	704 376-1605	1203 GREENBRIAR COURT	A AC	BROSNAN, DENNIS WILLIAM, III	OPH 011
BRAXTON, DORIS BLACKWELL	PD /ADL 001	WILSON 27893	919 291-1700	2 DOCTOR'S PARK	A RT
711 HERMITAGE ROAD	A P AC	BRINKMAN, LINDA EVES	* 074	ASHEVILLE 28801	704 254-9693
BURLINGTON 27215	919 229-5341	10 PALMETTO PLACE	A AC	BROWN, ALAN REID	DR 044
BRAZIL, WILBURN OSCAR, JR.	U 011	GREENVILLE 27858	919 355-6121	3721 THUNDERBIRD HILL CIR.	A L/RT
100 VICTORIA ROAD	A * AC	BRINTON, LEWIS FLOYD	GS /GYN 049	SEBRING, FL 33870	
ASHEVILLE 28801	704 254-8883	603 E. CENTER AVE.	AC	BROWN, ALBERT BELMONT	GYN 065
BREAM, CHARLES ANTHONY	DR 032	MOORESVILLE 28115	704 664-1414	1615 DOCTOR'S CIR.	A AC
N. C. MEMORIAL HOSPITAL	L	BRITT, BENJAMIN EARL	P 092	WILMINGTON 28401	919 343-1122
CHAPEL HILL 27514	919 966-1461	1209 GLEN EDEN DR.	A AC	BROWN, ANN CARLSON	P /CHP 060
BRECHTELSBAUER, P. BRADLEY	032	RALEIGH 27612	919 876-0287	6934 BURLEWOOD RD.	AC
#6 HOLLAND DR.	A * S	BRITT, SAMUEL EMERSON, II	GS 078	DECEASED-6-88	
CHAPEL HILL 27514	919 968-1961	295 W. 27TH ST.	A AC	CHARLOTTE 28211	704 333-7722
BREEDEN, THOMAS E.	GYN 036	LUMBERTON 28358	919 738-8556	BROWN, ANNE BARBARA	034
1391-C GARRISON BLVD.	AC	BRITT, TILMAN CARLISLE, JR.	CD /IM 086	2055-A ACADEMY ST.	A * S
GASTONIA 28054	704 867-3551	216 GRACE STREET	A RT	WINSTON-SALEM 27103	919 722-2275
BREMER, CHARLES CHRISTOPHER	FP 074	MOUNT AIRY 27030	919 786-5745	BROWN, CHARLES WILLIAM	GYN /OBS 060
317 PINWOOD ROAD	A AC	BRITTIAN, LOWELL ELLIS	GP 060	2127 QUEENS ROAD, EAST	A L/RT
GREENVILLE 27858	919 756-7974	1900 CLOISTER DRIVE	L/RT	CHARLOTTE 28207	704 333-9852
BRENIZER, ADDISON GORGAS, JR.	GS /TS 060	CHARLOTTE 28211	704 366-1809	BROWN, DANIEL ELMER	PD 092
1333 QUEENS RD. #101	A L/RT	BRITTON, BLOYCE HILL, JR.	OTO /OT 034	3001 ESSEX CIRCLE	A AC
CHARLOTTE 28207	704 376-4942	BOWMAN GRAY, DEPT. OF OTO	A AC	RALEIGH 27608	919 782-0021
BRENNAN, MICHAEL W.	OPH 001	WINSTON-SALEM 27103	919 745-4161	BROWN, DAVID ALLEN	AI 011
1214 VAUGHN RD.	A * AC	BROADBENT, BRYAN, J.H.	034	390 S. FRENCH BROAD AVE.	A AC
BURLINGTON 27215	919 228-0254	300 HAWTHORNE ST. BOX 330	A S	ASHEVILLE 28801	704 254-5366
BRENNER, WILLIAM EDWARD	OBG /NPM 032	WINSTON-SALEM 27103	919 721-9971	BROWN, DAVID HOUSTON	IM /GER 043
101 CONNER DR. STE. 402	AC	BROADWELL, FREEMAN EDWARD, III	PM 044	PO BOX 399	A P AC
CHAPEL HILL 27514	919 942-0011	306 SPLIT RAIL CIRCLE #201	A R	BUIES CREEK 27506	919 893-5141
BRENTON, BRADLEY CLARK	DR 096	NEWPORT NEWS, VA 23602	804 875-0509	BROWN, DAVID WARREN	IM 032
2700 MEDICAL OFFICE PLACE	AC	BROCK, JULIAN STANLEY	R 064	891 W. WILLOW DRIVE	AC
GOLDSBORO 27530	919 734-1866	200 ENGLEWOOD DRIVE	A L/RT	CHAPEL HILL 27514	919 942-5123
BRESLIN, MARIANNE S.	P /PYM 032	ROCKY MOUNT 27804	919 443-1353	BROWN, DONALD CLAUDE	FP /GER 092
500 EASTOWNE DR., STE. 115	A AC	BRODER, MICHAEL SYLVAN	DR 029	305-B S. ACADEMY ST.	AC
CHAPEL HILL 27514	919 493-2657	PO BOX 789	A AC	CARY 27511	919 467-3730
BRESTEL, ERIC PAUL	A /IM 074	THOMASVILLE 27360	919 472-2000	BROWN, ERNEST HYDE, JR.	OBG 078
ECU DEPT. OF MEDICINE	AC	BRODEUR, DAVID	032	4300 FAYETTEVILLE ROAD	A AC
GREENVILLE 27858	919 551-2562	4800 UNIVERSITY DR. #24B	A S	LUMBERTON 28358	919 738-9601
BRETT, CHARLES BURDEN	PD 041	DURHAM 27707	919 493-6718	BROWN, FRANK MAC	ORS 045
1307 W. WENDOVER AVENUE	AC	BRODIE, BRUCE ROGERS	CD /IM 041	1027 FLEMING STREET	P AC
GREENSBORO 27408	919 272-5189	721 GREEN VALLEY RD.	A P AC	HENDERSONVILLE 28739	704 692-5781
BREWER, DANIEL EUGENE	FP 023	GREENSBORO 27408	919 378-0774	BROWN, FRANK REID	IM 041
1198 WYKE RD.	A AC	BRODIE, HARLOW KEITH HAMMOND	P 032	1103 COUNTRY CLUB DRIVE	A L/RT
SHELBY 28150	919 487-1148	DUKE UNIV. ALLEN BLDG. RM 207	A AC	GREENSBORO 27408	919 272-5048
BREWER, JAMES CHESTER, JR.	FP 041	DURHAM 27706	919 684-3220	BROWN, GEORGE WALLACE	FP 044
P. O. BOX 8248	A AC	BRODISH, PAUL HENRY	034	102 BROWN AVENUE	A * AC
GREENSBORO 27419	919 852-7618	315 LOCKLAND AVE.	A S	HAZELWOOD 28738	704 456-6021
BREWINGTON, THOMAS ELMER, JR.	OPH 041	WINSTON-SALEM 27103	919 766-8447	BROWN, HOWARD RICHARD	ORS 032
P. O. BOX 20346	AC	BROMBERG, PHILIP ALLAN	IM /PUD 032	4006 WESTFIELD DR.	A R
GREENSBORO 27420	919 272-5628	724 CLI. SCI. BLDG. 229-H	AC	DURHAM 27705	919 383-1617
BREWSTER, VANN ALLEN	OM 060	UNC, DIV. PULMONARY DISEASE		BROWN, JAMES WALTER, JR.	OTO /HNS 013
DUKE POWER COMPANY	A AC	CHAPEL HILL 27514	919 966-2531	633 GRANDVIEW DR., NE	A L/RT
P. O. BOX 33189		BROOKS, CHARLES MICHAEL	OBG 054	CONCORD 28025	704 782-8316
CHARLOTTE 28242	704 373-6192	KINSTON CLINIC NORTH	A AC	BROWN, JOHN MARK	IM /EM 032
BREZICKI, PAUL ALEXANDER	FP 012	DOCTORS DR., STE. E		BOX 93	
PO BOX 599	AC	KINSTON 28501	919 522-3373	POLKS LANDING STATION	A P AC
RUTHERFORD COLLEGE 28671	704 874-2811	BROOKS, CLAUDETTE E.	034	CHAPEL HILL 27516	919 929-4731
BREZINA, DAWN S.	EM 098	1900 QUEEN ST., APT. C-4	A S	BROWN, KERMIT ENGLISH	OBG 011
1911 CANAL DR.	AC	WINSTON-SALEM 27103	919 725-3240	398 CHUNNS COVE ROAD	A L/RT
WILSON 27893	919 237-8604	BROOKS, CLYDE LONG, JR.	IM 007	ASHEVILLE 28805	704 252-5117
BREZINA, EDWARD SHARP, JR.	OBG 098	615 E. 12TH ST.	A R	BROWN, MICHAEL ASHLEY	FP 074
1911 CANAL DRIVE	A AC	WASHINGTON 27889	919 946-2101	114 FLETCHER PLACE	A S
WILSON 27893		BROOKS, JEAN BAILEY	GYN 041	GREENVILLE 27834	919 758-3315
BRICE, ROBERT SAMUEL, JR.	GE /IM 034	1100 N. ELM STREET	A L/RT	BROWN, PAUL EUGENE	ORS 018
1901 HAWTHORNE RD., STE. 310	A AC	GREENSBORO 27401	919 273-8658	250 18TH ST. CIR. SE	A AC
WINSTON-SALEM 27103	919 760-4340	BROOKS, JOHN IRVING, JR.	IM 033	HICKORY 28602	704 322-5172
BRIDGES, THOMAS HOWARD	EM 023	TARBORO CLINIC	A AC	BROWN, RAEFORD E., JR.	AN 034
P. O. BOX 1706	AC	101 CLINIC DR.		300 S. HAWTHORNE RD.	AC
SHELBY 28150	704 487-3134	TARBORO 27886	919 823-2105	WINSTON-SALEM 27103	919 748-4498
BRIGGS, DOUGLAS MERRILL	FP 023	BROOKS, LESLIE F.	FP 025	BROWN, ROBERT CALVIN	CLP /PTH 041
1198 WYKE ROAD	A AC	810 KENNEDY AVE.	A AC	223 FLEMINGTON RD.	A AC
SHELBY 28150	704 487-1148	NEW BERN 28560	919 633-1678	CHAPEL HILL 27514	919 378-2809

BROWN, RONALD LAUCHLIN 2711 RANDOLPH RD. STE. 305 CHARLOTTE 28207	OBG 060 AC 704 372-8020	BUCHANAN, HARRY GLENN 203 BROAD STREET SPRUCE PINE 28777	FP 061 A AC 704 765-7361	BUNN, DAVID GLENN EAST MAIN STREET WHITEVILLE 28472	GP 024 AC 919 642-2016
BROWN, SUSAN EVANS 5501 FORTUNE'S RIDGE, STE. A DURHAM 27713	FP 032 AC 919 493-8877	BUCHANAN, ROBERT A., JR. 2609 N. DUKE ST., STE 403 DURHAM 27704	CD /IM 032 A AC 919 471-8441	BUNN, DAVID GLENN, JR. 2215 CANTERWOOD DR. WILMINGTON 28401	OBG 065 AC 919 763-1031
BROWN, TERRY MICHAEL 134 LOBLOLLY LANE CHAPEL HILL 27516	P 032 A R 919 967-2590	BUCHANAN, SCOTT A. 2A CARSON CIRCLE DURHAM 27705	032 A S 919 383-8367	BURAPAVONG, THAVIJ DAVID 416 GATEWOOD AVENUE HIGH POINT 27260	PS /GS 040 * AC 919 882-2531
BROWN, THOMAS LAWRENCE 145 AFTONSHIRE COURT WINSTON-SALEM 27104	OBG 034 AC 919 765-2802	BUCHIN, DAVID LEE 14212 CROSS CREEK ROAD RALEIGH 27614	EM /P 092 AC 919 876-8333	BURBA, ALONZO RICHARD 1700 S. TARBORO ST. WILSON 27893	FP 098 A AC 919 291-1300
BROWN, VASCUE O'NEIL 3532 MOUNTAINBROOK ROAD CHARLOTTE 28210	P 060 AC 704 553-1179	BUCKALEW, VARDAMAN M. JR. 300 S. HAWTHORNE ROAD WINSTON-SALEM 27103	NEP /IM 034 AC 919 748-2062	BURCH, LARRY THOMAS GLASSY MOUNTAIN DR. PO BOX 160	P 045 A AC 704 692-4900
BROWN, WALTER JOHN 79 TRUNDLE RDG. FEARRINGTON PITTSBORO 27312	PH /FP 019 AS 919 933-9331	BUCKLEY, EDWARD GEORGE BOX 3802, DUKE EYE CENTER DURHAM 27705	OPH /PD 032 A AC 919 684-6084	BURCH, WILLIAM HOBART BOX 285, HARRIS RD AND 74 LAKE LURE 28746	FP 045 A AC 704 625-9121
BROWN, WILLIAM EDWARD 2245 STANTONSBURG RD., STE. H GREENVILLE 27834	OBG 074 A AC 919 757-3131	BUCKWALTER, JOHN D. RT. #7, BOX 60 DURHAM 27707	AN 032 A P AC 919 470-4000	BURCHEL, HAROLD CURTIS 201 W. HOLLY HILL ROAD THOMASVILLE 27360	FP 029 A AC 919 475-2915
BROWN, WILLIAM LEE PO DRAWER 158 ROANOKE RAPIDS 27870	IM 042 A AC 919 537-0135	BUGG, SAMUEL JOSEPH P. O. BOX 2065 NEW BERN 28560	DR 025 A AC 919 633-5057	BURCHETTE, BRUCE WILSON G-6 DOCTOR'S PARK APTS. GREENVILLE 27834	074 A S 919 758-6981
BROWN, WILLIAM RAY, JR. 3080 TRENWEST DR. WINSTON-SALEM 27104	NS 034 A AC 919 765-3750	BUFFONG, ERIC ARNOLD 1703 COUNTRY CLUB RD., STE. 203 JACKSONVILLE 28540	OBG /END 067 A AC 919 346-2182	BURCHFIELD, WILLIAM JOHN 500 LAKE CONCORD RD., NE CONCORD 28025	OPH 013 A AC 704 782-1127
BROWNE, GEOFFREY H. 1600 LONGWOOD DR. GREENVILLE 27858	074 A S 919 355-7607	BUGG, CHARLES PAULETT 5807 SENTINEL DR. RALEIGH 27609	PD 092 AC 919 733-7611	BURDETTE, FRED MCPHERSON, JR. 1221 D COLUMBUS CIRCLE WILMINGTON 28403	GP 065 A L/R 919 457-6865
BROWNING, DAVID JUDSON 1600 E. THIRD ST. CHARLOTTE 28204	OPH 060 AC 704 371-3138	BUGG, EVERETT IRVING, JR. RT. #2, BOX 143 PITTSBORO 27312	ORS 032 A L 919 286-1249	BURDICK, RICHARD LAWRENCE 1704 S. TARBORO ST. WILSON 27893	IM 098 A AC 919 291-7001
BROWNING, DOUGLAS GUY 2050 CRAIG ST., APT. 23 WINSTON-SALEM 27103	034 A S 919 723-6603	BUIE, RODERICK MARK, JR. 101-F N. PARK DR. GREENSBORO 27401	IM /CD 041 A L/R P 011 A AC 704 254-3201	BURGESS, GLENN NORMAN 2422-B REYNOLDA RD. WINSTON-SALEM 27106	P 034 AC 919 722-5022
BROWNLEE, ROBERT CALVIN 111 SILVER CEDAR COURT CHAPEL HILL 27514	PD 032 A AC 919 929-0461	BUIE, STEPHEN E. HIGHLAND HOSPITAL PO BOX 1101 ASHEVILLE 28802	084 A P AC 704 433-2058	BURGESS, WILLIAM PATRICK 928 BAXTER STREET CHARLOTTE 28204	NEP /IM 060 A AC 704 374-1321
BRUBECK, ELLEN TEMPLE 238 SMITH CHAPEL RD. MOUNT OLIVE 28365	FP /GER 096 A AC 919 658-4954	BUJARD, ROBERT S., JR. 331 N. FIRST ST. ALBEMARLE 28001	GE /IM 012 A AC 704 879-8335	BURHANS, ROLLIN SCOFIELD, JR. 1830 HILLDALE ROAD DURHAM 27705	GS 032 A AC 919 383-5531
BRUCE, JAMES CRAWFORD 1036 PROFESSIONAL VILLAGE GREENSBORO 27401	IM /CD 041 A P AC 919 378-9180	BUKHARI, MUSHTAQ AHMAD DOCTOR'S CLINIC RUTHERFORD COLLEGE VALDESE 28690	012 A AC 704 879-8335	BURKART, JOHN 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	IM /NEP 034 AC 919 748-3963
BRUCH, RICHARD FRANKLIN TRIANGLE ORTHOPAEDIC ASSOC. A 2609 N. DUKE STREET DURHAM 27704	ORS /GER 032 A P * AC 919 471-8431	BULLA, JEFFERSON DAVIS, II 780 WOODY DRIVE GRAHAM 27253	FP 001 AC 919 228-1354	BURKART, THOMAS ELMA 6 DOCTOR'S PARK GREENVILLE 27834	NEP 074 A * AC 919 752-8880
BRUGGERS, BARRY ALAN 101 S. W. CARY PKY. STE. 170 CARY 27511	OBG 092 AC 919 467-5941	BULLARD, DENNIS EUGENE 3009 NEW BERN AVE. PO BOX 14027 RALEIGH 27620	NS 092 A AC 919 832-4448	BURKE, ANNETTE BLACKMON 4117 VANN DRIVE LUMBERTON 28358	PD 078 AC 919 739-0243
BRUMBACK, GEORGE FRANKLIN 1105 MONTPELIER GREENSBORO 27401	OPH 041 A P AC 919 274-4626	BULLARD, HOKE VOGLER, JR. WILSON CLINIC WILSON 27893	IM 098 A AC 919 291-7001	BURKE, DAVID JOSEPH 528 LAKE CONCORD ROAD, N. E. A PO BOX 1606 CONCORD 28025	ORS 013 A P AC 704 788-3155
BRUSINO, F. GREGORY 5129 RIVER CHASE RIDGE WINSTON-SALEM 27104	AN 034 A AC PD 063 A P * AC 919 692-2444	BULLEN, DORIS C.M. PO BOX 56 DARTMOUTH CLINIC, PA SOUTHERN PINES 28387	063 AC 919 692-6471	BURKE, JAMES GILLUM 414 W. LEBANON STREET P. O. BOX 1544 MOUNT AIRY 27030	ORS 086 A P AC 919 789-9041
BRUTON, HENRY DAVID 195 W. ILLINOIS AVE. SOUTHERN PINES 28387	PD 063 A P * AC 919 692-2444	BULLINGTON, WALTER GRAHAM 4335 COLWICK RD. CHARLOTTE 28211	OPH /AM 060 A P * AC 704 364-7400	BURKE, JAMES OTIS, JR. 8 MEDICAL PARK DRIVE LEXINGTON 27292	PD 029 AC 704 249-4911
BRYAN, EDWIN LANCASTER 200 E. NORTHWOOD STREET GREENSBORO 27401	IM /CD 041 A P * AC 919 274-7609	BULLOCK, THURMAN MONROE, JR. PO BOX 465 CHADBOURN 28431	FP /A 024 A RT 919 654-5369	BURKE, JOSEPH ANTHONY 4117 VANN DRIVE LUMBERTON 28358	R 078 A AC 919 276-2121
BRYAN, JAMES ALEXANDER, II NC MEMORIAL HOSPITAL DEPT. OF MEDICINE CHAPEL HILL 27514	IM /HEM 032 AC 919 966-2268	BULLOCK, WILLIAM ROBERT 217 TRAVIS AVENUE CHARLOTTE 28204	IM /OM 060 A AC 704 372-3350	BURKE, PATRICK 5950 FAIRVIEW RD. STE. 100 3 FAIRVIEW PLAZA CHARLOTTE 28210	PD 060 AC 704 551-4200
BRYAN, JOHN HUGH DEPT. OF RADIATION ONCOLOGY BOX 41208, CAPE FEAR MED. CTR. FAYETTEVILLE 28304	TR /PHO 026 A AC 919 323-6690	BUMGARNER, JOHN HENRY P. O. BOX 1735 SALISBURY 28144	AN /PUD 080 A P AC 704 638-1000	BURKE, WILLIAM ALLEN 502 WINSTEAD RD. GREENVILLE 27834	D 074 A AC 919 551-2555
BRYAN, THOMAS RHUDY, JR. MEDICAL ARTS BUILDING P. O. BOX 1163 NORTH WILKESBORO 28659	PD /OBS 097 AC 919 838-2500	BUMGARNER, JOHN REED 221 MISTLETOE DR. GREENSBORO 27403	CD /CD 041 A L/R 919 373-1123	BURKHARDT, NATHAN LESLIE, JR. 129 MCDOWELL ST. ASHEVILLE 28801	ORS 011 A AC 704 258-8800
BRYAN, WILLIAM ALEXANDER, III ASTON PARK CENTER 53 S. FRENCH BROAD AVENUE ASHEVILLE 28801	PD 011 A AC 704 258-0969	BUNCE, PAUL LESLIE ROUTE #7, BOX 646 CHAPEL HILL 27514	U 032 L/R 919 933-8766	BURKHART, CECIL ROBERT 1006 OAKCREST DRIVE REIDSVILLE 27320	PTH /CLP 079 AC 919 349-8461
BRYAN, WILLIAM BLAIR 1700 ABBEY PLACE CHARLOTTE 28209	PD 060 A AC 704 523-7232	BUNDY, STEPHANIE A. 103 SHILOH, APT. #9 GREENVILLE 27834	074 A S 919 756-0664	BURKHART, CHARLES ANDREW 345 WESTVIEW DRIVE, S.W. WINSTON-SALEM 27104	GP 034 A AC 919 761-1541
BRYANT, WILLIAM FRANKLIN, JR. 1700 ABBEY PLACE CHARLOTTE 28209	PD 060 A * AC 704 523-7232	BUNDY, WILLIAM LUMSDEN DOCTORS BLDG. PO BOX 786 N. WILKESBORO 28659	IM /GP 097 A L/R 919 838-2442	BURKHART, VERNON ANDERSON 2700 W. MARKET ST. GREENSBORO 27403	OM /IM 041 AC 919 379-6961

BURLESON, WILLIAM ROWELL 101 WEST 27TH STREET LUMBERTON 28358	U 078 A AC 919 738-7166	BUSCH, JAMES R. 1700 S. TARBORO ST. WILSON 27893	PD 098 A AC 919 291-4370	BYRON, ROBERT SILL 675 BILTMORE AVENUE ASHEVILLE 28803	P 011 A AC 704 254-5369
BURNETT, JOHN WESLEY, JR. 810 KENNEDY AVE. NEW BERN 28560	FP 025 A AC 919 633-1678	BUSER, STEVEN DONALD 534 MARSHALL WAY DURHAM 27705	032 A S 919 383-5653	BYRUM, CLIFFORD CONWELL 2800 BLUE RIDGE RD., STE. 301 RALEIGH 27607	GYN 092 A L 919 782-0124
BURNETTE, HOWARD OLSEN 108 N. COBLE STREET RANDLEMAN 27317	GP 076 A RT 919 498-2500	BUSH, RONALD EARL PO BOX 537 ARDEN 28704	IM 045 AC 704 684-0011	BYRUM, GRAHAM VANCE P. O. BOX 540 SCOTLAND NECK 27874	FP 042 A AC 919 826-3143
BURNETTE, J. P. ENGLEWOOD DR., KENLY CLI. KENLY 27542	IM 098 A AC 919 284-5151	BUSHER, JANICE THERESE 133 ANTLER RD. GREENVILLE 27834	IM 074 A AC 919 551-4633	BYRUM, GRAHAM VANCE, JR. 6 DOCTORS PARK GREENVILLE 27834	IM /NEP 074 A AC 919 752-8880
BURNEY, DONALD PATRICK 1317 N. ELM ST., STE. 1 GREENSBORO 27401	CDS /TS 041 A AC 919 373-8245	BUSS, DAVID HUMPHREY 237 GRANDVIEW DRIVE WINSTON-SALEM 27104	PTH /HEM 034 AC 919 748-2641	CABERWAL, DALJIT SINGH P. O. BOX 1509 ASHEBORO 27203	U 076 A AC 919 625-3997
BURNEY, FREDRIC ARLEN 402 MORVEN ROAD WADESBORO 28170	FP 004 AC 704 694-2129	BUSSE, EWALD WILLIAM BOX 2948, DUMC DURHAM 27710	P /GER 032 A P L 919 684-3416	CABLE, THOMAS ALLEN 206 FISHER PARK CIRCLE GREENSBORO 27401	FP 041 A AC 919 379-4132
BURNHAM, STEVEN JAMES UNC, DEPT. OF VS 229-H CLINICAL SCIENCE BLDG. CHAPEL HILL 27514	GS 032 A AC 919 966-3391	BUSTARD, VICTOR WILLIAM 1912 NEUSE BOULEVARD NEW BERN 28560	OBG /GYN 025 A AC 919 633-3339	CABRAL, DEBORAH BARBARA 208-B W. CENTER ST. LEXINGTON 27292	FP 029 A P AC 704 249-2921
BURNS, MARGARET VIRGINIA 146 VICTORIA ROAD ASHEVILLE 28801	P 011 A L 704 254-4616	BUTER, THOMAS HENRY 120 PROVIDENCE ROAD CHARLOTTE 28207	ORS 060 A AC 704 377-0351	CABUGWASON, LUCILA NOVAL 28 N. MAIN ST. PO BOX 726 NORWOOD 28128	GP 084 AC 704 474-3317
BURNS, ROBERT H., III PO BOX 7184 JACKSONVILLE 28540	AN 067 A AC 919 353-2115	BUTLER, CAREY JONES 516 OWEN DRIVE FAYETTEVILLE 28304	OTO /OT 026 A AC 919 485-6101	CACERES, MARCO ANTONIO PO BOX 458 ROANOKE RAPIDS 27870	GS /TS 042 A AC 919 537-6525
BURNS, STANLEY SHERMAN, JR. 1600 E. THIRD STREET CHARLOTTE 28204	OTO 060 A AC 704 372-3300	BUTLER, FREDERICK CLARENCE, JR 1915 GLEN MEADE ROAD WILMINGTON 28403	OPH 065 A * AC 919 763-3601	CADDELL, TILLIE HORKEY P. O. BOX 519 PINEHURST 28374	GP 063 A L 919 295-5511
BURNS, WALTER WOODROW, JR. 901 WILLOW DRIVE CHAPEL HILL 27514	GS 032 A * AC 919 967-8258	BUTLER, JAMES HILTON 3155 MAPLEWOOD AVENUE WINSTON-SALEM 27103	R 034 A AC 919 765-2702	CAHN, JACK RICHARD ROUTE #1, BOX 439 SPARTA 28675	FP 003 AC 919 372-5606
BURQUEST, BRET 7401 CARMEL EXEC. PK. STE. 208 CHARLOTTE 28226	P 060 A AC 704 541-0800	BUTLER, LARRY STEPHEN 1832 DOCTOR'S DR. SANFORD 27330	OBG 053 P AC 919 774-8761	CAIN, FRANK CORAL, JR. 224 NEW HOPE ROAD GASTONIA 28052	GP 036 AC 704 865-8241
BURROUGHS, FRANKLIN DANFORD P. O. BOX 248 HATTERAS 27943	FP 070 A AC 919 986-2388	BUTLER, RADFORD NORMAN 1881 WILLIAMS RD. LEWISVILLE 27023	IM 034 A L/RT 919 725-7587	CAIN, JAMES R., III ECU SCHOOL OF MEDICINE GREENVILLE 27858	NEP 074 A AC 919 551-2545
BURROUGHS, FREDERICK DOUGLAS 100 SUNNYBROOK ROAD, STE. 202 RALEIGH 27610	PD 092 * AC 919 821-3180	BUTLER, ROBERT HOYT 132 W. MILLER STREET ASHEBORO 27203	GE 076 A AC 919 625-3218	CALDEMEYER, JOHN EVERETT 715 FLEMING ST. HENDERSONVILLE 28739	DR 045 A AC 704 693-1441
BURROUGHS, PAUL LEACH, JR. 3410 EXECUTIVE DRIVE RALEIGH 27609	ORS 092 A AC 919 872-5296	BUTTERLY, DAVID WM. 705 CROSTIMBERS DR. DURHAM 27713	032 R 919 684-8111	CALDERONE, LISA M. 3421 OLD VINEYARD RD. #C41 WINSTON-SALEM 27103	034 A * S 919 768-4502
BURROUGHS, RUTH REUBEN 6413 MARGATE COURT RALEIGH 27612	PH /PD 092 A RT 919 781-5015	BUTTERWORTH, JOHN F., IV 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	AN 034 AC 919 748-3613	CALDWELL, BRUCE FRANCIS P. O. BOX 1006 CLINTON 28328	EM /GS 082 A AC 919 592-8511
BURRUS, JAMES HENRY P. O. BOX 1256 SHELBY 28150	GYN 023 A AC 704 482-2486	BUTTS, JOHN DAVIS, JR. OFF. OF CHIEF MEDICAL EXAMINER CHAPEL HILL 27514	FOP 032 AC 919 966-2253	CALDWELL, DAVID STEWART BOX 2978, DUMC DURHAM 27710	RHU /IM 032 A AC 919 684-3313
BURT, JOSEPH MARK BOX 3889, DUMC DURHAM 27710	032 A R 919 775-5932	BYERLY, JAMES HAMPTON P. O. BOX 340 SANFORD 27330	GP 053 A L 919 775-5932	CALDWELL, GEORGE LEONHARD, JR. 2038 QUEEN ST. WINSTON-SALEM 27103	034 A S 919 722-3629
BURT, TERENCE WILLIAM 405 WINDSWEEP DR. #703 ASHEVILLE 28801	EM 011 AC 704 255-3786	BYERLY, WESLEY GRIMES, JR. 24 SECOND AVENUE, N.E. HICKORY 28601	GS 018 A * AC 704 328-2231	CALDWELL, JESSE BURGOWNE, JR. 1307 PARK LANE GASTONIA 28052	GYN 036 A P * L/RT 704 865-0968
BURTON, ASHBY J., III PO BOX 710 RICH SQUARE 27869	FP 066 A AC 919 539-2082	BYLCIW, STANLEY ROBERT PO BOX 1538 SMITHFIELD 27577	ORS 051 A P AC 919 934-1094	CALDWELL, LAWRENCE M. II P. O. BOX 849 NEWTON 28658	GE /IM 018 A P AC 704 464-4550
BURTON, CLAUDE SHREVE, III BOX 3511, DUMC DURHAM 27710	D /IM 032 AC 919 684-5037	BYNUM, DONALD K., JR. 245 BURNETT-WOMACK BLDG. 229-H UNC. SCH. OF MED. CHAPEL HILL 27514	ORS /HS 032 A AC 919 966-2030	CALDWELL, LAWRENCE M., SR. 406 S. COLLEGE AVE. NEWTON 28658	GP 018 A L/RT 704 464-2330
BURTON, EARL EDWARD, JR. 3900 BROWNING PLACE RALEIGH 27609	D /IM 092 A AC 919 782-2735	BYNUM, ROBERT WILLIAM, IV 100 NASH MEDICAL ARTS MALL ROCKY MOUNT 27804	NEP /IM 064 A AC 919 443-9084	CALDWELL, ROBERT MANFRED 227 GRACE ST. MOUNT AIRY 27030	PH 086 A L/RT 919 374-2131
BURTON, HARRY G., III 257 MCDOWELL ST. ASHEVILLE 28803	CDS /TS 011 A P AC 704 258-1121	BYRD, KERRY WENDELL 152 CHARLESTOWNE CIRCLE WINSTON-SALEM 27103	034 A S 919 765-3033	CALHOUN, AUBREY DANIEL 403 E. STATESVILLE AVE. MOORESVILLE 28115	IM 049 A P AC 704 663-4443
BURTON, PHILIP DOUGLAS 802 S. MAIN ST. WAKE FOREST 27587	FP 092 AC 919 556-7111	BYRD, VERNON DALE 2643 MULBERRY LANE. ARLINGTON SQUARE APTS. GREENVILLE 27858	074 A S 919 551-1812	CALL, DAVID LEE MOREHEAD MEM. HOSP.-RAD EDEN 27288	DR 079 AC 919 623-9711
BURWELL, WALTER BRODIE 317 ORANGE STREET HENDERSON 27536	IM 091 L 919 438-5619	BYRD, WILLIAM EUGENE 1724 E. 10TH ST. PO BOX 1093 ROANOKE RAPIDS 27870	RHU /IM 042 AC 919 535-1082	CALL, KENNETH D. 602-A W. CHURCH ST. FARMVILLE 27828	074 A S 919 753-5687
BUSBY, JULIAN GOODE, JR. 307 N. LINDSAY ST. HIGH POINT 27260	OBG 040 A AC 919 885-0149	BYRNE, JOHN JACOB PO BOX 32861 CHARLOTTE 28232	AN 060 A AC 704 338-2372	CALLAGHAN, WILLIAM M. PO BOX 427 LAKE JUNALUSKA 28745	OBG 044 AC 704 456-7369
BUSBY, MERLE RUDY 901 W. HENDERSON STREET SALISBURY 28144	GS 080 A AC 704 633-1581	BYRNES, THOMAS HENDERSON, JR. 309 PINEYWOOD ROAD THOMASVILLE 27360	IM /CD 029 A AC 919 475-8121	CALLAHAN, JOSEPH BRODHEAD MEDICAL ARTS BUILDING HENDERSON 27536	OBG 091 A AC 919 492-8576
BUSBY, WILLIAM JARVIS 105 PINEYWOOD ROAD THOMASVILLE 27360	ORS 029 P AC 919 475-8141	BYRNETT, JEFFREY WILLIAM 1624 MEMORIAL DR. BURLINGTON 27215	GS /VS 001 A AC 919 229-6428	CALLAHAN, RICHARD DALE 1 DOCTOR'S DR. ASHEVILLE 28801	ON /HEM 011 A AC 704 254-8232

CALLAWAY, CLIFFORD KAY 4600 HOLBROOK DR. CHARLOTTE 28212	EM 060 AC 704 588-3418	CANTLEY, LARRY KEITH 2933 MAPLEWOOD AVE. WINSTON-SALEM 27103	END 034 A P AC 919 765-1640	CARRASCO, LEONOR C. 1306 N. HERRITAGE KINSTON 28501	A 054 A AC 919 523-5461
CALLAWAY, JASPER LAMAR DUKE UNIV. MED. CTR. DURHAM 27710	D 032 A * L/RT 919 684-3432	CANUPP, TONY WAYNE PO BOX 729 MOORESVILLE 28115	IM /EM 049 AC 704 663-5566	CARROLL, BARBARA ANNE P. O. BOX 1357 HILLSBOROUGH 27278	R 032 A AC 919 684-2711
CALLAWAY, SAMUEL CLAYTON, JR. 2311 DELANEY ROAD WILMINGTON 28403	OTO 065 AC 919 762-8754	CAPIZZI, ROBERT LAWRENCE 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	ON /HEM 034 A AC 919 748-4464	CARROLL, CHARLES FISHER, JR. CABARRUS MEMORIAL HOSPITAL CONCORD 28025	PTH 013 A AC 704 788-5987
CALLISON, WILLIAM JOSEPH STE. 101, 445 BILTMORE CENTER ASHEVILLE 28801	ORS 011 A AC 704 254-7271	CAPOROSSI, PAUL VINCENT RT. #2, BOX 195 CONOVER 28613	OBG 018 A AC 704 322-4920	CARROLL, FRANCIS MURRAY 104 SEVENTH AVENUE CHADBOURN 28431	FP /A 024 A AC 919 654-3143
CAMBLOS, JOSHUA FRY B. 17 FOREST ROAD ASHEVILLE 28803	GS /GYN 011 A L/RT 704 274-2794	CAPPIELLO, DAVID LAWRENCE 129 MCDOWELL STREET ASHEVILLE 28801	ORS 011 A AC 704 258-8800	CARSON, CULLEY CLYDE, III BOX 3274, DUMC DURHAM 27710	U 032 A AC 919 684-2127
CAMERON, HAROLD H. 802 MCCARTHY BLVD. NEW BERN 28562	OPH 025 A AC 919 633-4183	CARANDANG, NAPOLEON VELUZ AT&T TECHNOLOGIES, INC. P. O. BOX 25000 GREENSBORO 27420	IM /OM 041 AC 919 279-3627	CARSON, JACK OLIVER P. O. BOX 549 GRIFTON 28530	FP 074 A AC 919 524-4463
CAMNITZ, PAUL SAMUEL BOX 5007 GREENVILLE 27834	OTO 074 A P AC 919 752-5227	CARBONELL, ANTONIO MIGUEL 3320 EXECUTIVE DR. STE. 222 RALEIGH 27609	PS 092 A AC	CARSON, SHANNON STEWART 42-A STRATFORD HILLS APTS. CHAPEL HILL 27514	032 A S 919 968-8231
CAMP, EDWARD HAYS 112 BALSAM DRIVE WAYNESVILLE 28786	GS 044 A L/RT 704 456-9858	CARDWELL, WILLARD 2312 LAFAYETTE GREENSBORO 27408	IM /CD 041 A L/RT 919 288-4740	CARSWELL, JANE TRIPLETT P. O. BOX 960 LENOIR 28645	FP 014 AC 704 754-0541
CAMP, THOMAS FRANCIS, JR. 2800 BLUE RIDGE, STE. 205 RALEIGH 27607	IM /CD 092 AC 919 782-0414	CAREY, ANDREW B. 13E COURTNEY SQUARE GREENVILLE 28758	074 A R 919 355-3432	CARTER, COLEMAN DELYNNE 217 TRAVIS AVENUE CHARLOTTE 28204	IM 060 A AC 704 372-3350
CAMPANO, MANUEL OSWALDO P. O. BOX X-3 GREENSBORO 27402	PTH 041 A AC 919 854-6462	CARLSON, ERIC BARNETT 1705 WEST 6TH ST. GREENVILLE 27834	CD /IM 074 A AC 919 752-6101	CARTER, JAMES HARVEY BOX 3106, DUMC DURHAM 27710	P 032 AC 919 684-6102
CAMPBELL, ALLEN BARRY 93 VICTORIA ROAD ASHEVILLE 28801	OBG 011 A P AC 704 253-4821	CARLSON, KENNETH PAUL 2932 LYNTHURST AVE. WINSTON-SALEM 27103	U 034 A AC 919 765-4021	CARTER, JAMES WALTER 10 DOCTOR'S PARK GREENVILLE 27834	TS /GS 074 A P AC 919 758-1747
CAMPBELL, CHARLES BRUCE, III 2827 LYNTHURST AVE., STE. 204 WINSTON-SALEM 27103	OPH 034 AC 919 768-0725	CARLTON, THOMAS KERN, JR. 720 GROVE STREET SALISBURY 28144	PD 080 AC 704 636-5576	CARTER, JEAN W. 100 S. BOYLAN AVE. RALEIGH 27603	OBG 092 AC 919 832-5529
CAMPBELL, DIANE JANE 2315 EXECUTIVE PARK CIR. PO BOX 8307 GREENVILLE 27835	OBG 074 AC 919 830-1035	CARLTON, WILLIAM YARBOROUGH 509 WESTOVER AVE. WINSTON-SALEM 27104	P 034 A AC 919 722-9939	CARTER, JOHN JEFFERSON, JR. CITY RT. #3, 311 FAIRGROUND RD SPINDALE 28160	P /CHP 081 AC 704 287-2211
CAMPBELL, DONALD BARNES 3100 BLUE RIDGE RD. RALEIGH 27612	IM 092 A AC 919 781-7500	CARMACK, KEITH K.K. KITTY HAWK MEDICAL CTR. 4716 N. CORATAN HIGHWAY KITTY HAWK 27949	FP 070 AC 919 261-3848	CARTER, MARGARET FRONEBERGER FORSYTH MEMORIAL HOSPITAL 3333 SILAS CREEK PARKWAY WINSTON-SALEM 27103	AN 034 A AC 919 760-5691
CAMPBELL, FRANCIS MICHAEL 503 E. STATESVILLE AVE. MOORESVILLE 28115	GS 049 AC 704 663-7905	CARMICHAEL, DENNIS D. 2711 RANDOLPH RD., STE. 205 CHARLOTTE 28207	CHP /P 060 AC 704 372-5238	CARTER, NEEDHAM BATTLE 3811 WOODLAWN RD. ROCKY MOUNT 27804	IM /CD 064 A RT 919 977-6746
CAMPBELL, FRANK HIGHSMITH P. O. BOX 53651 FAYETTEVILLE 28305	GS /TS 026 A AC 919 485-6161	CARNES, ROBERT S., III 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	AN 034 AC 919 748-2927	CARTER, NUNTA RICHARDSON, JR. 512 DIXON BOULEVARD SHELBY 28150	FP 023 A AC 704 487-7540
CAMPBELL, JAMES ARCHIBALD 1955 RANDOLPH ROAD CHARLOTTE 28207	OBG 060 AC 704 376-3536	CARNEY, CHARLES NOEL RT. #9, BOX 540-C CHAPEL HILL 27514	PTH 032 AC 919 966-4676	CARTER, PHILIPS JOHN PO BOX 14580 315 W. WENDOVER AVE. GREENSBORO 27415	ORS 041 A P AC 919 275-0724
CAMPBELL, JEFFREY PAUL 201 WESTBROOK DR., #D9 CARRBORO 27510	032 A S	CARO, JOSE FRANCISCO ECU, DEPT. OF MEDICINE GREENVILLE 27834	END /IM 074 A AC 919 551-2571	CARTER, ROBERT WILSON KERNODLE CLINIC BURLINGTON 27215	IM /CD 001 A P * AC 919 227-3621
CAMPBELL, JOSEPH LESTER 306 FOREST HILLS ROAD WILSON 27893	GPM /PH 098 A L 919 291-8523	CARPENTER, KENNETH C. P. O. BOX 699 LENOIR 28645	GP 014 A AC 704 754-7861	CARTER, STEVEN RAYMOND PO BOX 2060 SOUTHERN PINES 28387	AN 063 A AC 919 295-5551
CAMPBELL, PAUL THOMAS 3323 LASSITER ST. DURHAM 27707	032 A R 919 471-9244	CARR, DAVID RUDDLE 5407 S.W.80TH TERRACE GAINESVILLE, FL 32608	032 A R 904 392-3711	CARTY, BRIAN CLIFFORD 120-4 RAINRIDGE DR. WINSTON SALEM 27104	034 A S 919 765-7147
CAMPBELL, ROBERT RICHARD 2700 MEDICAL OFFICE PLACE GOLDSBORO 27530	R 096 A AC 919 734-1866	CARR, HENRY JAMES, JR. 603 BEAMAN STREET CLINTON 28328	IM 082 A P * AC 919 592-6114	CARVER, DONALD D. 4A COLLINS PARK APTS. 1212 COLLINS DR. BURLINGTON 27215	032 A S 919 968-6403
CAMPBELL, WALKER HAWES 2400 WAYNE MEMORIAL DRIVE GOLDSBORO 27530	OBG 096 A P AC 919 734-3344	CARR, JENIFER 248 S. SUNSET DR. WINSTON-SALEM 27103	034 A S 919 773-0369	CARVER, GORDON MALONE, JR. 114 CRUTCHFIELD ST. DURHAM 27705	TS /GS 032 A AC 919 286-1245
CANADAY, MAURICE LEWIS 110 DOCTOR'S PARK PO BOX 578 LINCOLNTON 28092	FP /CD 055 AC 704 735-7413	CARR, JOHN FERGUSON, II 1200 BROAD ST. DURHAM 27705	D 032 A * AC 919 286-7903	CASCIIO, WAYNE E. CB 7075, BURNETT-WOMACK BLDG. CHAPEL HILL 27599	CD /IM 032 AC
CANDELA, STEPHEN JOSEPH PO BOX 260 SUPPLY 28462	ORS 010 A P AC 919 754-4355	CARR, KENT EMERSON 3404 MERRIFIELD RD. ROCKY MOUNT 27801	IM 064 A AC 919 937-4084	CASERIO, JAMES JOSEPH 547 N. JUSTICE ST. HENDERSONVILLE 28739	IM 045 A AC 704 692-5096
CANIPE, TOMMIE LEE P. O. BOX 5229 HIGH POINT 27262	GS /TS 040 AC 919 887-3164	CARR, MARJORIE BARNWELL 2800 BLUE RIDGE BLVD., STE. 501 RALEIGH 27607	PD 092 A AC 919 781-7490	CASEY, DEBORAH M. 7300 CRESHEIM RD.C-17 PHILADELPHIA, PA 19119	034 A * S
CANNON, EUGENE BOLIVIA 366 LEXINGTON ROAD ASHEBORO 27203	PD 076 A L/RT 919 625-2460	CARR, RAYMOND EDWARD 624 QUAKER LN., STE. C-101 HIGH POINT 27262	GS /TS 040 A AC 919 883-1348	CASEY, DENNIS NELSON KINSTON CLINIC, NORTH KINSTON 28501	DR 054 A AC 919 527-7077
CANNON, THOMAS BERNARD 2805 LYNTHURST AVENUE WINSTON-SALEM 27103	FP 034 AC 919 768-8890	CARR, THOMAS A. 217 TRAVIS AVE. CHARLOTTE 28204	060 AC	CASH, DAVID WAYNE 310 DAVIE AVE. STATESVILLE 28677	FP 049 A AC 704 873-3269
CANNON, WOODWARD 2800 BLUE RIDGE BLVD. STE. 305 RALEIGH 27607	GS 092 A AC 919 781-7416	CARR, WILLIAM C. 5394 PERSHING AVE. #2E ST. LOUIS, MO 63112	PD 000 A R	CASHMAN, JOHN 1905 GLEN MEADE ROAD WILMINGTON 28403	U 065 A P * AC 919 763-6251

CASHWELL, LEON FRANKLIN, JR. 300 S. HAWTHORNE ROAD WINSTON-SALEM 27103	OFH 034 A * AC 919 748-4091	CHAMBERLAIN, JACK KENNETH ECU, SCHOOL OF MEDICINE GREENVILLE 27834	HEM /ON 074 A AC 919 551-2560	CHAPMAN, TODD MASTERS 1822 BRUNSWICK AVE. CHARLOTTE 28207	ORS 060 A AC 704 373-0544
CASSIANO, COLEY JAMES 1016-A PROFESSIONAL VILLAGE GREENSBORO 27401	FP 041 AC 919 379-1156	CHAMBERLAIN, MATTHEW P. 136 FOREST ACRES DR. GREENVILLE 27834	A S 919 551-3267	CHARLTON-ALSTON, LEI S. HEALTHCO INC. PO BOX 425	IM 091 A AC 919 456-2181
CASTELL, DONALD OVERTON 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	GE 034 AC 919 748-4612	CHAMBERLAIN, STEVEN A. 110 W. GROVER ST. SHELBY 28150	OBG 023 A AC 704 487-5258	CHARLTON, JOHN DAVID 1301 W. WENDOVER AVENUE GREENSBORO 27408	A 041 L 919 275-0441
CASTELLANI, WM. JOHN ECU SCHOOL OF MEDICINE DEPT. OF CLINICAL PATHOLOGY GREENVILLE 27834	PTH 074 A AC 919 757-4928	CHAMBERLIN, HARRIE ROGERS UNC, DEPT. OF PEDIATRICS CHAPEL HILL 27514	PD 032 L/RT 919 966-5171	CHARLTON, OLIVER PATRICK 4420 LAKE BOONE TRAIL RALEIGH 27607	DR 092 A AC 919 755-3023
CASTELLOE, THOMAS EDISON P. O. BOX 10707 RALEIGH 27605	ORS 092 A AC 919 781-5600	CHAMBERS, ARTHUR L., III 3619 WESTRIDGE CIRCLE DR. ROCKY MOUNT 27801	EM 064 AC 919 443-8172	CHASE, ROBERT EUGENE 1816 PEMBROKE RD., STE. #2 GREENSBORO 27408	AN 041 AC 919 272-3720
CATALANO, PHILIP M. 1416 59TH ST. WEST BRADENTON, FL 34209	D 057 A AC 792 293-4000	CHAMBERS, ROBERT EDWARD 1839 E. GARRISON BOULEVARD GASTONIA 28054	PD 036 AC 704 864-2685	CHASE, TIMOTHY LEE 549 ARBOR HILL RD. APT. 62B KERNERSVILLE 27284	A * S 919 996-8014
CATES, BANKS RALEIGH, JR. 1012 S. KINGS DR. STE. 522 CHARLOTTE 28283	IM 060 AC 704 377-4578	CHAMBERS, ROBERT TILLMAN 104 BETHESDA MEDICAL CENTER WINSTON-SALEM 27103	PD 034 A AC 919 765-5242	CHASSON, ALBERT LEON REX HOSPITAL RALEIGH 27607	PTH 092 A AC 919 783-3058
CATHCART, CORNELIUS FITZHAROLD MARIA PARHAM HOSPITAL HENDERSON 27536	PD 091 AC 919 492-9565	CHAMBLEE, DONALD VANCE 211 S. SHARON AMITY ROAD CHARLOTTE 28211	FP 060 A AC 704 366-7586	CHATHAM, SCOTT T. PO DRAWER 38 HICKORY 28603	OBG 018 A AC 704 322-4140
CATHELL, EDWIN JENNINGS P. O. BOX 440 LEXINGTON 27292	GS 029 A L/RT 704 246-2745	CHAMBLEE, HUBERT ROYSTER, JR. 20 ENTERPRISE STREET RALEIGH 27607	OPH 092 A AC 919 829-1948	CHAUDHRY, ABDUL GHAFOOR 2800 BLUE RIDGE BLVD. STE. 306 RALEIGH 27607	CDS /GS 092 A AC 919 782-7900
CATO, ALLEN EASLEY, JR. RT. #2, BOX 470 HILLSBOROUGH 27278	PD /PUD 032 A P AC 919 248-2187	CHAMBLEE, JOHN SIGMA 509 E. CHURCH STREET NASHVILLE 27856	PH /GPM 064 A L/RT 919 459-2223	CHAUDHRY, HASHMAT ALI 725-C HAMILTON ST. ROANOKE RAPIDS 27870	OPH 042 A P AC 919 537-0522
CATTIE, JOHN VINCENT 106 E. PHIFER STREET MONROE 28110	GS /CDS 090 A AC 704 289-8528	CHAMBLISS, JOHN RANDOLPH 100 NASH MEDICAL ARTS MALL ROCKY MOUNT 27801	IM 064 A AC 919 443-9084	CHAUDHURI, DEBI PRASAD 1617 OWEN DRIVE FAYETTEVILLE 28304	GS 026 AC 919 323-0101
CATZ, NITZAN D. 607 BERKSHIRE RD. SMITHFIELD 27577	OTO /HNS 051 A AC 919 934-0948	CHANCE, JAMES KENNETH 802 MCCARTHY BLVD. NEW BERN 28560	OPH 025 A * AC 919 633-4183	CHAVIS, L. FRANCINE PO BOX 433 OXFORD 27565	000 R
CAUDLE, JOHN ALLEN 1900 RANDOLPH RD., STE. 918 CHARLOTTE 28207	P 060 A P AC 704 333-7722	CHANDLER, ARTHUR CECIL, JR. 1830 HILLANDALE ROAD DURHAM 27705	OPH 032 A AC 919 383-5531	CHEANEY, RUSSELL ALAN 300 GROVER ST. SHELBY 28150	AN 023 AC 704 482-5716
CAUGHEY, DALE WELLS, JR. 5305-A WRIGHTSVILLE AVENUE WILMINGTON 28403	IM 065 AC 919 799-4220	CHANDLER, EDGAR TED 741 HIGHLAND AVE. WINSTON-SALEM 27101	IM 034 A AC 919 727-2097	CHEEK, GEO. W., JR. 317 ENGLEMAN BURLINGTON 27215	GS 001 A RT 919 584-6551
CAUGHRAN, JOHN HAMILTON 120 PROVIDENCE ROAD CHARLOTTE 28207	ORS 060 A AC 704 377-0351	CHANDLER, JOE THURSTON 928 BAXTER STREET CHARLOTTE 28204	NEP /IM 060 A AC 704 374-1321	CHEEK, JOHN MERRITT, JR. 1414 KENT STREET DURHAM 27707	GS 032 A L/RT 919 489-1241
CAUSEY, ANDREW JACKSON 210 VALLEY STREAM ROAD STATESVILLE 28677	OPH /OTO 049 L 704 873-8337	CHANDLER, MARK C. N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514	032 A R 919 966-2025	CHEELY, GEORGE RAYBURN 3020 NEW BERN AVE., STE. 420 RALEIGH 27610	CD /IM 092 A P AC 919 833-5111
CAVALLO, MARTYN J. 235 MCCAULEY ST. APT. C-6 CHAPEL HILL 27516	032 A S 919 929-7786	CHANDLER, WILLIAM MARCUS, JR. PO BOX 2680 HENDERSONVILLE 28739	R /AM 045 AC 704 693-1441	CHEESBOROUGH, JOHN DAVIDSON 827 S. HORNER BOULEVARD SANFORD 27330	D 053 AC 919 775-7926
CAVANAUGH, PATRICK JOSEPH 4420 LAKE BOONE TRAIL RALEIGH 27607	TR 092 A AC 919 783-3018	CHANG, JOHN SHYUEYI P. O. BOX 715 LINCOLNTON 28092	OBG 055 A AC 704 732-3346	CHEN, CHIH-CHENG FRANK 1608 WELLINGTON AVENUE WILMINGTON 28401	N 065 A AC 919 395-5521
CAVINESS, VERNE STRUDWICK 913 VANCE STREET RALEIGH 27608	CD /IM 092 A L/RT 919 832-4258	CHANG, YONG DAE ROYAL PARK - 2F CARRBORO 27510	032 A S	CHEN, KEH-FANG 604 W. KING ST. KINGS MOUNTAIN 28086	OBG 023 AC 704 739-8059
CAZZANIGA, STEFANO L. 1611 DUKE UNIV. RD. APT. 1-E DURHAM 27701	032 A S 919 489-5105	CHAPIN, JOHN HARMON ROUTE #2, BOX 130 LANSING 28643	FP 005 AC 919 982-2158	CHEN, TONG YONG PO BOX 33549 CHARLOTTE 28233	AN 060 A AC 704 371-4049
CECIL, STEPHEN GERARD 607 WOODBERRY DR. GOLDSBORO 27530	AN 096 A AC 919 731-6089	CHAPLIN, CHARLES HAL 2215 RANDOLPH ROAD CHARLOTTE 28207	PS /GS 060 A AC 704 372-6846	CHENEY, PAUL R., JR. 7108 PINEVILLE-MATTHEWS RD. CHARLOTTE 28211	IM 060 A AC 704 542-1952
CEFALO, ROBERT CHARLES 430 LAKESHORE LANE CHAPEL HILL 27514	OBG /NPM 032 AC 919 966-1601	CHAPLIN, DON CLARENCE KERNODLE CLINIC, INC. BURLINGTON 27215	IM /CD 001 A P * AC 919 227-3621	CHEREN, ISA 1900 QUEEN ST., APT. C-8 WINSTON-SALEM 27103	034 A S 919 724-3782
CEFALU, SALVADOR JOSEPH DOROTHEA DIX HOSPITAL RALEIGH 27611	P /GER 092 * AC 919 733-5518	CHAPLINSKI, THOMAS JOSEPH 1705 W. 6TH ST. GREENVILLE 27834	ON /HEM 074 AC 919 752-6101	CHERRY, JEAN MICHELE 805-A W. MAIN ST. CARRBORO 27510	032 A * S
CELESTINO, FRANK SAMUEL 3400 YORK ROAD WINSTON-SALEM 27104	FP 034 A AC 919 748-2258	CHAPMAN, CHARLES GRANGER 6134 DEVERON DRIVE CHARLOTTE 28211	BLB 060 A RT 704 366-2057	CHESSON, ARTHUR SAUNDERS, JR. 1501 DOCK ST. WILMINGTON 28401	PD 065 AC 919 762-1744
CELLA, JOHN ROBERT P. O. BOX 19509 RALEIGH 27619	R 092 A AC 919 833-1407	CHAPMAN, GEOFFREY SEWALL 2400 CLOISTER DR. CHARLOTTE 28211	HEM /ON 060 AC 704 372-8750	CHEWNING, SAMUEL JACKSON, JR. 1822 BRUNSWICK AVE. CHARLOTTE 28207	ORS 060 A P AC 704 372-9820
CHALFA, NICOLAI P. O. BOX 1864 HIGH POINT 27261	AN 040 A AC 919 882-2567	CHAPMAN, JESSE PUGH, JR. 520 BILTMORE AVENUE ASHEVILLE 28801	TS /GS 011 L/RT 704 252-7357	CHI, HONG YUP 105 N. MAIN AVENUE NEWTON 28658	FP 018 A AC 704 464-5424
CHALFANT, WILLIAM PAXSON 56 LAKE CONCORD ROAD, N.E. CONCORD 28025	GS /CDS 013 A AC 704 786-1104	CHAPMAN, LYNNE WAGONER 106 BERKSHIRE ROAD GREENVILLE 27858	IM 074 A R 919 756-5966	CHIARAMONTI, ALEXANDER 101 CARY PKWY. SW, #210 CARY DERMATOLOGY CTR. CARY 27511	D 092 A AC 919 467-8556
CHALLA, VENKATA RAMANA 200 FLINTSHIRE ROAD WINSTON-SALEM 27104	PTH /NA 034 A AC 919 768-0591	CHAPMAN, ROBERT AMASA P. O. BOX 728 BANNER ELK 28604	FP 006 AC 704 898-4828	CHIAVETTA, STEPHEN VICTOR 4420 LAKE BOONE TRAIL RALEIGH 27607	032 A S 919 945-4928

CHICCONI, THOMAS GERARD 1711 LYNWOOD AVE. WINSTON-SALEM 27104	EM 034 A AC 919 765-9328	CHUNG, JOSEPH YANGSOO 1200 MEDICAL COURT MARION 28752	GS /GP 059 A AC 704 652-5818	CLARK, THEODORE RUST PO BOX 56 SOUTHERN PINES 28387	P /ALD 063 A AC 919 692-6471
CHIKES, PETER GEORGE 34 ARDSLEY AVE., NE CONCORD 28025	OTO 013 A P AC 704 782-2166	CHUNG, WAN SOO 320 MCCASKEY ROAD WILLIAMSTON 27892	GP 007 A AC 919 792-1071	CLARK, THOMAS BOYLE, III P. O. BOX 2951 DURHAM 27705	PTH 032 A R 919 684-3300
CHILDERS, MELVIN DAVIS, JR 1928 RANDOLPH RD., STE. 109 CHARLOTTE 28207	OPH 060 P AC 704 372-3070	CHUNG, ZUN SUB 2926 S. MAIN STREET HIGH POINT 27263	FP /EM 040 A AC 919 434-3118	CLARK, TIMOTHY J. 324 DUPONT CIR. GREENVILLE 27858	R 074 A P AC 919 551-4485
CHILDERS, TERRY CELY 131 MCDOWELL ST. ASHEVILLE 28801	PD 011 AC 704 254-9811	CHURCH, C. FRANKLIN 1109 DRESSER COURT RALEIGH 27609	FP /D 092 A AC 919 872-4900	CLARK, VIVIAN E. 120 CONNER DR., STE. 101 PO BOX 3317 CHAPEL HILL 27514	GYN 032 AC 919 942-8571
CHILES, NOAH HAMPTON 501 WESTWOOD AVENUE HIGH POINT 27262	IM 040 A AC 919 882-3911	CHURCH, JACK LEE BOX 104, BROUGHTON HOSP. MORGANTON 28655	R /IM 012 * AC 704 433-2256	CLARK, WILLIAM MACKKEY 647 LLEWELLYN PLACE CHARLOTTE 28207	R 060 A AC 704 371-4058
CHIMIAK, JAMES MICHAEL 1233 GOVERNOR CIR. WILMINGTON, DE 19809	000 R 215 897-8055	CILIBERTO, SAMUEL DAVID 101 S. VANCE STREET SANFORD 27330	ORS 053 A P AC 919 776-0551	CLARKE, DONALD KEITH 1530-0 BRIDLE CIR. GREENVILLE 27834	074 A S 919 756-2072
CHIPLEY, PATRICK LINCOLN P. O. BOX 399 ENKA 28728	GP 011 AC 704 667-2531	CINTRON, RUBEN 300 S. HAWTHORNE RD. MED. STUDENT, BOX 336 WINSTON-SALEM 27103	034 A S 919 773-1564	CLARKE, LEN GORDON 1018 E. MEADOW RD. EDEN 27288	FP 079 A RT 919 623-6836
CHIPMAN, MARTIN 1262 OLIVER ST. FAYETTEVILLE 28304	N 026 A AC 919 484-5151	CISZEK, THOMAS ARTHUR PO BOX 2000 FAYETTEVILLE 28302	NPM /PD 026 A AC 919 323-6762	CLARKE, THOMAS LAWRENCE 501 N. CLEVELAND AVENUE WINSTON-SALEM 27101	OBG 034 AC 919 722-3874
CHITWOOD, WALTER R., JR. 3217 TATES CREEK RD. LEXINGTON, KY 40502	CDS /TS 074 AC 919 551-4822	CITRIN, KERRY ALAN 105 PINEYWOOD ROAD P. O. BOX 1187 THOMASVILLE 27360	GS 029 A AC 919 475-7148	CLARKE, WILLIAM LOWE, JR 551 THIRD ST. NE HICKORY 28601	FP 018 A L/RT 704 327-4441
CHIU, ARVA YAHUA 1640 NORTHWEST BLVD. APT. #4 WINSTON-SALEM 27104	034 A * S 919 722-1616	CITRON, DAVID SANFORD 8116 RISING MEADOW RD. MATTHEWS 28105	IM /FP 060 L/RT 704 338-3146	CLASSEN, CHARLES HENRY, JR. KINSTON CLINIC, NORTH, STE. F KINSTON 28501	ORS 054 A AC 919 522-2020
CHIULLI, RICHARD ALLEN 137 JAMES CREEK ROAD SOUTHERN PINES 28387	GS 063 A AC 919 295-1141	CLANCY, THOMAS V. 2131 S. 17TH ST. WILMINGTON 28402	065 A AC 919 343-0161	CLAXTON, CALVIN PORTER, JR. 257 MCDOWELL STREET ASHEVILLE 28803	CDS /TS 011 A P AC 704 258-1121
CHOI-CHUNG, MOON SOOG EASTGATE CENTER SYLVA 28779	PM 050 AC 704 586-5508	CLAPP, HUBERT LEE BOX 365 SWANNANOVA 28778	GP 011 A L 704 686-3300	CLAY, RICKY PERRY 2577 STANTONSBURG RD. GREENVILLE 27834	PS 074 A P * AC 919 752-1406
CHOI, MINA NUI 805 JACKSON ST. DURHAM 27701	032 A S 919 688-7899	CLAPP, JAMES ROBERT BOX 2991, DUMC DURHAM 27710	IM /NEP 032 A AC 919 684-6674	CLAYTON, MELVIN LOUIS PO BOX 788 AHOSKIE 27910	008 A AC 919 332-2993
CHOI, SAN HO 8 RIVERVIEW ST., STE. 202 FRANKLIN 28734	GS 056 A AC 704 524-7464	CLARK, ALAN BOYD BOWMAN GRAY, BOX 93 WINSTON-SALEM 27103	034 A S 919 724-4572	CLEAVER, H. DEHAVEN 100 MEDICAL ARTS MALL ROCKY MOUNT 27801	GS /TS 064 AC 919 443-9084
CHOKSI, JANAK KANTILAL 405 RUDD ST. B BURLINGTON 27215	ON /IM 001 AC 919 226-0276	CLARK, C. SCOTT 3500 POWELTON AVE. C-106 PHILADELPHIA, PA 19104	034 A S OTO /RHI 032	CLEGG, HERBERT WILLIAM, II 2711 RANDOLPH RD. STE. 501 CHARLOTTE 28207	PD /ID 060 * AC 704 374-1747
CHOONG, HAN PYO P. O. BOX 548 503 THIRD STREET, SW TAYLORSVILLE 28681	GS 002 A AC 704 632-7467	CLARK, CHARLES EDWARD, III 2609 N. DUKE ST. STE. 306 DURHAM 27704	032 AC 919 471-8700	CLEMENT, JAMES EDWIN 101 BETHESDA DRIVE GREENVILLE 27834	GYN 074 A P AC 919 758-4181
CHOW, CAROLINE CHIA-LIN 501 DOWNING ST., APT. J DURHAM 27705	032 A S 919 383-2939	CLARK, DOUGLAS HENDON 295 WEST 27TH STREET LUMBERTON 28358	GS 078 A AC 919 738-8556	CLEMENTS, DENNIS ALFRED, III 119 WISTERIA DR. CHAPEL HILL 27514	PD /ID 032 A R 919 684-6610
CHOW, GREGORY HENKUO #9 GEORGETOWN CT. DURHAM 27705	032 A S 919 383-6849	CLARK, DOUGLAS WINSTON 306 S. GREGSON ST. DURHAM 27701	PD 032 A AC 919 688-6349	CLENDENINN, NEIL JAMES 120 MEADOWBROOK DR. CHAPEL HILL 27514	032 AC 919 443-6444
CHRISTAKOS, ARTHUR CHRIS BOX 2976, DUMC DURHAM 27710	GYN 032 A AC 919 684-4647	CLARK, FRANKLIN ST. CLAIR 1790 METROMEDICAL DRIVE FAYETTEVILLE 28304	GS /CDS 026 AC 919 323-2626	CLEVELAND, JEFFREY ALLEN 2000 VIRGINIA ROAD WINSTON-SALEM 27104	034 A S 919 723-8536
CHRISTENBURY, JONATHAN DAVID 1900 RANDOLPH RD. STE. 706 CHARLOTTE 28207	OPH 060 A P * AC 704 332-9365	CLARK, JOHN BLUE, JR. 3830 SILVERBELL DR. CHARLOTTE 28211	EM /IM 060 A AC 704 371-4160	CLEVENGER, ALVA BEN 10255 E. VIA LINDA, APT. 1078 SCOTTSDALE, AZ 85258	PTH 000 A AS 602 860-5090
CHRISTENSEN, FRANK HOWARD 109 CONNER DR., STE. 2207 CHAPEL HILL 27514	OPH /PS 032 A AC 919 933-1294	CLARK, KENNETH JAMES, JR. 49 MCDOWELL ST. ASHEVILLE 28801	GE /IM 011 A AC 704 258-3870	CLINE, DAVID MARTIN ECU SCHOOL OF MEDICINE BRODY 4W-54 GREENVILLE 27858	EM 074 A AC 919 551-2954
CHRISTENSEN, HARVEY EARL ROUTE #2, BOX 190 CONOVER 28613	GS /TS 018 P AC 704 322-9105	CLARK, LEE ANDREW, JR. WILSON CLINIC WILSON 27893	OPH 098 A * AC 919 291-7001	CLINE, JAMES ALEXANDER WELLONGATE 2-D 3430 SUNSET AVE. ROCKY MOUNT 27804	GS /EM 064 A RT 919 443-6444
CHRISTIANSON, DANA J. 102 WATER OAK SUITES BREVARD 28712	OPH 088 A P AC 704 884-7320	CLARK, LOUIS PHILLIP, JR. 225 TIMBERLAKE DR. FAYETTEVILLE 28304	HS /ORS 026 A AC 919 484-2171	CLINE, JOHN WILLIAM 1110 W. MAIN STREET DURHAM 27701	032 A AC 919 682-9341
CHRISTOPHER, WILLIAM EDWARD, JR 242 S. COLONIAL AVE. CHARLOTTE 28207	P 060 A AC 704 375-4405	CLARK, MARGARET ANNE 250 CHARLOIS BOULEVARD WINSTON-SALEM 27103	IM 034 A AC 919 768-4730	CLINE, KATHLEEN ANN 1211 RED BANKS RD. GREENVILLE 27858	EM 074 A * AC 919 551-4757
CHRYSLER, CHARLES OTIS 3894 E. INDEPENDENCE BLVD. CHARLOTTE 28205	FP 060 A AC 704 537-5424	CLARK, MICHAEL EMIL 1227 EBERT ST. WINSTON-SALEM 27103	034 A S 919 942-1975	CLINE, ROBERT SEITZ 555 CARTHAGE STREET SANFORD 27330	FP 053 A AC 919 774-6518
CHU, CHARLEEN T. BOX 2715, DUMC DURHAM 27710	032 A S 919 684-6164	CLARK, PRESTON SAMUEL MERRITT MEDICAL PLAZA 1511 WESTOVER TERR., STE. 101 GREENSBORO 27408	END /IM 041 AC 919 373-0311	CLINE, WAYNE ALLEN 909 W. HENDERSON STREET SALISBURY 28144	U 080 L/RT 704 633-9441
CHUNG, HONG-YILL 407 CARMEN AVENUE JACKSONVILLE 28540	GP 067 AC 919 353-2800	CLARK, RICHARD LEE ROUTE #4, BOX 529 CHAPEL HILL 27516	DR 032 AC 919 966-4400	CLINE, WAYNE ALLEN, JR. 909 W. HENDERSON STREET SALISBURY 28144	U 080 A AC 704 633-9441
CHUNG, IL WHAN SYLVA UROLOGICAL CLINIC, PA EASTGATE CENTER SYLVA 28779	U 050 AC 704 586-5507	CLARK, TERRENCE PETER 445 BILTMORE AVE., STE. 304 ASHEVILLE 28801	CHP /P 011 * AC 704 252-1421	CLINE, WILLIAM TUCKER 3400 EXECUTIVE DRIVE RALEIGH 27609	GS /CDS 092 A AC 919 876-2732

CLINTON, HOWARD LESLIE, JR. 2001 VAIL AVE. CHARLOTTE 28207	FP /EM 060 AC 704 379-5917	COLE, ROGER DALE 840 MAGNOLIA ST. WINSTON-SALEM 27103	A S 919 723-4036	COLLMAN, MITCHELL SCOTT PO BOX 17569 RALEIGH 27619	CD /IM 092 AC 919 783-5273
CLIPPINGER, FRANK WARREN, JR. BOX 3935, DUMC DURHAM 27710	ORS 032 A AC 919 684-4229	COLE, TOLLIE BOYCE BOX 3805, DUMC DURHAM 27710	OTO 032 A AC 919 684-6819	COLSON, JOSEPH SAMPSON 106 WARREN AVE. OXFORD 27565	FP 039 A RT 919 693-2697
CLONINGER, CHARLES EDGAR 9674 RIVIERA DR. SHERRILLS FORD 28673	FP 018 A L/RT 704 478-3155	COLE, WARREN HENRY 8 W. KENSINGTON ROAD ASHEVILLE 28804	GS 011 A RT 704 254-4475	COLTON, SHARON ANN PO BOX 1566 LINCOLNTON 28092	IM 055 AC 704 732-3348
CLONINGER, GILES LATHERN, JR. 115 MAIN STREET HAMLET 28345	FP 077 A AC 919 582-1319	COLEMAN, ELIZABETH ANNE CAROLINA COUNSELING CENTER 2450 DELANEY AVE. WILMINGTON 28403	P 065 A AC 919 763-9517	COMBS, JOHN GILBERT, JR. 2318 BLYTHE ROAD WILMINGTON 28403	R 065 A P AC 919 392-2610
CLONINGER, KENNETH LEE, JR. 200 E. NORTHWOOD ST., STE. 504 GREENSBORO 27401	NS 041 A AC 919 272-4578	COLEMAN, GORDON DONALD 1920 S. 16TH ST. WILMINGTON 28401	PD 065 A P * AC 919 762-3942	COMBS, JOSEPH JOHN 335 SPRINGMOOR DR. RALEIGH 27615	IM /PUD 092 A L/RT 919 848-7335
CLONINGER, ROWELL CONNOR 309 WESTFIELD RD. SHELBY 28150	GS 023 L/RT 704 487-8591	COLEMAN, JAMES BARR 604 W. MAIN STREET WASHINGTON 27889	GS 007 AC 919 946-0181	COMPEAU, PHILLIP E. C. 1710 PARKWOOD DR., SOUTH WILKESBORO 28697	IM 097 P * AC 919 667-1285
CLONINGER, TIMOTHY EARL P. O. BOX 35291 CHARLOTTE 28235	TR 060 A AC 704 338-2272	COLEMAN, LESTER L., JR. P. O. BOX 376 HILDEBRAN 28637	FP 018 A AC 704 397-3522	COMPTON, JOHN WALLACE 2700 MEDICAL OFFICE PLACE GOLDSBORO 27530	R 096 A AC 919 734-1866
CLONTZ, TED HAMILTON 402 E. SUGARCREEK RD. CHARLOTTE 28213	FP 060 AC 704 596-0822	COLEMAN, NANCY LOU 403 HILLTOP ST. GREENVILLE 27858	074 A S 919 752-3394	CONARD-CORKEY, ELIZABETH M. 519 HERMITAGE COURT CHARLOTTE 28207	PH /GPM 060 A L 704 375-7831
CLOUTIER, MICHAEL 1005 SHAMROCK RD. HIGH POINT 27260	R 040 A AC 919 887-1926	COLEMAN, PETER R. 207 CONNER DR., APT. 22 CHAPEL HILL 27514	FP /ALD 032 A R 919 929-2067	CONARD, DAVID LLOYD 101 W. T. HARRIS BLVD. C-101 CHARLOTTE 28213	IM 060 A AC 704 547-1462
CLUTTS, GEORGE ROBERT 344 N. ELM STREET GREENSBORO 27401	GS /TS 041 A AC 919 275-9554	COLEMAN, PHILIP DIVOLL 625 E. 12TH ST. WASHINGTON 27889	GS /TS 007 AC 919 946-0181	CONDIE, SCOTT DOUGLAS 1198 WYKE ROAD SHELBY 28150	FP 023 A AC 704 487-1148
CLYDE, WALLACE ALEXANDER, JR. UNC SCHOOL OF MEDICINE 229-H 535 BURNETT-WOMACK CLI SC BLDG CHAPEL HILL 27514	PD /ID 032 AC 919 966-2331	COLEMAN, RALPH EDWARD DUMC, DEPT. OF RADIOLOGY DURHAM 27710	NM 032 A AC 919 681-5454	CONLEY, MARTIN JAMES, JR. 1515 DOCTOR'S CIRCLE WILMINGTON 28401	CD /IM 065 AC 919 763-5182
COBB, GREGORY WAYNE 264 MEMORIAL DRIVE JACKSONVILLE 28540	OPH 067 AC 919 353-1030	COLES, DEBRA LYNN 212 MCCAULEY ST. 1-B CHAPEL HILL 27514	IM 032 A S 919 968-1909	CONNELL, GEORGE FREDERICK 1105 BROOKSIDE DRIVE WILSON 27893	AN 098 A AC 919 291-1700
COBEY, WILLIAM GRAY 2024 RANDOLPH ROAD CHARLOTTE 28207	PD 060 AC 704 375-4453	COLEY, ELWOOD BROGDEN 2903 SHAW AVE. LUMBERTON 28358	PD 032 AC 919 739-3018	CONNELLY, JERRY HUBBARD 212-C W. WENDOVER AVE. GREENSBORO 27401	GP /GPM 041 AC 919 275-3828
COBO, LIONEL MICHAEL BOX 3802, DUKE EYE CTR. DURHAM 27710	OPH 032 A * AC 919 684-3799	COLEY, SILAS BODIE, JR. 815 KENMORE ROAD CHAPEL HILL 27514	P /N 032 A AC 919 929-0326	CONNER, JOEL DEWITT 571 COX RD. GASTONIA 28054	GYN 036 A AC 704 865-0033
COCHRAN, W. GERALD 410 MOCKSVILLE AVE. SALISBURY 28144	PS 080 A * AC 704 633-8561	COLLAWN, THOMAS HERBERT 1901 RANDOLPH RD. CHARLOTTE 28207	AN 060 A P AC 704 366-5311	CONRAD, ELIZABETH 1862 RUNNYMEADE RD. WINSTON-SALEM 27104	PD 034 A P L/RT 919 723-1213
CODINGTON, JOHN BONNELL 1501 MEDICAL CENTER DRIVE WILMINGTON 28401	GS 065 AC 919 763-6289	COLLETT, JAMES ROUNTREE 2203 S. STERLING ST., STE. 231 MORGANTON 28655	IM /CD 012 L/RT 704 437-0121	CONRAD, LARRY LEE R.R. 7, BOX 68-B, SPIVEY RD. WHITEVILLE 28472	EM 024 * AC 919 642-9735
CODY, RICHARD F., JR. 321 W. UNIVERSITY DR. CHAPEL HILL 27516	032 A S 919 933-2056	COLLIER, ALBERT MILFORD UNC, 535 CLINICAL SCI. BLDG CHAPEL HILL 27514	PD /ID 032 A AC 919 966-2331	CONSTEN, DANIEL JOHN 304 MCCASKEY RD. WILLIAMSTON 27892	FP 007 A AC 919 322-4021
COFFER, BERTRAM WATTS P.O. BOX 18139 2800 BLUE RIDGE RD. STE. 204 RALEIGH 27619	AN 092 A P * AC 919 781-7420	COLLIER, ROBERT 104 7TH AVE. CHADBOURN 28431	FP /IM 024 A AC 919 654-3143	CONTOGIANNIS, MARY ANN 3529 SPICEBUSH TRAIL GREENSBORO 27410	034 A R 919 748-2011
COGGESHALL, ALLAN BANCROFT 109 BEVERLY PLACE GREENSBORO 27403	GS 041 A L/RT 919 299-7190	COLLIGAN, JOSEPH FRANCIS 192 VILLAGE DRIVE JACKSONVILLE 28540	P /CHP 067 A P * AC 919 353-4165	COOK, BRIAN DOCTORS PARK APTS. U-1 GREENVILLE 27834	074 A S 919 758-3689
COGGINS, DAVID ALLEN 1131-D SALEM DR. CHARLOTTE 28209	032 A R 919 338-2000	COLLIN, CHARLES F. 1350 S. KINGS DR. CHARLOTTE 28207	GS 060 A AC 704 372-8750	COOK, CHARLES ALVIN 1108 DRESSER COURT RALEIGH 27609	NEP /IM 092 AC 919 872-8550
COHAN, RICHARD HARRIS 9 RABBITS GLEN TERRACE DURHAM 27713	DR 032 A AC 919 681-2711	COLLINGS, GILBEART H., JR. 5533 NATOMA DR. FT. MYERS, FL 33907	OM /PM 000 AC 704 885-2854	COOK, DAVID MARTIN 117-D HUNT CLUB LN. RALEIGH 27606	032 S 919 851-8871
COHEN, ARTHUR R. 200 HAWTHORNE RD. PRESBYTERIAN HOSPITAL CHARLOTTE 28211	PTH 060 A AC 704 371-4814	COLLINS, CHARLES DAVID 113 GREY FOX RUN ROCKINGHAM 28379	GS 077 A AC 919 895-6301	COOK, DAVID OWEN 2652 TANTELON PL. WINSTON-SALEM 27107	U 034 A R 919 785-0393
COHEN, KENNETH LEE UNC, DEPT. OF OPHTHALMOLOGY A 617 CLINICAL SCI. BLDG. 229-H CHAPEL HILL 27514	OPH 032 AC 919 966-5296	COLLINS, DAVID DUTROW 2825 LYNTHURST AVE., STE. 101 WINSTON-SALEM 27103	PUD /IM 034 A AC 919 765-0888	COOK, DONALD EUGENE, JR. 808 CIRCLE DR. UNION FAMILY PRACTICE, PA MONROE 28110	FP 090 AC 704 289-5443
COHEN, MYRON SCOTT UNC, 547 BURNETT-WOMACK, 229-H CHAPEL HILL 27514	ID 032 AC 919 966-2536	COLLINS, DAVID LEONARD 48 ARDSLEY AVE. NE CONCORD 28025	GS 013 A AC 704 786-1108	COOK, JAMES HOSMER 281 MCDOWELL STREET ASHEVILLE 28803	D 011 A AC 704 252-5679
COHEN, NORMAN ALLEN 1512 KIRKWOOD DR. DURHAM 27705	032 A R 919 684-8111	COLLINS, FRANCIS FARRELL, JR. 205 PAGE RD. PINEHURST 28374	IM /PUD 063 A AC 919 295-5511	COOK, JOHN EDMUND PO BOX 96 CAMDEN 27921	AN 070 A P * AC 919 338-1542
COLAVITA, PAUL G. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	IM /CD 034 A AC 919 748-4673	COLLINS, WARREN JAMES 105 GROVER STREET SHELBY 28150	GYN 023 AC 704 482-2486	COOK, JOSEPH WILLIAM 1960 RANDOLPH ROAD CHARLOTTE 28207	TS /CDS 060 A AC 704 373-1500
COLE, DEBRA WULFHORST 840 MAGNOLIA DR. WINSTON-SALEM 27103	034 A S 919 723-4036	COLLINS, WILLIAM STUART 3969 QUILLING ROAD WINSTON-SALEM 27104	P 034 A AC 919 765-7350	COOK, LELAND JAMES 420 N. CENTER ST. HICKORY 28601	GS 018 A AC 704 327-9178
		COLLINSON, FRANK WILSON MEM. HOSP. X-RAY DEPT. WILSON 27893	DR /NR 098 A AC 919 399-8112	COOK, PAUL P. 3320 WAKE FOREST RD. RALEIGH 27609	IM /ID 092 AC

COOK, PERRY FLETCHER 446 CENTRAL AVE. MERLO PARK, CA 94025	A	032 S	CORPENING, ALBERT NEWTON 141 E. MAIN ST. PO BOX 158 YOUNGSVILLE 27596	FP 092 * AC	COX, RONNIE LEWIS 624 QUAKER LANE HIGH POINT 27262	IM /CD 040 AC 919 841-6711
COOK, RUSSEL CLIFFORD 608 E. 12TH STREET WASHINGTON 27889	PD 007 P AC 919 946-4134		CORPENING, JOSEPH DURHAM 720 GROVE STREET SALISBURY 28144	PD 080 AC 704 636-5576	COX, RUSSELL JACKSON 902 COX RD. STE. C GASTONIA 28052	PD 036 A AC 704 864-6522
COOK, WESLEY ALLEN, JR. DUMC, DIV. OF NEURO-SURGERY DURHAM 27710	NS 032 A AC 919 684-3582		CORRELL, EARL EUGENE KANNAPOLIS MEDICAL CLINIC KANNAPOLIS 28081	GP 013 A P AC 704 933-2101	COX, STANLEY CULLEN, III 205 CREST ROAD SOUTHERN PINES N C 28387	OTO 063 A AC 919 295-6831
COOK, WILLIAM EUGENE 115 S. CHURCHILL DRIVE FAYETTEVILLE 28303	FP /PUD 026 A L/RT 919 484-5321		CORT, CAROLYN RAY P. O. BOX 188 BURNSVILLE 28714	PD 061 * AC 704 682-6912	COX, STEPHEN HAMPTON 2208 BROOKWOOD TRAIL SANFORD 27330	FP /A 053 A AC 919 258-6521
COOKE, JAMES HARBIN, JR. 130 LAKE CONCORD RD. CONCORD 28025	IM 013 A P AC 704 782-3114		COSGROVE, KENNETH EDWARD 510 7TH AVENUE, WEST HENDERSONVILLE 28739	IM /CD 045 A P * AC 704 692-2231	COX, WILLIAM FOSCUE 3740 KIRKLEES ROAD WINSTON-SALEM 27104	IM /GPM 034 A L/RT 919 765-2626
COOKE, RALPH MCBRIDE 631 ELK SPUR ST. ELKIN 28621	GP /GER 086 A L 919 835-3525		COSTENBADER, WM. B., JR. 131 MCDOWELL STREET ASHEVILLE 28801	OTO /HNS 011 A AC 704 254-3517	COXE, JAMES SHERWOOD, III 3410 EXECUTIVE DRIVE RALEIGH 27609	END /IM 092 A AC 919 876-7692
COONRAD, RALPH WOODWARD 1828 HILLANDALE ROAD DURHAM 27705	ORS /HS 032 A AC 919 286-1249		COSTNER, JAMES M. 113 E. 12TH ST. GREENVILLE 27834	074 A S 919 757-3217	CRACKER, ANDREW ROBERT 1809 GLEN MEADE ROAD WILMINGTON 28401	OBG 065 A AC 919 763-9833
COOPER, ARMAH JAMALE 604-B PASTEUR DR. GREENSBORO 27403	P 041 A P AC 919 855-7231		COTTER, DANIEL T. 2122 SHANNON DR. GASTONIA 28054	AN 036 A AC 704 866-2825	CRADDOCK, LARRY WAYNE 449 N. WENDOVER RD. CHARLOTTE 28211	OBG 060 A AC 704 364-3760
COOPER, EDWIN BRANAN, JR. 1902 STANTON RD. KINSTON 28501	ORS /PM 054 A P AC 919 522-2020		COTTLE, RONALD WADE 118 E. WALTER ST. WHITEVILLE 28472	FP 024 A AC 919 642-2706	CRAIG, ISAAC ALAN LENOIR MEMORIAL HOSPITAL KINSTON 28501	PTH 054 AC 919 522-7141
COOPER, HERBERT A. UNC, DB #7220 BURNETT-WOMACK BLDG. CHAPEL HILL 27599	PHO /CLP 032 AC 919 966-1178		COTTRELL, WILLIAM MILNES 758 WILLIAMSBURG DR. CONCORD 28025	AN 013 A AC 704 786-2111	CRAIG, ROBERT LAWRENCE 16 COLONIAL PLACE ASHEVILLE 28804	P 011 A L/RT
COOPER, LYLE RAY PO BOX 2685 3 NEW BERN MEDICAL ARTS CTR. NEW BERN 28560	IM 025 AC 919 638-4023		COUGHLIN, PAUL WM. FITZHENRY 624 QUAKER LANE, D-100 HIGH POINT 27262	U 040 A AC 919 886-5151	CRAIN, BARBARA JEAN 106 FOXRIDGE COURT CHAPEL HILL 27514	PTH 032 A AC 919 286-0411
COOPER, MILES ROBERT 300 S. HAWTHORNE ROAD WINSTON-SALEM 27103	ON /HEM 034 A * AC 919 748-4300		COUNCIL, ALBERT BARBEE, JR. 701 S. VAN BUREN ROAD EDEN 27288	FP 079 AC 919 623-1514	CRAIN, JACK LEE PO BOX 32861 CHARLOTTE 28232	GYN /END 060 A P AC 704 338-3149
COOPER, TIM ERVIN, JR. 3535 RANDOLPH ROAD CHARLOTTE 28211	IM /PUD 060 A AC 704 366-8240		COUNCIL, JOHN CROMARTIE, JR. 1851 E. THIRD ST., STE. 103 CHARLOTTE 28204	PD 060 AC 704 333-6659	CRANDALL, ROBERT GORDON 1900 RANDOLPH RD. STE. 900 CHARLOTTE 28207	P 060 AC 704 333-7722
COOPER, WILLIAM CORNELIUS, JR. 124 FOY DRIVE ROCKY MOUNT 27801	PD 064 AC 919 443-4031		COUNDOURIOTIS, ANDREW 1408 WASHINGTON ST. DURHAM 27701	032 A R 919 683-2785	CRANE, GEORGE WILLIAM, JR. 1200 BROAD STREET DURHAM 27705	D 032 A * AC 919 286-7903
COPE, BRIAN SCOTT 4755 COUNTRY CLUB RD. APT. 109-E WINSTON-SALEM 27104	034 A S 919 760-2482		COURIE, MAURICE NICKOLA 3145 ESSEX CIRCLE RALEIGH 27608	GYN 092 AC 919 782-3698	CRANE, LARRY MARTIN 24 CHANCERY PLACE DURHAM 27707	DR 032 A * AC 919 470-5289
COPELAND, DANA DERWARD 10004 GRADY CIRCLE RALEIGH 27609	PTH /NA 092 A AC 919 755-8260		COURREGE, MARY LOU 3208 OLEANDER DR. WILMINGTON 28403	D 065 A * AC 919 763-7333	CRANFORD, HAROLD DAVIS 22 YOUNG DR. PO BOX 747 LEXINGTON 27292	OPH 029 AC 704 249-7544
COPELAND, DONALD LEE RT. #1, BOX 684 DAVIDSON 28036	FP 060 A AC 704 892-3723		COURTS, ANDREW JOHNSON 1024 PROFESSIONAL VILLAGE GREENSBORO 27401	CHP /P 041 A AC 919 272-4262	CRANZ, OSCAR WILLIAM 1605 DUBOSE DR. PO BOX 1316 KINSTON 28501	GS 054 A L/RT 919 523-3677
COPELAND, GARY BENJAMIN 1629 OWEN DRIVE FAYETTEVILLE 28304	OPH 026 A P * AC 919 484-6141		COUTURE, MARK MOSCOE 902 COX RD. STE. G GASTONIA 28054	GS 036 A AC 704 864-6011	CRAVEN, DALLAS CLIFFORD, JR. 2104 RANDOLPH ROAD CHARLOTTE 28207	GS 060 A * AC 704 377-3900
COPPEDGE, THOMAS OLIVER, JR. 4067 ABINGDON RD. CHARLOTTE 28211	DR 060 A AC 704 366-0504		COVINGTON, CONNELL 100 SUNNYBROOK RD. STE. 202 RALEIGH 27610	PD /GP 092 AC 919 821-3180	CRAVEN, FREDERICK THORNS P. O. BOX 185 CONCORD 28025	GP 013 A * L/RT 704 782-2710
COPPRIDGE, ALTON JAMES 923 BROAD STREET DURHAM 27705	U 032 A * AC 919 286-1297		COVINGTON, DONALD SCOTT RT. #11, BOX 94 CHAPEL HILL 27514	032 A S	CRAVEN, NICHOLAS SCOTT 123 EASTSIDE DR. LEXINGTON 27292	FP /P 029 AC 704 246-2253
CORBETT, JOHN RICHARD 924 HOWE ST. SOUTHPORT 28461	R 010 A AC 919 457-5271		COVINGTON, JOHN M.C. 506 FRANKLIN STREET ROANOKE RAPIDS 27870	OPH 042 A L/RT 919 537-3644	CRAVEN, THOMAS, JR. 2001 S. 17TH STREET WILMINGTON 28401	ORS 065 A AC 919 763-7344
CORCORAN, EDWIN EMMONS 69 MCDOWELL STREET ASHEVILLE 28801	IM /GE 011 A L/RT 704 258-3870		COVINGTON, MARTIN CADE 212 W. MAIN STREET SANFORD 27330	FP 053 AC 919 776-1412	CRAWFORD, JOHN LITTLEFIELD, III 1701 OLD VILLAGE ROAD HENDERSONVILLE 28739	OPH 045 A AC 704 693-1773
CORCORAN, MELISSA C. PO BOX 2716 DURHAM 27710	032 A S 919 688-7636		COWAN, LEON KERR WILSON DERM. CLINIC, PA 702 BROAD ST. WILSON 27893	D 098 A * AC 919 291-5600	CRAWFORD, JOHN ROBERT, III 310 N. MAIN STREET SALISBURY 28144	OPH 080 A P AC 704 633-7542
CORDELL, A. ROBERT BOWMAN GRAY SCH. OF MED. WINSTON-SALEM 27103	CDS /TS 034 A AC 919 748-4672		COWAN, ROBERT JENKINS 2869 FAIRMONT ROAD WINSTON-SALEM 27106	NM /R 034 A AC 919 748-4932	CRAWFORD, LARRY CLARKE 316 N. GRAHAM-HOPEDALE RD. BURLINGTON 27215	GS /TS 001 A AC 919 227-3621
CORLEY, MALCOLM OSBOURNE ROUTE #1, BOX 391 SYLVA 28779	DR 050 AC 704 586-6371		COWARD, HOLLYJEAN 305 S. HAWTHORNE RD. APT. 8 WINSTON-SALEM 27103	034 A S 919 724-4554	CRAWFORD, MICHAEL D. PO BOX 7099 ROCKY MOUNT 27801	OTO 064 A P * AC 919 937-4100
CORNISH, MARY HELD 903 GREEN ST. DURHAM 27701	032 A R 919 966-5360		COWHERD, DAVID MCLELLAN PO BOX 3000 MOORE REGIONAL HOSP. PINEHURST 28374	CD 063 A AC 919 295-7882	CRAWFORD, ROBERT CECIL, JR. P. O. BOX 5543 HIGH POINT 27262	OBG 040 AC 919 889-5422
CORNWALL, THOMAS PAUL 2501 NORTH ST., STE. 330 RALEIGH 27607	PYA /CHP 092 A AC 919 782-4954		COX, ALEXANDER MCNEIL 325 S. MARKET STREET MADISON 27025	GP 079 A L/RT 919 548-2240	CRAWFORD, ROBERT ORR, JR. 101 CLINIC DR. TARBORO 27886	OPH 033 A * AC 919 823-2105
			COX, JOHN BALDWIN 4511 ROLLINGWOOD DR. DURHAM 27713	PUD /IM 032 A R 919 493-4674	CRAWLEY, GEORGE EDWARD, III 1113 HILLSIDE DR. GREENVILLE 27834	074 A S 919 830-0748

CREDLE, WILLIAM FRONTIS, JR. 1202 MEDICAL CENTER DRIVE WILMINGTON 28401	PUD /IM 065 A AC 919 763-8251	CROSS, ALRED CHARLES, JR. AT&T, PO BOX 25000 GREENSBORO 27420	OM /GP 041 A AC 919 279-7108	CULLEN, PETER PATRICK 250 CHARLOIS BOULEVARD WINSTON-SALEM 27103	IM 034 AC 919 768-4730
CREECH, JOSEPH JAN 707 LASSITER ST. SMITHFIELD 27577	IM 051 AC 919 934-0212	CROSS, ROBERT VANDERVOORT P. O. BOX 5128 HIGH POINT 27262	GYN 040 A L/RT 919 887-3011	CULLEY, JAMES PAUL 506 WOOD ST. TROY 27371	GS 062 A AC 919 572-3737
CREGAN, GREGG EDWARD BOX 25007 1425 PLAZA DR. WINSTON-SALEM 27114	ORS /HS 034 A AC 919 768-1270	CROSSLEY, JAMES JOHN 100 E. NORTHWOOD ST. GREENSBORO 27401	OTO /A 041 A AC 919 274-5441	CULLOM, JOSEPH WILLIAM 624 QUAKER LN., STE. 200-C PO BOX 5229 HIGH POINT 27262	GS 040 AC 919 887-3164
CREIGHTON, ROBERT KILGO 6442 SHINNWOOD RD. WILMINGTON 28403	OBG 065 AC 919 256-6356	CROUCH, WALTER LEE 1902 BREWTON COURT WILMINGTON 28403	PD 065 A RT 919 762-3619	CULP, JOHN HARRY, JR. 401 S. SHARON AMITY ROAD CHARLOTTE 28211	GYN 060 AC 704 365-0110
CREWS, DAVID ALLEN 3915 E. HAZEL LANE GREENSBORO 27408	AN 041 AC 919 299-6343	CROUNSE, ROBERT GRIFFITH RT. #2, BOX 263-T BLOUNTS CREEK 27814	D /PH 074 A AC 919 551-4629	CULPEPPER, FRED CARROLL, III 1851 E. THIRD ST., STE. 103 CHARLOTTE 28204	PD 060 AC 704 333-6659
CREWS, HARRY DENNISTON 10 MCDOWELL STREET ASHEVILLE 28801	NEP /IM 011 A AC 704 258-8545	CROUSE, JOHN ROBERT, III BOWMAN GRAY SCH. OF MED. 300 S. HAWTHORNE ROAD WINSTON-SALEM 27103	IM 034 A AC 919 748-2674	CULTON, JULIAN CLARK 1600 E. THIRD STREET CHARLOTTE 28204	OPH 060 A P AC 704 372-3300
CRIGLER, NORRIS WOLF, JR. P. O. BOX 2959 ASHEVILLE 28801	R 011 AC 704 254-4617	CROW, JIMMIE RAY 1041 NOELL LN., STE. 102 ROCKY MOUNT 27804	GS /VS 064 A AC 919 443-0026	CULTON, YANCEY GOELET, JR. 2609 N. DUKE ST. STE. 503 DURHAM 27704	GYN 032 A AC 919 471-6832
CRISCO, LARRY V. 1210 ROOSEVELT DR. CHAPEL HILL 27514	032 A S 919 968-1964	CROW, JOHN BUREN 591 CROW ROAD SHELBY 28150	FP 023 A AC 704 487-7052	CUMMINGS, CHARLES EMMETT 281 MCDOWELL STREET ASHEVILLE 28803	D 011 A P AC 704 252-5676
CRISP, SELLERS LUTHER 622 MEDICAL DR. GREENVILLE 27834	ORS 074 A AC 919 752-4613	CROW, LAURA LOMAX 202 TALLYHO TRAIL CHAPEL HILL 27514	032 A R 919 966-4131	CUMMINGS, RICHARD EDWARD 2508 N. QUEEN STREET KINSTON 28501	PS 054 AC 919 523-7082
CRISMAN, CLINTON SAMUEL 219 E. ELM STREET GRAHAM 27253	FP 001 A L 919 226-2448	CROW, SAMUEL LESLIE 418 DOCTOR'S BLDG. ASHEVILLE 28801	IM /CD 011 A L/RT 704 252-5633	CUNNINGHAM, EDWARD RAY P. O. BOX 760 BRYSON CITY 28713	GS /GP 087 A AC 704 488-2283
CRISMAN, MARK ANDERS 219 E. ELM ST. GRAHAM 27253	FP 001 A AC 919 226-2448	CROWE, JAMES EARL RADIOLOGY DEPT. NORTHERN HOSP. OF SURRY CO. MOUNT AIRY 27030	DR 086 A AC 919 789-9541	CUNNINGHAM, JOSEPH W., JR. 381 GLENDARE DR., APT. I WINSTON-SALEM 27104	034 A S 919 725-7803
CRIST, TAKEY 200 MEMORIAL DRIVE JACKSONVILLE 28540	OBG 067 A AC 919 353-2115	CROWE, JOHN ALBERT, JR HOOTS MEM. HOSPITAL BOX 68 YADKINVILLE 27055	GS 086 A AC 919 689-3111	CUNNINGHAM, MARK ALAN 202 DOCTOR'S BLDG. ASHEVILLE 28801	AN 011 A AC 704 254-1969
CRITTENDEN, SUSAN LAWRENCE 103 BAINES CT. CARY 27511	IM 092 AC 919 467-6125	CROWELL, CHARLES CARLOS, III 624 QUAKER LN., STE. 103-C HIGH POINT 27262	CD /IM 040 A AC 919 885-6168	CUNNINGHAM, PAUL R. G. ECU, BRODY BLDG., ROOM 4S-10 GREENVILLE 27834	GS 074 A AC 919 551-2620
CROCKER, DANIEL LIND 100 NASH MEDICAL ARTS MALL ROCKY MOUNT 27801	ON /HEM 064 * AC 919 443-9084	CROWELL, GORDON CAMERON ROUTE #4, BOX 999 LINCOLNTON 28092	IM 055 A AC 704 735-1430	CURL, KENNETH FRANK 720 HOSPITAL DR. COLUMBUS 28722	PD 075 A P AC 919 681-2711
CROFT, JAMES MORRIS P. O. DRAWER 849 MORGANTON 28655	FP 012 A AC 704 437-9401	CROYLE, TERENCE ALAN 110 CAPISTRANO COURT WINSTON-SALEM 27103	OPH /EM 034 A R 919 760-2646	CURL, WALTON WRIGHT 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	ORS 034 A AC 919 748-4207
CROMARTIE, WILLIAM JAMES 804 FLOB 23L-H/DEPT.MIC.& IMMUNOLOGY UNC SCHOOL OF MEDICINE CHAPEL HILL 27514	ID 032 A L 919 966-5925	CRUM, AMY ELIZABETH 2017 CRAIG ST. WINSTON-SALEM 27103	034 A S 919 725-7944	CURNES, JOHN TAYLOR BOX 3808, DUMC DEPT. OF RADIOLOGY DURHAM 27710	R /NUR 032 A AC 919 552-2275
CRONLAND, MURPHY ALAN P. O. BOX 488 LINCOLNTON 28092	GP 055 AC 704 735-3048	CRUM, BRYAN GLENN 315 TAYLOR ST., APT. O WINSTON-SALEM 27101	034 A S 704 735-3081	CURRIE, DONALD PATRICK PO BOX 24369 WINSTON-SALEM 27114	U 034 A AC 919 768-0735
CROOK, JOHN NEWMAN 56 LAKE CONCORD ROAD CONCORD 28025	GS /CDS 013 A AC 704 786-1104	CRUMLEY, CHARLES EDWIN P. O. BOX 1309 LINCOLNTON 28093	IM 055 AC 919 868-4816	CURRIN, JAMES MITCHELL, JR. 515 LAUCHWOOD DRIVE LAURINBURG 28352	FP 083 A AC 919 276-1340
CROOM, ARTHUR BASCOM 1311 ROBIN HOOD RD. HIGH POINT 27260	R 040 A L/RT 919 882-6057	CRUMMIE, ROBERT GWINN 6245 CLIFFDALE ROAD FAYETTEVILLE 28304	P/ALD 026 * AC 919 728-7019	CURRIN, JOE BADGETT, JR. 500 N. ENNIS STREET FUQUAY-VARINA 27526	IM 092 A AC 919 552-2275
CROOM, DORWYN WAYNE, II 311 S. SHORE DR. NEBO 28761	PTH 012 AC 704 438-2255	CRUMPLER, JAMES FULTON 414 PEACHTREE STREET ROCKY MOUNT 27804	PD 064 A L 919 442-1523	CURRY, CLAYTON SMITH 1309 PLAZA CHARLOTTE 28205	GYN 060 A L 704 376-5698
CROOM, ROBERT DEVANE, III NCMH, DEPT. OF SURGERY CHAPEL HILL 27514	GS 032 A AC 919 966-4416	CRUTCHER, KENNETH L. RT. #1, BOX 134-B HUDSON 28638	FP /EM 014 AC 919 728-7019	CURTIS, RICHARD FRANKLIN PO BOX 659 LENOIR 28645	R /NM 014 A P AC 704 754-8421
CROOM, ROBERT DEVANE, JR. 501 MCCASKILL AVE. MAXTON 28364	GP 078 A L/RT 919 844-3160	CRUTCHFIELD, ANDREW JACKSON 2240 CLOVERDALE AVE., STE. 93 WINSTON-SALEM 27103	IM /CD 034 A L 919 725-5669	CUTCHIN, JOSEPH HENRY, JR. P. O. BOX 67 SHERRILLS FORD 28673	GP 018 A L/RT 704 478-2431
CROSBY, EDWARD BROWN PO BOX 1980 ASHEVILLE 28802	ORS /HS 011 A P AC 704 258-0847	CRUTCHFIELD, WILLIAM MONROE 1134 N. ROAD STREET ELIZABETH CITY 27909	OTO /PS 070 AC 919 335-2923	CUTCHIN, LAWRENCE MCGILBRA RT. #3, BOX 325 TARBORO 27886	IM /PD 033 A P * AC 919 823-2105
CROSBY, IVAN KEITH 2827 LYNDHURST AVE., #205-A WINSTON-SALEM 27103	CDS /TS 034 A P AC 919 768-9510	CRUTCHLEY, WILLIAM F., JR. 1134 N. ROAD STREET ELIZABETH CITY 27909	GS 070 A P AC 919 338-3909	CUTHRELL, WILLIAM VANCE 300 S. HAWTHORNE RD. DIV. MATERNAL-FETAL MED/OBGYN WINSTON-SALEM 27103	OBG /NPM 034 A R 919 748-4595
CROSKERY, RICHARD WILLIAM 1705 W. 6TH ST., BLDG. E GREENVILLE 27834	IM 074 A AC 919 752-6101	CRUZ, CORAZON SAMODIO ROUTE #2, BOX 310 LINCOLNTON 28092	R /GP 055 AC 704 435-4586	CUTSON, TONI MICHELE 9 GORHAM PL. DURHAM 27705	FP /GER 032 A R 919 383-0615
CROSLAND, DAVID BAILEY 1054 BURRAGE ROAD, N. E. CONCORD 28025	OBG 013 A P AC 704 788-4151	CRUZ, JULIA MARGARITA 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	ON 034 A AC 919 748-2075	CYKERT, SAMUEL 711 HERMITAGE ROAD BURLINGTON 27215	IM 001 A AC 919 226-9317
CROSS, ALAN WHITEMORE CLINICAL SCIENCES BLDG. UNC, DEPT. OF PEDIATRICS CHAPEL HILL 27514	PD /GPM 032 A AC 919 962-1136	CUBBERLEY, CHARLES LAMB, JR. P. O. BOX 95 WILSON 27894	FP 098 A L/RT 919 243-4638	CZERMAK, CHARLES LOUIS, JR. P. O. BOX 1781 BOONE 28607	DR 095 AC 704 264-6984
CROSS, ALMON RUFUS 414 HILLCREST DRIVE HIGH POINT 27262	OBG 040 A L/RT 919 884-1236	CUENCA, NELIDA ALBA 6748-B IRON GATE DR. FAYETTEVILLE 28306	PD /PH 026 A AC		

D'ERCOLE, AUGUSTINE JOSEPH PDE /NPM	032	DANIEL, THOMAS BRANTLEY	U 092	DAVIS, DWIGHT GROOME, JR.	GS /TS 092
UNC CB #7220	AC	110 SELMA RD.	A L/RT	5825 MAPLE RIDGE RD.	AC
BURNETT-WOMACK 509		PO BOX 845		RALEIGH 27609	919 876-3671
DEPT. OF PEDIATRICS		WENDELL 27591	919 365-5550	DAVIS, EDWARD LANGSTON	IM /CD 034
CHAPEL HILL 27514	919 966-4435	DANIEL, THOMAS MANNING	PD 051	1809 HATTIE CIRCLE	AC
D'LUGIN, JAY JEFFREY	034	501 SELMA RD.	A P AC	WINSTON-SALEM 27105	919 723-4864
3421 OLD VINEYARD RD. #C-34	A S	PO BOX 568		DAVIS, GEORGE EDWARD	PD 074
WINSTON-SALEM 27103	919 768-2093	SMITHFIELD 27577	919 934-7123	8 MEDICAL PAVILION	A AC
D'SOUZA, VINCENT J.	034	DANIEL, WALTER EUGENE	AN 092	GREENVILLE 27834	919 758-1750
300 S. HAWTHORNE RD.	A AC	312 BUNCOMBE STREET	A AC	DAVIS, GEORGE THOMAS	OBG 076
WINSTON-SALEM 27103	919 748-4435	RALEIGH 27609	919 832-7988	230 FOUST STREET	AC
DACEY, RALPH G., JR.	NS 032	DANIELS, CHARLES A.	PTH 096	ASHEBORO 27203	919 625-6128
UNC 148	A * AC	DEPT. OF PATHOLOGY	A AC	DAVIS, GLENN MILLER	PS 092
BURNETT-WOMACK BLDG.		PO BOX 8001		2501 NORTH ST. STE. 500	* AC
DIV. OF NEUROSURGERY-229-H		GOLDSBORO 27533	919 735-1530	RALEIGH 27609	919 782-7762
CHAPEL HILL 27514	919 966-1374	DANIS, MARION	IM 032	DAVIS, JACK BEASON	P 001
DACUS, ROBERT MABRY, III	OBG 029	UNC DEPT. OF MEDICINE	AC	1946 MARTIN STREET	A AC
1302 LEXINGTON AVENUE	A P AC	5025-A OLD CLINIC BLDG.		BURLINGTON 27215	919 228-0581
THOMASVILLE 27360	919 475-6139	CHAPEL HILL 27514	919 966-2276	DAVIS, JAMES EVANS	GS /TS 032
DAGENHART, TIMOTHY LEE	FP 074	DANOFF, JASCHA WOLSEY	CHP /P 074	2609 N. DUKE ST., STE. 402	A P * AC
322 SPRINGHILL RD.	A S	ECU, DEPT. OF PSYCHIATRY	A AC	DURHAM 27704	919 471-8439
GREENVILLE 27834	919 830-1242	GREENVILLE 27858	919 551-2660	DAVIS, JAMES HOWELL	CDS /TS 092
DAHNNERS, LAURENCE E.	ORS 032	DARDEN, JAMES LEE, JR.	FP 008	2800 BLUE RIDGE BLVD., STE 306	A AC
UNC, 237	A AC	ACADEMY ST., MED. ARTS BLDG.	AC	RALEIGH 27607	919 782-7900
BURNETT-WOMACK BLDG.		AHOSKIE 27910	919 332-3548	DAVIS, JAMES NORMAN	N 032
229-H, CB #7055		DARNELL, LINDA RUTH	034	V. A. MEDICAL CTR., NEUROLOGY	AC
CHAPEL HILL 27514	919 966-2039	2 MCCORMICK DR.	A S	DURHAM 27705	919 286-6956
DAINER, PAUL M.	HEM /ON 074	HACKESSIN, DE 19707	919 723-9612	DAVIS, JOHN D., JR.	FP 095
ECU, 3E-106 BRODY BLDG.	A AC	DARSIE, JAMES LEIGH	OTO 014	P. O. BOX 8	A AC
GREENVILLE 27858	919 551-2560	MULBERRY MEDICAL PARK	AC	BLOWING ROCK 28605	704 295-3116
DALE, FREDERICK PAYNE	GS 054	LENOIR 28645	704 754-2464	DAVIS, JOHN PRESTON	IM 034
P. O. BOX 1316	A RT	DASCOMB, HARRY EMERSON	IM /ID 092	329 BANBURY ROAD	A L/RT
KINSTON 28501	919 522-1626	3000 NEW BERN AVENUE	A AC	WINSTON-SALEM 27104	919 768-5390
DALE, GROVER CLEVELAND	GP 096	RALEIGH 27610	919 755-8520	DAVIS, JOHN WOODROW	FP 018
3293 RANDY ROAD	A L	DASHER, GEORGE ALBERT	U 060	24 SECOND AVENUE, N. E.	A AC
LANCASTER, PA 17601	717 898-8033	1333 ROMANY ROAD	A AC	HICKORY 28601	704 328-2231
DALEY, JOHN GILBERT	OBG /END 065	CHARLOTTE 28204	704 372-5180	DAVIS, JUNIUS WEEKS, JR.	PD /PH 025
2143 ECHO LANE	AC	DAUGHERTY, HARRY KARRICK	CDS /TS 060	201 ABNER NASH ROAD	L/RT
WILMINGTON 28403	919 343-0161	1960 RANDOLPH ROAD	A P AC	NEW BERN 28562	919 633-4121
DALEY, MICHAEL BERNARD	IM 062	CHARLOTTE 28207	704 373-1500	DAVIS, KEITH ALAN	032
PO BOX 887	AC	DAUGHERTY, JANICE ELAINE	FP 074	102 RAINBOW DR.	A S
TROY 27371	919 572-3779	P. O. BOX 339	A AC	CARRBORO 27510	919 968-1728
DALLDORF, FREDERIC GILBERT	PTH 032	BETHEL 27812	919 551-4614	DAVIS, MICHAEL LEE	IM 025
308 WOODHAVEN RD.	AC	DAUGHRIDGE, CLAY C., JR.	IM /CD 063	EASTERN CAROLINA INT.MED.	A P AC
CHAPEL HILL 27514	919 966-4541	P. O. BOX 519	A AC	P. O. BOX 68	
DALTON, BENNIE BOOKER	GP 076	205 PAGE ROAD	919 295-5511	POLLOCKSVILLE 28573	919 224-4591
606 WAYNICK, BOX 8101	A L/RT	PINEHURST 28374	R 008	DAVIS, NELSON PARKE, II	GS /CDS 098
WRIGHTSVILLE BEACH 28480	919 256-5956	DAUGHRIDGE, TRUMAN GIFFIN	A AC	1700 S. TARBORO STREET	A AC
DALTON, CLAUDETTE ELLIS HARLOE	AN 060	706 WOODLAWN DRIVE	919 332-8121	WILSON 27893	919 399-2200
3205 GLEN TERRACE	A AC	AHOSKIE 27910	FP /GER 095	DAVIS, OWEN KIDDER	OBG /END 034
CHARLOTTE 28211	704 364-6228	DAVANT, CHARLES, III	095	BRIGHAM AND WOMENS HOSP.	A R
DALTON, HORACE MILTON	OPH 054	RT. #2, BOX 5, CHESTNUT DR.	A AC	75 FRANCIS ST.	
KINSTON CLINIC, NORTH	A L/RT	BLOWING ROCK 28605	704 295-3116	BOSTON, MA 02115	617 732-6987
KINSTON 28501	919 522-1611	DAVANT, CHARLES, JR.	FP /OPH 095	DAVIS, PHILIP BIBB	GS 041
DALTON, JAMES D., JR.	032	P. O. BOX 8	A AC	1125 GATEHOUSE RD.	A L
311 S. LASALLE ST. APT. 5-E	A S	BLOWING ROCK 28605	704 295-3116	HIGH POINT 27260	305 276-6779
DURHAM 27705	919 383-4817	DAVENPORT, JOHN EMMETT	IM 060	DAVIS, PHILIP COLEMAN	OBG 011
DALY, JAMES KEARNEY	DR /P 054	3535 RANDOLPH RD.	A AC	93 VICTORIA ROAD	A P AC
2711 WESTBROOKE DR.	* AC	CHARLOTTE 28207	704 847-3380	ASHEVILLE 28801	704 253-4821
KINSTON 28501	919 522-3443	DAVIDIAN, VARTAN AMBAR, JR.	PS /GS 092	DAVIS, ROBERT ALDEN	GS 008
DALY, JOHN T.	PTH /FOP 032	1112 DRESSER COURT	A * AC	BERTIE MEMORIAL HOSPITAL	A AC
P. O. BOX 15337	A AC	RALEIGH 27609	919 872-2616	WINDSOR 27983	919 794-4865
DURHAM 27704	919 477-6742	DAVIDSON, ANDREW	OPH 025	DAVIS, ROBERT LEE	DR /NM 004
DALY, LIAM N.	P 026	802 MCCARTHY BLVD.	A P AC	515 CAMDEN ROAD	A P AC
1262 OLIVER ST.	A AC	NEW BERN 28560	919 633-4183	WADESBORO 28170	704 694-3597
FAYETTEVILLE 28304	919 484-5151	DAVIS, ANDREW CALVIN	OPH 012	DAVIS, ROBERT NICHOLAS	D 041
DAMBECK, ALLYN BENARD	EM 082	335 E. PARKER RD.	AC	600 WALTER REED DRIVE	* AC
312 FOX LAKE DRIVE	A AC	MORGANTON 28655	704 433-6220	GREENSBORO 27403	919 294-6555
CLINTON 28328	919 592-8511	DAVIS, ARTHUR EMERSON, JR.	PTH /A 092	DAVIS, RONALD L., III	U 041
DAMERON, THOMAS BARKER, JR.	ORS 092	1209 COWPER DRIVE	AC	200 E. NORTHWOOD ST. STE. 302	A AC
P. O. BOX 10707	A P * AC	RALEIGH 27608	919 833-9839	GREENSBORO 27401	919 275-6115
RALEIGH 27605	919 781-5600	DAVIS, CLINTON B., II	ORS 032	DAVIS, RUFUS JACKSON	GP 036
DANFORD, JERRY LEE	GYN 032	2609 N. DUKE ST.	A AC	P. O. BOX 337	A AC
1830 HILLANDALE ROAD	AC	DURHAM 27704	919 471-8431	CRAMERTON 28032	704 825-8266
DURHAM 27705	919 383-5531	DAVIS, CORNELIUS A., III	032	DAVIS, THOMAS R.	OBG 000
DANIEL, CROWELL TURNER, JR.	OBG 026	501-G DOWNING ST.	A S	7026 VALLEY HAVEN DR.	A R
1641 OWEN DRIVE	A AC	DURHAM 27705	919 286-7291	CHARLOTTE 28211	704 365-5144
FAYETTEVILLE 28304	919 484-6474	DAVIS, COURTLAND HARWELL, JR.	NS 034	DAVIS, TIMOTHY EUGENE	GS /CRS 041
DANIEL, JOHN THOMAS, JR.	GS 032	2525 WARWICK RD.	L/RT	1317 N. ELM ST., STE. #5	A P AC
415 DUNSTAN STREET	A P * AC	WINSTON-SALEM 27104		GREENSBORO 27401	919 274-8444
DURHAM 27707	919 682-7378	DAVIS, DANIEL WHITAKER	FP 004	DAVIS, WALTER ETCHHELLS	ON /HEM 032
DANIEL, LOUIE SAMUEL	FP 039	402 MORVEN ROAD	A AC	1830 HILLANDALE ROAD	A * AC
124 PINE CONE DRIVE	A L/RT	WADESBORO 28170	704 694-2129	DURHAM 27705	919 383-5531
OXFORD 27565	919 693-6735	DAVIS, DONALD FALES	P /N 096	DAVIS, WAYNE EDWARD	U 034
DANIEL, LOUIS BROADDUS, JR.	ORS 063	ROUTE #10, BOX 46	AC	504 FORSYTH MEDICAL PARK	A AC
PINEHURST SURGICAL CLINIC	A * AC	GOLDSBORO 27530	919 778-3973	WINSTON-SALEM 27103	919 765-4882
PINEHURST 28374	919 295-1042				

DAVIS, WILLIAM HERSEY, JR. 723 N. STRATFORD RD. WINSTON-SALEM 27104	ADL /PD 034 L/RT 919 724-3312	DEERING, TIMOTHY BRADFORD 30 CHOCTAW STREET ASHEVILLE 28801	GE /IM 011 A P AC 704 254-0881	DENNY, KEVIN M. 1900 RANDOLPH RD. CHARLOTTE 28207	P 060 AC 704 333-7722
DAWKINS, HOWARD GARRETT, JR. 2577 STANTONSBURG ROAD GREENVILLE 27834	PS /GS 074 A AC 919 752-1406	DEES, JOHN ESSARY DUKE HOSPITAL DURHAM 27710	U 032 A L/RT 919 684-6928	DENUNA, VICENTE BOGADOR 28 N. LOGAN STREET MARION 28752	GS /ABS 059 AC 704 652-5797
DAWSON, ROBERT EDWARD 512 SIMMONS STREET DURHAM 27701	OPH 032 A L/RT 919 682-7175	DEES, JOHN TYLER COURTHOUSE AVE., PO BOX 815 BURGAW 28425	FP /PH 065 A P * AC 919 259-2161	DENUNZIO, NEIL L. PO BOX 9 WINFALL 27985	IM 070 AC 919 426-9172
DAY, JAMES WILLIAM 3310 BROOKVIEW HILLS BLVD. #203A WINSTON-SALEM 27103	IM 034 A AC 919 765-9631	DEES, SUSAN COONS BOX 2913, DUMC DURHAM 27710	PDA /PD 032 A * L 919 684-2933	DEPERCEL, JOHN LESLIE 521 11TH AVE. CIRCLE NW HICKORY 28601	ORS /GP 018 A P AC 704 324-2800
DAY, PHILIP MARK 198 LAKESIDE DR. GROVER 28073	GP 023 A P AC 704 937-7905	DEFRAZZO, ANTHONY JOHN 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	PS 034 A AC 919 748-4500	DERBYSHIRE, JOHN STUART 1400 BROOKWOOD DR. PO BOX 7828 ROCKY MOUNT 27804	IM 064 A AC 919 977-6746
DE LA GARZA, CARLOS A. 24 SECOND AVE., NE HICKORY 28601	FP 018 A AC 704 328-2231	DEGNORE, LISA TIFFANY 432 FEARRINGTON POST PITTSBORO 27312	R 032 919 966-4131	DERIAN, THOMAS C. 101 CONNER DR. STE. 200 CHAPEL HILL 27514	ORS 032 A AC 919 929-7796
DE LISSIO, MICHAEL G. 101 S. W. CARY PARKWAY CARY 27511	GE 092 AC 919 469-1858	DEGRAW, MARTIN CRAWFORD 810 KENNEDY AVE. NEW BERN 28560	FP 025 A AC 919 633-1685	DERRICK, WILLIAM ADAM, JR. ASU HEALTH SERVICES BOONE 28608	ADL /GP 095 AC 704 262-3100
DE-LA-TORRE, ERNESTO ESTEBAN 3080 TRENWEST DRIVE WINSTON-SALEM 27103	NS 034 A AC 919 765-3750	DEGUEHERY, LINDSEY E. 1700 S. TARBORO ST. WILSON 27893	PUD 098 A AC 919 291-1300	DESKINS, WILLIAM CYPHERS 1420 E. FRANKLIN ST. MONROE 28110	FP 090 A AC 704 289-8427
DE-VARONA, JOSE MIGUEL 215 MEMORIAL DRIVE JACKSONVILLE 28540	FP /P 067 AC 919 353-5118	DEHOFF, PHILIP WILLIAM 3535 RANDOLPH RD., STE. 105 CHARLOTTE 28211	OBG 060 A AC 704 365-0470	DESROCHERS, DAVID ALAN 608 E. 12TH STREET WASHINGTON 27889	DR 007 * AC 919 946-2137
DEALY, DARILYN HEDDEN 445 BILTMORE CTR., STE. 404 ASHEVILLE 28801	ID /IM 011 AC 704 258-9635	DEJUAN, EUGENE, JR. BOX 3802, DUKE EYE CENTER DURHAM 27710	OPH 032 A AC 919 684-5631	DESTEFANO, NEIL MICHAEL PO BOX 780 REIDSVILLE 27320	GS /GYN 079 * AC 919 349-8484
DEAN, CLAYTON CLEWIS 702 STATE FARM RD. BOONE 28607	GS /CDS 095 A AC 704 264-7650	DEL PERO, ROBERT ALAN 301 BOWMAN GRAY DR. GREENVILLE 27834	OPH 074 A P AC 919 758-4300	DETERDING, JAMES LEROY 208 W. WENDOVER AVENUE GREENSBORO 27401	NEP /IM 041 A AC 919 379-9708
DEAN, JOAN C. B. 1227 MARTIN ST. WINSTON-SALEM 27103	034 A R 919 748-2382	DELEON, ARTURO DEJESUS 1109 DRESSER COURT RALEIGH 27609	FP /IM 092 AC 919 872-4900	DETWILER, DONALD GENE 756 WEATHERGREEN DR. RALEIGH 27615	DR 092 A AC 919 783-3023
DEAN, JOHN NEWELL 147 ASHLAND AVENUE ASHEVILLE 28801	IM 011 A AC 704 258-1188	DELEON, ROSEMARY ESPINO 2903 ADRIAN COURT RALEIGH 27604	AN 092 AC 919 829-9550	DEUTSCH, MARGARET ANN 605 JONES FERRY RD. #DD9 CARRBORO 27510	ON /HEM 032 R 919 684-8111
DEAN, RICHARD HENRY 300 S. HAWTHORNE RD. DEPT. OF SURGERY WINSTON-SALEM 27103	GS 034 A AC 919 748-4443	DELIGIO, JAMES J. KITTY HAWK MED. CTR. KITTY HAWK 27949	FP /HYP 070 AC 919 261-3848	DEVILLA, AMADA RUIZ 115 LONG CIRCLE ROANOKE RAPIDS 27870	OPH 042 A P AC 919 537-8193
DEAN, ROBERT JAMES 2321 STALLINGS DR. KINSTON 28501	AN 054 A AC 919 522-3177	DELLASEGA, MARK 1705 W. SIXTH ST. GREENVILLE 27834	IM /GE 074 A AC 919 752-6101	DEVINE, GERARD MICHAEL 395 WEST 27TH STREET LUMBERTON 28358	IM 078 A AC 919 739-7551
DEANG, CEDRIC RODRIGUEZ 1300 LEXINGTON AVENUE THOMASVILLE 27360	GS 029 AC 919 475-2376	DELLINGER, CLYDE JAMES P. O. BOX 8 DREXEL 28619	FP 012 A AC 704 437-3634	DEVINE, LEIBERT EARL P. O. BOX 298 EDENTON 27932	FP 021 P AC 919 482-7774
DEANGELIS, WASHINGTON J. 1001 S. HAMILTON ROAD CHAPEL HILL 27514	FP /DIA 032 AC 919 968-4551	DELTA, BASIL GEORGE 249 BILLINGSLEY ROAD CHARLOTTE 28211	GPM /PD 060 AC 704 375-1885	DEWALD, JONATHAN GLEN 1700 S. TARBORO ST. WILSON 27893	IM 098 A AC 919 291-1300
DEANS, WILLIAM RONALD, JR. 2412 PROFESSIONAL DR. ROCKY MOUNT 27804	N 064 A AC 919 443-0041	DELUCA, PAMELA S. 1815 BRANTLEY ST. WINSTON-SALEM 27103	S 034 A S 919 723-9695	DEWALT, JOSEPH LEO IRIS LANE CHAPEL HILL 27514	IM /ORS 032 AC 919 966-2281
DEAS, DAVID JOHN 239 WILMOT DR. GASTONIA 28054	P 036 A P AC 704 867-2338	DEMALLIE, DIANE A. 311 S. LASALLE ST. APT. 47B DURHAM 27705	S 032 A S 919 723-9695	DEWAN, DAVID MICHAEL 3333 SILAS CREEK PKWY. FORSYTH MEM. HOSPITAL WINSTON-SALEM 27103	AN 034 A AC 919 760-5259
DEATON, HUGO L. 420 N. CENTER STREET HICKORY 28601	GS /TS 018 A AC 704 327-9178	DEMAS, RONALD CHARLES 2115 EAST 7TH ST., STE. 101 CHARLOTTE 28204	N /PM 060 A AC 704 372-3714	DEWITT, DONALD EVERETT 321 PINWOOD DR. GREENVILLE 27834	FP 074 A AC 919 551-4614
DEATON, PHILIP CARL 200 E. NORTHWOOD ST. STE. 204 GREENSBORO 27401	NS 041 A AC 919 379-0077	DEMASON, MARC 515 THOMPSON ST., STE. B EDEN 27288	GS 079 A AC 919 623-9118	DEYTON, JOHN WESLEY, JR. 124 MEMORIAL DRIVE JACKSONVILLE 28540	OBG 067 A P AC 919 353-7741
DEATON, PLEASANT PAUL PO BOX 700 VALDESE 28690	GS 012 A AC 704 874-0555	DENHAM, JOHN WILLIAM 3415 THORESBY CT. WINSTON-SALEM 27104	IM /FP 034 A AC 919 760-5782	DEYTON, ROBERT GUY, JR. 101 BETHESDA DRIVE GREENVILLE 27834	OBG 074 A P AC 919 758-4181
DEBECK, THOMAS WADE 29 SANDY POINT FIGURE EIGHT ISLAND WILMINGTON 28405	N 065 A AC 919 272-8488	DENNIS, KENNETH MICHAEL 1 SMATHERS STREET CLYDE 28721	PD /ADL 044 * AC 704 627-9226	DHANDE, VIJAY G. 6434 BURLWOOD RD. CHARLOTTE 28211	060 A AC 704 371-4944
DEBNAM, GEORGE CLYDE 524 S. BLOUNT STREET RALEIGH 27601	GP /OBS 092 A AC 919 832-1667	DENNIS, PATRICK MICHAEL DOWN EAST EYE CENTER, PA 2104 N. HERRITAGE ST. KINSTON 28501	OPH 054 AC 919 523-9599	DHATT, MALKIAT SINGH P. O. BOX 2028 ASHEBORO 27203	CD /IM 076 A AC 919 629-4176
DEBOGORSKI, JOZEFA PO BOX 6028 GREENVILLE 27834	PM 074 A AC 919 551-4440	DENNIS, RONALD GREENE 3535 RANDOLPH ROAD CHARLOTTE 28211	OTO 060 A AC 704 365-0711	DHILLON, TEJPAL SINGH P. O. BOX 1688 SMITHFIELD 27577	ORS 051 A AC 919 934-3091
DECLERCK, PAUL ALBERT 2503 N. QUEEN STREET KINSTON 28501	FP 054 A AC 919 522-3717	DENNIS, STEVEN HENRY VANCE MEDICAL ARTS BLDG. HENDERSON 27536	OTO 091 AC 919 492-9720	DIAB, ALBERT JOSEPH 3801 COMPUTER DRIVE RALEIGH 27609	IM 092 AC 919 787-5217
DEEKENS, STEWART ANDREWS, JR. 350 E. PARKER ROAD MORGANTON 28655	FP 012 A AC 704 437-9401	DENNISON, HERBERT EUGENE 630 FIFTH AVENUE, WEST HENDERSONVILLE 28739	OBG 045 AC 704 692-2258	DIAMOND, JOHN MICHAEL ECU, DEPT. OF PSYCHIATRY GREENVILLE 27858	P /CHP 074 A AC 919 551-2673
DEEPE, ROBERT PO BOX 458 ROANOKE RAPIDS 27870	GS 042 AC 919 535-1585	DENNY, FLOYD WOLFE, JR. BOX 3, WING D, CB #7240 UNC SCHOOL OF MEDICINE CHAPEL HILL 27599	PD /ID 032 AC 919 962-1136	DIAZ-BUXO, JOSE ANTONIO 928 BAXTER STREET CHARLOTTE 28204	NEP /IM 060 A AC 704 374-1321

DICKERSON, ANDREW JACKSON 110 WAYNEWOOD DR. WAYNESVILLE 28786	GS /TS 044 L/RT 704 456-5002	DIOQUINO, RENATO MERCADO 240 S. MAIN STREET MARION 28752	IM /PUD 059 AC 704 652-2214	DORMAN, BRUCE HUGH 2001 S. 17TH STREET WILMINGTON 28401	ORS 065 A AC 919 763-7344
DICKERSON, LEON ARCHIBALD, JR. 2600 E. 7TH ST. CHARLOTTE 28204	ORS 060 A AC 704 372-9820	DIROCCO, JUDITH GERALYN 1725-B FRANCISCAN TERR. WINSTON-SALEM 27127	034 A S 919 788-4844	DORNBLAZER, GEORGE HENRY 6511 CROSSFIELD LN. CHARLOTTE 28226	P 060 AC 704 377-4243
DICKEY, RICHARD ALLEN PO BOX 1460 OLD MOCKSVILLE RD. STATESVILLE 28677	END /IM 049 AC 704 878-2011	DIXON, DIRK STANCILL, SR. P. O. BOX 1532 LEXINGTON 27292	R 029 AC 919 249-1515	DORSETT, FLETCHER I. 2020 HOLLYROOD STREET WINSTON-SALEM 27107	IM 034 A L/RT 919 723-5732
DICKIE, JAMES WILLIAM 448 WAYNE DRIVE WILMINGTON 28403	GS 065 A L/RT 919 762-8429	DIXON, JAMES WELLINGTON P. O. BOX 20085 GREENSBORO 27420	GS /GP 041 AC 919 378-1957	DORSETT, JOHN DEWEY, JR. 1851 E. THIRD STREET CHARLOTTE 28204	IM /CD 060 A * AC 704 333-4175
DICKINSON, MICHAEL WRIGHT 420 N. CENTER STREET HICKORY 28601	GS /CDS 018 A AC 704 327-9178	DIXON, JOHN ELLIOTT P. O. BOX 427 AYDEN 28513	FP 074 A AC 919 746-3116	DORSEY, DEANNA LYNN 406 LOCKLAND AVE. WINSTON-SALEM 27103	034 A S 919 723-3042
DICKSON, ALBERT PICKETT, III P. O. BOX 217 NEWLAND 28657	FP 006 AC 704 733-9276	DIXON, ROBERT ROSS 240 18TH ST. CIRCLE, SE HICKORY 28602	PD 018 P AC 704 322-2550	DORTON, PHILLIP KEVIN 1302 LEXINGTON AVE. THOMASVILLE 27360	OBG 029 A AC 919 475-6139
DICKSON, BRICE TEMPELTON, JR. 837 ATHENIAN DR. GASTONIA 28052	IM 036 A L/RT 704 867-7656	DIXON, SEWELL HINTON, JR. 1317 N. ELM ST., STE. 1 GREENSBORO 27401	CDS /TS 041 A AC 919 373-8245	DOSS, GEORGE WESTON HIGHLAND HOSPITAL P. O. BOX 1101 ASHEVILLE 28802	P 011 A AC 704 254-3201
DICKSON, F. KEELS 485 N. WENDOVER RD. CHARLOTTE 28211	OTO /A 060 A AC 704 366-7921	DIXON, GEORGE RANDALL 90 HOSPITAL DR. CLYDE 28721	DR 044 AC 704 452-2260	DOTTERER, ELIZABETH JAMES 118 HAWKINS AVENUE SANFORD 27330	IM /GYN 053 A L 919 776-5723
DICKSON, ROBERT TRULOCK 806 WESTMINISTER LANE KINSTON 28501	GE 054 AC 919 522-3072	DOANE, JOHN HORTON, JR. 250 CHARLOIS BOULEVARD WINSTON-SALEM 27103	IM /CD 034 A AC 919 768-4730	DOTTERER, JOHN EMANUEL 118 HAWKINS AVENUE SANFORD 27330	GER /FP 053 A L 919 776-5723
DICKSTEIN, SHERRY ANNE 1305 W. WENDOVER AVE. GREENSBORO 27408	OBG 041 A AC 919 275-5391	DOBSON, LOLO ALLEN, JR. 115 COOK ST. PO BOX 1058 MT. PLEASANT 28124	FP 013 A * AC 704 436-6521	DOUGLAS, ARTHUR EUGENE, JR. 4 TRINITY DR. LUMBERTON 28358	P 078 A AC 919 738-8230
DIECKMANN, MERWIN R. 209-B MCLEAN DR. SWANSBORO 28584	FP 074 A AC 919 393-6543	DOBYNS, RICHARD JOSEPH 2517 OLD SALISBURY RD. WINSTON-SALEM 27127	034 A S 919 785-2274	DOUGLAS, BENJAMIN 103 ASHEVILLE HIGHWAY SYLVA 28779	OTO /HNS 050 A AC 704 586-7474
DIETRICK, RONALD BURTON KENANSVILLE SURGICAL CLINIC BOX 845 KENANSVILLE 28349	GS /TS 031 A AC 919 296-0545	DODD, PATRICIA 325 VANDERBILT RD. ASHEVILLE 28803	GS /GYN 011 L/RT 704 274-2795	DOUGLAS, EDGAR SMITH, JR. 101 BETHESDA DRIVE GREENVILLE 27834	OBG 074 A AC 919 758-4181
DI FIORE, RALPH J. 200 DOCTORS DR. STE. J JACKSONVILLE 28540	ORS 067 A AC 919 353-1412	DOFFERMYRE, LUTHER RANDOLPH P. O. BOX 1011 DUNN 28334	FP 043 A L 919 892-4151	DOUGLAS, JOHN MUNROE 4107 POMFRET LN. CHARLOTTE 28211	IM 060 A L/RT 704 366-0267
DIGBY, DONALD JOE 3312 BATTLEGROUND AVE. GREENSBORO 27410	OPH 041 A AC 919 282-5000	DOLAN, DANIEL LYNN 9 BAIRD MOUNTAIN ROAD WEST ASHEVILLE 28804	IM /CD 011 A AC 704 658-2677	DOUGLAS, MICHAEL ERIN 301 BIRCH STREET BOONE 28607	AN 095 A P AC 704 264-4691
DIGBY, RONALD WYMAN 1896 REMOUNT ROAD GASTONIA 28054	CD /IM 036 A AC 704 867-0735	DOLINAR, LOUIS JOHN ECU SCHOOL OF MEDICINE DEPT. OF PSYCHIATRY GREENVILLE 27858	P 074 A AC 919 551-2986	DOUGLASS, DONALD PERRY 401 WESTWOOD AVENUE HIGH POINT 27262	GS /TS 040 A P AC 919 887-3164
DILL, DAVID LEE 203 CEDAR ROCK EST. DR. LENOIR 28645	DR 014 A AC 704 754-2283	DOLLS, KENNETH JOHN 401 MULBERRY ST. STE. 103 LENOIR 28645	ORS 014 A P AC 704 758-7091	DOVER, CARL THOMAS, JR. 312 S. MCCASKEY RD. PO BOX 845 WILLIAMSTON 27892	PD 007 A AC 919 792-8101
DILL, FRANKLIN GEORGE 124 MEMORIAL DRIVE JACKSONVILLE 28540	OBG 067 A P AC 919 353-7741	DOMBY, WILLIAM ROGER 30 CHOCTAW STREET ASHEVILLE 28801	PUD /IM 011 A AC 704 255-7733	DOWDESWELL, ROBERT HORTON 735 SIXTH AVE., WEST HENDERSONVILLE 28739	PTH 045 A AC 704 697-6781
DILLARD, MARGARET BLEICK 104 LISA LANE GREENVILLE 27858	IM 074 A R 919 551-4100	DONAHUE, MICHAEL JOSEPH 1505 MEDICAL CENTER DRIVE WILMINGTON 28401	D 065 A P AC 919 763-1555	DOWDY, DAVID A. 6720 CISCAYNE PLACE CHARLOTTE 28211	CD 060 A P AC 704 322-5117
DILLARD, SAM BOOKER 1530 QUEENS RD. #1204 CHARLOTTE 28207	D 060 A AC 704 333-8811	DONALD, WILLIAM BLANTON, JR. 624 QUAKER LANE, SUITE 202-C HIGH POINT 27262	OPH 040 A * AC 919 884-2242	DOWNEY, LUCY MCMASTER BIDDLE 2000 GUMTREE RD. ASHEBORO 27203	PD 076 A AC
DILLINGHAM, WILLIAM STEPHEN 479 N. WENDOVER RD. CHARLOTTE 28211	P 060 A P AC 704 365-3185	DONAYRE, LUIS ERNESTO 144 JEFFERSON STREET WHITEVILLE 28472	GS /TS 024 A AC 919 642-3136	DOWNES, POSEY EDGAR, JR. 1928 RANDOLPH ROAD CHARLOTTE 28207	OBG 060 AC 704 376-1612
DILLON, DANIEL CHRISTIAN 11 13TH AVENUE, N. E. HICKORY 28601	IM /GE 018 A P AC 704 322-1068	DONGRE, SHRIKUMAR SHRIPAD 1216 BROOK ACRES TRAIL CLEMMONS 27012	AN 034 AC 919 760-5180	DOYLE, OWEN WILLIAM 1013 PROFESSIONAL VILLAGE GREENSBORO 27401	DR 041 A AC 919 275-6481
DILWORTH, JOHN HERBERT 1505 WESTOVER TERR. GREENSBORO 27408	ORS /HS 041 A AC 919 275-0927	DONNELLY, GRANT LESTER 240 WINDSOR DRIVE SALISBURY 28144	PUD 080 A RT 704 637-0905	DOYLE, RAYMOND THOMAS 1400 BROOKWOOD DR. PO BOX 7828 ROCKY MOUNT 27804	IM /HEM 064 A AC 919 977-6746
DIMEO, MICHAEL JOSEPH 1604 MEMORIAL DR. BURLINGTON 27215	PUD /IM 001 A P AC 919 226-7300	DONOHUE, JAMES FRANCIS UNC, 724 BURNETT-WOMACK CHAPEL HILL 27514	PUD /IM 032 AC 919 966-2531	DRAELOS, ZOE DIANA 213 PINE RIDGE DR. HIGH POINT 27260	D 076 A AC
DIMITRIUS, ROBIN P. O. BOX 364 WHITEVILLE 28472	AN 024 A AC 919 642-8011	DONOVAN, PAUL J. 111 HOSPITAL DR. TARBORO 27886	EM 033 A P AC 919 641-7150	DRAFFIN, RICHARD MARION 3643 N. ROXBORO STREET DURHAM 27704	PTH 032 A AC 919 470-5251
DIMMIG, THOMAS A. 2609 N. DUKE ST. DURHAM 27704	ORS 032 A P AC 919 471-8431	DOOLITTLE, ROBERT PRINCE UNC-G STUDENT HEALTH CENTER GREENSBORO 27412	ADL /IM 041 AC 919 334-5340	DRAKE, ALMOND JERKINS, III US NAVAL HOSP-NAPLES, BOX 19 FPO NEW YORK, NY 09521	IM 000 A AC
DINAPOLI, RAPHAEL JOSEPH, JR. 1985 UMSTEAD DR. RALEIGH 27603	PH /AM 032 A P * AC 919 733-2833	DORENBUSCH, ALFRED ADOLPH 2734 HAMPTON AVENUE CHARLOTTE 28207	OTO 060 A L/RT 704 334-0498	DRAKE, DAVID EWING P. O. BOX 3654 FAYETTEVILLE 28305	FP 026 AC 919 485-3078
DINEEN, JAMES ROBERT 1616 MEDICAL CENTER DRIVE WILMINGTON 28401	ORS 065 A P AC 919 762-2655	DORFMAN, MARGARET JEANNE DOROTHEA DIX HOSP.-PSY. RALEIGH 27611	P 092 AC 919 733-9917	DRAKE, SAMUEL THOMAS 603 COX ROAD GASTONIA 28054	GE /IM 036 AC 704 867-3585
DINGFELDER, JAMES RAY 700 EASTOWNE DR., STE. 200 CHAPEL HILL 27514	OBG 032 A AC 919 942-4100	DORION, ROBERT P. NASH GENERAL HOSPITAL ROCKY MOUNT 27804	PTH /HEM 064 A AC 919 443-8166	DRAKE, WILTON RODWELL, JR. VANCE MEDICAL ARTS CENTER HENDERSON 27536	FP 091 A AC 919 492-3152

DRAY, GREGORY JOSEPH 20 MCDOWELL ST. ASHEVILLE 28801	HS /ORS 011 A P AC 704 253-7521	DUNN, JACK NEWTON 512 SIXTH AVENUE, WEST HENDERSONVILLE 28739	U 045 AC 704 692-6262	EARNHARDT, RICHARD CRAIG 2836 CHAPEL HILL RD. APT. 30-B DURHAM 27707	032 A S 919 493-7968
DREILING, DALE T. 522 N. ELAM AVENUE GREENSBORO 27403	FP 041 AC 919 852-3800	DUNN, LAWRENCE ANTHONY 600 COLGATE DURHAM 27704	P 032 R 919 688-2651	EARP, HENRY SHELTON, III UNC, DEPT. OF MEDICINE CHAPEL HILL 27514	END /IM 032 AC 919 966-3338
DREW, JOHN EDWIN P. O. BOX 337 MACCLESFIELD 27852	FP 033 A AC 919 827-5231	DUNN, RICHARD BERRY P. O. BOX 190 CLIMAX 27233	GYN 041 A L 919 674-9745	EASLEY, ELEANOR BEAMER 141 CAROL WOODS CHAPEL HILL 27514	GYN /OBS 032 A L/RT 919 968-8229
DRIVER, ALBERT GARDNER, JR. ECU, DEPT. OF MEDICINE GREENVILLE 27834	PUD /IM 074 A AC 919 551-4653	DUNN, THADDEUS L. 1515 DOCTORS CIRCLE WILMINGTON 28401	PUD /IM 065 AC 919 763-5182	EASLEY, HENRY ALEXANDER, III 101 BETHESDA DR. GREENVILLE 27834	OBG 074 A AC 919 758-4181
DROEGEMUELLER, WILLIAM 908 WOODBINE DR. CHAPEL HILL 27514	GYN 032 AC 919 966-5281	DUNPHY, DONAL LEO UNC, DEPT. OF PEDIATRICS CHAPEL HILL 27514	PD 032 A AC 919 966-2461	EASON, HERMAN FRANKLIN P. O. BOX 1521 WILSON 27893	PUD 098 A L 919 243-4752
DROSSMAN, DOUGLAS ARNOLD UNC, 324 CLINICAL SCIENCE BLDG CHAPEL HILL 27514	GE /PYM 032 AC 919 966-2511	DUPUY, DAVID NORRIS 3535 RANDOLPH ROAD CHARLOTTE 28211	ORS 060 A AC 704 365-2111	EASON, ERNEST BERNARD 1522 VAUGHN RD. BURLINGTON 27215	IM 001 A AC 919 226-1658
DRUMMOND, JACK NEWTON GRANTHAM MEDICAL CLINIC RT. 1, BOX 100-C GOLDSBORO 27530	FP 096 AC 919 689-2222	DUPUY, SAMUEL STUART 301 HAWTHORNE LANE CHARLOTTE 28204	U 060 A AC 704 374-0236	EASON, GEORGE WILLIAM 111 RIPLEY ROAD WILSON 27893	DR 098 A AC 919 399-8112
DUBOSE, JOHN MCNEELY P. O. BOX 1316 KINSTON 28501	TS /GS 054 A AC 919 522-1626	DURFEE, MICHAEL FULK WAKE TEEN MEDICAL SERVICES 619 OBERLIN RD. RALEIGH 27605	ADL /PD 092 * AC 919 828-0035	EASTON, MARGIE B. 2729 SAWGRASS COURT WINSTON-SALEM 27103	FP 032 A S 919 942-2779
DUBOW, DAVID ALAN 1957 STONEWOOD DR. WINSTON-SALEM 27103	EM /IM 034 A S 919 768-2751	DURHAM, CECIL TRACY, JR. 7 MCDOWELL STREET ASHEVILLE 28801	N 011 A * AC 704 255-7776	EASTON, PAUL RICHARD 2729 SAWGRASS COURT WINSTON-SALEM 27103	032 A S 919 942-2779
DUCK, WALTER OTIS DRAWER 729 MARS HILL 28754	FP 057 A P * L/RT 704 689-2411	DUROCHER, KEVIN HOWARD 2311 CANTERWOOD DR. WILMINGTON 28401	P 065 A AC 919 762-9606	EASTERLING, WILLIAM E., JR. UNC SCHOOL OF MEDICINE CHAPEL HILL 27599	GYN /END 032 A * AC 919 966-5214
DUCKETT, CHARLES HOWARD DEPT. OF FAMILY MEDICINE ECU SCHOOL OF MEDICINE GREENVILLE 27858	FP 074 A * AC 919 551-5452	DURR, ROBERT ALAN 3320 OLD WAKE FOREST RD. RALEIGH 27609	PUD /IM 092 AC 919 872-4850	EASTON, EDWARD JAMES, JR. PO BOX 32861 CHARLOTTE 28232	NM /DR 060 A AC 704 373-2430
DUDLEY, ALLISON JOHNSON 2317 RANDOLPH ROAD CHARLOTTE 28207	PD 060 AC 704 376-5572	DURR, WALTER JACOB P. O. BOX 455 SYLVA 28779	GS 050 A L 704 586-6060	EASTWOOD, FREDERICK THOMAS P. O. BOX 30203 RALEIGH 27622	PD 092 A * L/RT 919 787-1961
DUDLEY, CHARLES COUNCIL, JR. 320 IVY CIRCLE ELKIN 28621	PTH /FP 086 A RT 919 835-2931	DUSZLAK, EDWARD J., JR. 3029 S. FAIRWAY DR. BURLINGTON 27215	DR 001 * AC 919 228-1371	EATON, ALEXANDER M. 17 E. 89TH ST. NEW YORK, NY 10128	000 A R 212 997-7066
DUDLEY, JOSEPH BOYLES 3333 SILAS CREEK PARKWAY WINSTON-SALEM 27103	PTH 034 A P AC 919 760-5840	DUTTON, JONATHAN JOSEPH BOX 3802, DUKE EYE CENTER DURHAM 27710	OPH /ON 032 A AC 919 684-3142	EATON, HUBERT ARTHUR, JR. P. O. BOX 982 WILMINGTON 28401	IM 065 A AC 919 763-5453
DUFFY, CHARLES 607 POLLOCK STREET NEW BERN 28560	FP 025 A L 919 637-2077	DUVALL, DIANE LYNN 434 S. FACTORY ROW WINSTON-SALEM 27101	034 A S 919 724-1815	EATON, JEFFREY GRAY 103 CAROLINA CIRCLE WINSTON-SALEM 27104	034 A S 919 721-9163
DUKES, ROBERT RAYMOND 1301-A DICKINSON AVE. GREENVILLE 27834	074 A S 919 756-9928	DUVALL, PAUL BRANDON NEWLAND MED. BLDG. GALLIMORE ROAD BREVARD 28712	FP 088 A AC 704 884-9030	EATON, LISLE A., JR. 8 WHITE OAK TR. CHAPEL HILL 27516	PTH 032 R 919 966-4334
DULA, FREDERICK MAST, JR. 401 MOCKSVILLE AVE., STE. 100 SALISBURY 28144	R 080 A AC 704 633-1023	DYE, DAVID GODDARD 530 N. ELAM AVE. GREENSBORO 27403	ORS 041 A P AC 919 292-8824	EATON, ROBERT FARRELL 1027 FLEMING STREET HENDERSONVILLE 28739	ORS 045 A AC 704 692-5781
DULIN, THOMAS LEROY 200 GREENWICH RD. CHARLOTTE 28211	FP 060 A AC 704 366-5002	DYER, DAVID PATTERSON 2436 ASHEVILLE ROAD WAYNESVILLE 28786	PD /A 044 AC 704 456-9041	EAVES, RUPERT SPENCER, JR. 631 COX RD. GASTONIA 28054	OPH 036 A AC 704 864-7789
DUMAS, MARK NEAL 313 AIRPORT RD. KINSTON 28501	IM 054 AC 919 522-3072	DYKERS, JOHN REGINALD, JR. P. O. BOX 565 422 N. IVY AVENUE SILER CITY 27344	FP 019 AC 919 663-2931	EBELING, JAMES GERARD 3742 SWARTHMORE RD. DURHAM 27707	IM 032 A R 919 471-2044
DUMMIT, ELDON STEVEN, JR. P. O. BOX 1378 SANFORD 27330	PTH 053 A AC 919 774-2272	DYKES, JAMES RUSSELL 114 SWIFT AVE. DURHAM 27705	AC 919 286-7755	EBERT, JAMES B., JR. #4 CARRIAGE HOUSE GREENVILLE 27834	074 A S 919 756-5093
DUNAWAY, HOWARD YATES, III 120 PROVIDENCE RD. CHARLOTTE 28207	ORS 060 A AC 704 377-0351	EADIE, EDWARD B., JR. 1134 N. ROAD STREET ELIZABETH CITY 27909	U 070 A P AC 919 338-4141	EBKEN, RICHARD KEPPLER P. O. BOX 1169 SANFORD 27330	GS /TS 053 A AC 919 775-7146
DUNCAN, MARGARETA JOHNSON 306 W. EDGERTON STREET DUNN 28334	FP 043 A AC 919 892-2567	EAGLES, ARCHIE YELVERTON RT. #2, BOX 25 AHOSKIE 27910	IM 008 A L 919 332-4155	ECKBERT, WILLIAM FOX P. O. BOX 309 CRAMERTON 28032	FP 036 A L 704 824-1321
DUNCAN, STACY ALLEN, JR. 306 W. EDGERTON STREET DUNN 28334	FP 043 A AC 919 892-2151	EAKINS, JOEY WILLIAM ROUTE #3, BOX 303-K WILMINGTON 28403	ID 065 A AC 919 763-3651	ECKLEY, GEORGE MORGAN, JR. 110-P STOCKTON STREET STATESVILLE 28677	IM 049 A AC 704 873-4334
DUNKELBERG, RAY HAMILTON NEWLAND MED. BLDG. BREVARD 28712	IM /NEP 088 A P AC 704 884-9030	EARL, JOHN KEITH 210 13TH AVE. PLACE, N.W. HICKORY 28601	FP 018 AC 704 328-2941	EDDINGER, CHARLES FREDERICK P. O. BOX 45 SPENCER 28159	FP 080 AC 704 636-1720
DUNLAP, BENJAMIN EMERSON 925-C THOMAS STREET STATESVILLE 28677	FP 049 A * AC 704 872-7636	EARLY, IRA G., SR. 2240 CLOVERDALE AVE. STE. 192 WINSTON-SALEM 27103	IM /CD 034 A AC 919 722-6010	EDDINS, GEORGE EDGAR, JR. 214 E. NORTH STREET ALBEMARLE 28001	IM /CD 084 A AC 704 982-1136
DUNLAP, JACK ERWYN 4320 FAYETTEVILLE ROAD LUMBERTON 28358	ORS 078 AC 919 739-0634	EARLY, MICHAEL WAYNE PO BOX 1629 PEMBROKE 28372	FP 078 A AC 919 521-2816	EDKINS, PATRICIA TEAGUE RT. #4, BOX 357 CHAPEL HILL 27516	TR 032 AC 919 966-1101
DUNLAP, WILLIAM MARSHALL 3521 HAWORTH DR. RALEIGH 27609	ON /IM 092 A AC 919 782-1806	EARNEST, ROBERT RHEA 102 HOSPITAL DR. STE. 9 CLYDE 28721	PD /ADL 044 AC 919 765-8490	EDMONDS, JOHN HENRY, JR. BOWMAN GRAY SCH. OF MED. WINSTON-SALEM 27103	CD /IM 034 A AC 919 748-4208
DUNN, ERNEST CLINTON, JR. PO BOX 729 PAMLICO MEDICAL CTR., PA BAYBORO 28515	GP 025 A AC 919 633-1616			EDMONDSON, FRANK, JR. P. O. BOX 2628 ASHEBORO 27203	FP 076 A L/RT 919 625-3230

EDWARDS, ALLEN RICHARD RT. #3, BOX B-240 STATESVILLE 28677	FP /EM 049 AC 704 873-0281	ELKORDY, MAHA ABDUL-HAFEZ 3144 MERRIANNE DR. RALEIGH 27607	032 A S 919 942-7699	ENOJADO, SILVERIO CASTRO, JR. P. O. BOX 308 CLARKTON 28433	FP 009 A AC 919 647-4311
EDWARDS, CHARLES DANIEL 202 CARSWELL LANE GOLDSBORO 27530	GS 096 A AC 919 778-1205	ELLEDGE, EMMETT SCOTT 114 DEVONSHIRE DR. SAN ANTONIO, TX 78209	OTO 034 A R	ENRIGHT, KATHERINE ANNE BOX 3492, DUMC DURHAM 27710	IM 032 A AC 919 684-2675
EDWARDS, CHARLES HILLMAN, II 301 HAWTHORNE LANE CHARLOTTE 28204	CDS /TS 060 A P AC 704 375-8413	ELLENBOGEN, CHARLES 1601-B OWEN DRIVE FAYETTEVILLE 28304	IM /ID 026 A AC 919 323-1152	ENSOR, ROBERT DALE 1333 ROMANY ROAD CHARLOTTE 28204	U 060 AC 704 372-5180
EDWARDS, ELLISON FRANCIS 3535 RANDOLPH ROAD, STE. 204 CHARLOTTE 28211	PS /MFS 060 A AC	ELLINGTON, AMZI JEFFERSON, JR. 291 N. GRAHAM-HOPEDALE RD. BURLINGTON 27215	GYN 001 AC 919 226-2423	EPES, CHARLES RICHARD 3312 BATTLEGROUND AVE. GREENSBORO 27410	OPH 041 A AC 919 282-5000
EDWARDS, ELMO STEPHEN 2800 BLUE RIDGE BLVD., STE. 501 RALEIGH 27607	PD 092 A P AC 919 781-7490	ELLINGTON, ROBERT NORWOOD 291 N. GRAHAM-HOPEDALE ROAD BURLINGTON 27215	GYN 001 AC 919 226-2423	EPNER, RONALD ALAN 101 S.W. CARY PARKWAY CARY 27511	ORS /HS 092 AC 919 467-4992
EDWARDS, GEORGE SADLER, JR. 3410 EXECUTIVE DR. RALEIGH 27609	HS /ORS 092 A AC 919 872-5296	ELLIOTT, CHARLES MARTIN 1960 RANDOLPH ROAD CHARLOTTE 28207	CD /IM 060 A AC 704 373-1503	EPPLE, KENNETH HALL 2311 LAFAYETTE AVE. GREENSBORO 27408	P 041 A RT 919 288-6215
EDWARDS, GEORGE SADLER, SR. 3410 EXECUTIVE DRIVE RALEIGH 27609	ORS 092 A AC 919 872-5296	ELLIOTT, HARDIE BISHOP 47 VILLAGE GREEN SOUTHERN PINES 28387	EM 063 A AC 919 692-7451	EPSTEIN, SUSAN ELISE 1815 BRANTLEY ST. WINSTON-SALEM 27104	034 A S
EDWARDS, JAMES L., JR. 1511 WESTOVER TERR. STE. 108 GREENSBORO 27408	GE /IM 041 A AC 919 378-0713	ELLIOTT, JAMES FRANCIS, SR. ROUTE #2, BOX 405 CREEDMOOR 27522	P 039 A L/RT 919 528-2433	ERB, NORRIS SCRIBNER 8 OAK ROAD SALISBURY 28144	U 080 AC 704 633-2449
EDWARDS, JAMES RONALD ROUTE #7, BOX 210-E RALEIGH 27614	PTH 092 A * AC 919 755-8260	ELLIOTT, JOS. ALEXANDER, JR. 1900 RANDOLPH RD. SUITE 714 CHARLOTTE 28207	D 060 A * AC 704 375-0043	ERCKMAN, PAUL NEFF 1307-B E. FRANKLIN STREET MONROE 28110	PD 090 A AC 704 283-1515
EDWARDS, JOEL LYNN P. O. BOX 666 MOCKSVILLE 27028	FP 034 P AC 704 634-6128	ELLIS, CHARLES ROBERT 106 S. MYRTLE ST. CHINA GROVE 28023	FP 080 A AC 704 857-0137	ERDIN, ROBERT ALEXANDER, JR. 624 QUAKER LN., STE. 103-C HIGH POINT 27262	CD /IM 040 A AC 919 885-6168
EDWARDS, PAUL D. 311 S. LASALLE ST. #41-G DURHAM 27705	032 A S 919 286-7143	ELLIS, CLARENCE ONEIL PO BOX 35294 CHARLOTTE 28235	IM 060 A AC 704 372-9884	ERNEST, JOSEPH MACDONALD, III BOWMAN GRAY, DEPT. OF OBG WINSTON-SALEM 27103	OBG 034 AC 919 748-4291
EDWARDS, TIMOTHY FREEMAN 245 MEMORIAL DR. JACKSONVILLE 28540	OBG 067 A AC 919 353-4333	ELLIS, DAVID A. 630 5TH AVE. WEST HENDERSONVILLE 28739	OBG 045 AC 704 692-2258	ERNST, HENRY EDWIN 167 INGLESIDE DRIVE, S.E. CONCORD 28025	IM 013 L/RT 704 782-0960
EDWARDS, WILSON BARTON, JR. 108 SARA LANE #B GREENVILLE 27834	074 A S 919 758-1547	ELLIS, GEORGE GREENE P. O. BOX 789 OLD FORT 28762	FP 059 AC 704 668-7694	ERRICO, JAMES MELTON 100 WESTWOOD AVENUE HIGH POINT 27262	OPH 040 A P AC 919 889-2323
EGLINTON, DANIEL THOMAS 53 S. FRENCH BROAD ASHEVILLE 28801	ORS 011 A AC 704 252-7180	ELLIS, GEORGE JOSEPH, JR. 6034 RITTENHOUSE RD. WINSTON-SALEM 27104	OBG 034 A P AC 919 765-6172	ERTISCHEK, STEPHEN DAVID 1032 COLLEGE STREET OXFORD 27565	IM 039 A AC 919 693-6541
EGUEZ, JORGE 108 S. ANDREWS AVE. GOLDSBORO 27530	FP 096 P AC 919 734-6992	ELLIS, JOHN NELSON PINEHURST SURGICAL CLINIC PINEHURST 28374	ORS 063 A AC 919 295-6831	ESHELMAN, THOMAS CARL 3421 HUCKABAY CIR. RALEIGH 27612	R 092 A AC 919 755-3023
EHLE, ALBERT LAWRENCE UNC, 751 BURNETT-WOMACK CHAPEL HILL 27514	N 032 A * AC 919 966-3707	ELLISON, CARROL WENDELL 500 E. PARKER ROAD MORGANTON 28655	OBG 012 A P AC 704 433-5700	ESPEY, DAN, JR. 24 SECOND AVE., NE HICKORY 28601	FP 018 A AC 704 327-4453
EHRlichMAN, GLORIA SOTOMAYOR 603 BEAMAN STREET CLINTON 28328	PD 082 AC 919 592-7712	ELLISON, GERALD LYNN 495 RAYCONDA FAYETTEVILLE 28304	DR 026 P AC 919 323-2012	ESPORAS, DEMOSTHENES CAGBALINO 1610 LORD ASHLEY DR. SANFORD 27330	U 053 A AC 919 775-7146
EICHENBRENNER, TIMOTHY JOHN 225 HAWTHORNE LN., STE. 202 CHARLOTTE 28204	PD 060 AC 704 332-8111	ELLISON, PAUL STRIBLING, JR. 101 WARREN AVE. #B BALTIMORE, MD 21230	023 A P R 301 625-1654	ESTES, EDWARD HARVEY, JR. 407 CRUTCHFIELD ST. DURHAM 27704	IM /CD 032 A P * AC 919 471-2571
EIFRIG, DAVID ERIC UNC, DEPT. OF OPH. CHAPEL HILL 27514	OPH 032 A * AC 919 966-5296	ELLISON, THOMAS SCOTT 2401 FAIRWAY DR. WINSTON-SALEM 27103	023 A P R 919 722-1807	ESTOYE, CESAR ROMERO 601 RIDGE ROAD ROXBORO 27573	GS /GP 073 A AC 919 599-0202
EISELE, JOHN EVANS PO BOX 6028 GREENVILLE 27834	PD /PM 074 A AC 919 551-4440	ELLISTON, E. BRUCE 206 ASHELAND AVE. ASHEVILLE 28801	FP 011 AC 704 258-8681	ESTOYE, TERESITA FERRER ROANOKE WOMENS PAVILION PROFESSIONAL DR.	OBG /NPM 042 A AC 919 535-2200
EISENACH, JAMES CONRAD FORSYTH MEMORIAL HOSP. OBSTETRIC ANESTHESIA WINSTON-SALEM 27103	AN 034 A AC 919 760-5295	ELLISTON, WINSTON LEON 210 ASHELAND AVE. ASHEVILLE 28801	AI /PD 011 A P AC 704 253-3382	ESTWANIK, JOSEPH JOHN 1516 ELIZABETH AVE. CHARLOTTE 28204	ORS /SM 060 AC 704 334-4663
EISENBERG, CARL JESSE 2001 VAIL AVE. CHARLOTTE 28207	R 060 A P AC 704 379-5860	ELMORE, MILES 10 MCDOWELL STREET ASHEVILLE 28801	IM /NEP 011 A AC 704 258-8545	ETHERINGTON, JOHN L. 2709 MEDICAL OFFICE PLACE GOLDSBORO 27530	OPH /OTO 096 A L 919 735-3701
EISENBERG, EDWARD F. 600 DULUTH ST. DURHAM 27705	032 A R 919 966-5136	ELMORE, WILLIAM GLENN P. O. BOX 249 ROANOKE RAPIDS 27870	DR 042 * AC 919 535-2121	ETZOLD, VALERIE JEAN RT. #3, BOX 338 PITTSBORO 27312	032 A S 919 542-2328
EL-BAYADI, NAGUI R. SKYLAND MED. BLDG. SKYLAND DRIVE SYLVA 28779	GS 050 A AC 704 586-2156	EMERY, DARYL CHARLES 1212 CEDARHURST DR. RALEIGH 27615	CD /IM 092 AC 919 872-4850	EUBANKS, REAVIS THAYER 86 VICTORIA ROAD ASHEVILLE 28801	GS 011 AC 704 253-2396
EL-DROUBI, HAZEM 111 MALLARD LN. ROCKINGHAM 28379	U 077 A AC 919 997-5054	ENGELKE, STEPHEN CARL 220 PINEVIEW DRIVE GREENVILLE 27834	PD /NPM 074 AC 919 551-4665	EUBANKS, WILLIAM MALCOLM, JR. 1712 E. FOURTH STREET CHARLOTTE 28204	OBG 060 A AC 704 375-9074
ELBER, ERWIN RICHARD 1501 E. FRANKLIN STREET MONROE 28110	OTO 090 A P AC 704 289-9415	ENGELSTAD, ANNE CARINE A. 2050 QUEEN ST. WINSTON-SALEM 27103	034 A S 919 767-8331	EURE, CHARLES ALLAN 3521 HAWORTH DR. RALEIGH 27609	IM 092 AC 919 782-1806
ELESHA, WILLIAM 1900 HAWTHORNE RD. #214 WINSTON-SALEM 27103	GS 034 A P AC 919 765-1610	ENGSTROM, GEORGE ALFRED 40 ARDSLEY AVENUE, N.E. CONCORD 28025	PD 013 P AC 704 786-1145	EVANGELIST, FELIX ANTHONY 1900 RANDOLPH RD. STE. 408 CHARLOTTE 28207	CDS /TS 060 A P AC 704 333-7731
ELIZONDO, MERCEDITAS O. 20 N. MAIN STREET CLIFFSIDE 28024	GP /PTH 081 A AC 704 657-9742	ENGSTROM, LINCOLN L. 217 KIMBERLY JO DR. ROCKY MOUNT 27804	R 064 A AC 919 443-8083	EVANS, AMOS RAY 1705 W. SIXTH STREET, BLDG. H GREENVILLE 27834	P 074 A AC 919 758-4810
		ENNIS, GEORGE ELLIOTT 912 SECOND STREET, N. E. HICKORY 28601	IM /HEM 018 A P AC 704 328-2381		

EVANS, AVERY J. BOX 2841, DUMC DURHAM 27710	032 A S 919 688-5730	FAN, JACK J. P. O. BOX 807 CLAYTON 27520	FP 051 AC 919 553-5711	FEEZOR, CHARLES NOEL, JR. 3535 RANDOLPH ROAD, STE. 101 CHARLOTTE 28211	U 060 AC 704 366-4631
EVANS, DAVID ARNOLD 1408 E. FRANKLIN ST. MONROE 28110	GYN 090 A P AC 704 289-2553	FARABOW, WILLIAM SIDNEY 400 N. ELM ST. HIGH POINT 27260	OBG 040 A P AC 919 889-4353	FEHRING, THOMAS K. 120 PROVIDENCE ROAD CHARLOTTE 28207	ORS 060 A AC 704 377-0351
EVANS, JOSEPHINE ADAMSON 1010 DEMERIUS ST. DURHAM 27701	032 A S 919 688-5730	FARIS, JOHN CHARLES 2803 LYNTHURST AVE. WINSTON-SALEM 27103	DR /NM 034 A P * AC 919 768-1021	FEIN, ALAN BRUCE 108 WATER LEAF LANE CARY 27511	DR /IM 092 A AC 919 755-8511
EVANS, OTIS DRUELL, JR. 110 W. GROVER STREET SHELBY 28150	OBG 023 A AC 704 487-5258	FARLEY, DYER JACKSON, JR. P. O. BOX 757 LINCOLNTON 28092	GS 055 AC 704 735-0481	FEIN, DOUGLAS A. 300 S. HAWTHORNE RD. BOX 484, BOWMAN GRAY WINSTON-SALEM 27103	034 A S 919 922-4096
EVANS, WALLACE NICKLES, II 121 EDINBURGH SOUTH, STE. 100 CARY 27511	FP 092 A AC 919 467-3281	FARLEY, ROBERT HUGH 311 W. WENDOVER AVE. GREENSBORO 27408	GS 041 A AC 919 275-8415	FELDMAN, MARC DAVID 1315 MOREENE RD. APT. 21E DURHAM 27705	9 032 A R 919 286-0411
EVERETT, ROY NATHAN 109 AIRPORT ROAD KINSTON 28501	PUD 054 A AC 919 522-4094	FARLEY, WILLIAM WINFREE 3814 BROWNING PLACE RALEIGH 27609	PD 092 * AC 919 782-8326	FELIX, RICHARD REID A-305 DOCTOR'S BUILDING ASHEVILLE 28801	P /PYM 011 AC 704 258-3880
EVERHART, CARLTON DHU 911 WORTH ST. MOUNT AIRY 27030	FP 086 AC 919 786-5108	FARMER, CHARLES DUDLEY 928 BAXTER ST. CHARLOTTE 28204	NEP /IM 060 A AC 704 374-1321	FELKNER, RICHARD S. 1600 E. THIRD STREET CHARLOTTE 28204	OTO 060 A P AC 704 372-3300
EVERHART, ROBERT G. 1202 MEDICAL CENTER DR. WILMINGTON 28401	CD 065 A AC 919 341-3300	FARMER, JOHN LOVELACE, JR. 231 BRYAN BUILDING RALEIGH 27605	D 092 AC 919 828-0288	FELTON, ROBERT LEE, JR. PO BOX 57 WATERFORD, VA 22190	GP 063 A L 703 882-3743
EWERS, EDWIN PATTERSON P. O. BOX 487 WARSAW 28398	FP 031 A L/RT 919 293-4432	FARMER, JOSEPH C., JR. DUKE, DEPT. OF SURGERY DURHAM 27710	OTO /OT 032 A * AC 919 684-6357	FELTS, JOHN HARVEY BOWMAN GRAY SCH. OF MED. WINSTON-SALEM 27103	NEP /IM 034 AC 919 748-4259
EWING, JOHN ALEXANDER 2311 CANTERWOOD DR. WILMINGTON 28401	P 065 A AC 919 251-9888	FARMER, THOMAS WOHLSEN UNC SCHOOL OF MEDICINE 751 BURNETT-WOMACK BLDG 229-H CHAPEL HILL 27514	N /IM 032 A L 919 966-2526	FENCL, RAYMOND JOHN 180-0 PARKWOOD ELKIN 28621	U 086 * AC 919 526-2000
EYERMAN, MELVIN FREDERIC 1244 ARBOR ROAD, 444 WINSTON-SALEM 27104	PH 034 A * L/RT 919 723-7420	FARMER, WOODARD EASON 27 PARK RD. ASHEVILLE 28813	IM 011 A L 704 274-0718	FENNING, ROBERT LAWRENCE 3535 RANDOLPH ROAD CHARLOTTE 28211	ON /ON 060 A AC 704 365-0760
EYSTER, JAMES M. 1028 WASHINGTON ST. PO BOX 10956 RALEIGH 27605	DR 092 A AC 919 834-8733	FARNHAM, ROBERT, III PRESBYTERIAN HOSP PATHOLOGY DEPT. CHARLOTTE 28233	PTH 060 A * AC 704 371-4814	FERDON, BENJAMIN BETHEA 3100 BLUE RIDGE BLVD., #300 RALEIGH 27612	IM 092 A P AC 919 781-7500
FABIAN, DENIS 503 OWEN DR. PO BOX 64517 FAYETTEVILLE 28306	PS /GS 026 A AC 919 483-8121	FARRELL, FRANK WILSON, JR. 3155 MAPLEWOOD AVENUE WINSTON-SALEM 27103	DR 034 A AC 919 773-3878	FEREBEE, ANGELA 101 HOMESTEAD RD. #916 CHAPEL HILL 27516	032 A S 919 929-6442
FADIAL, JOHN MURRAY PO BOX 33549 CHARLOTTE 28233	EM 060 A AC 704 371-4160	FARRINGTON, CECIL MURRAY, JR. 322 MOCKSVILLE AVENUE SALISBURY 28144	FP 080 AC 704 637-1123	FERGUSON, ALFRED LEA 6 DOCTOR'S PARK GREENVILLE 27834	NEP /IM 074 A P * AC 919 752-8880
FAGAN, JAMES ARTHUR PO BOX 33549 CHARLOTTE 28233	DR /NM 060 A AC 704 371-4056	FARRINGTON, JOHN KIRBY 307 N. LINDSAY ST. HIGH POINT 27262	OBG 040 A AC 919 885-0149	FERGUSON, BERRYLIN JUNE 1830 HILLDALE RD. DURHAM 27705	OTO /A 032 A AC 919 383-5531
FAGG, JOHN ANDERSON 2901 MAPLEWOOD AVENUE WINSTON-SALEM 27103	PS 034 A P * AC 919 765-8620	FARRIS, DAVID B. 311 S. LASALLE ST. APT. 4A DURHAM 27705	032 A S 919 383-6534	FERGUSON, GEORGE BURTON 1110 W. MAIN STREET DURHAM 27701	OTO 032 A L 919 682-9341
FAGUNDUS, DUNCAN MCLEOD 210 N. EASTERN ST. GREENVILLE 27858	074 A S 919 758-3395	FASSERO, JEFFREY J. 8 PEDESTAL ROCK LANE DURHAM 27712	032 A R 919 479-0514	FERGUSON, STEPHEN DEXTER 403 E. STATESVILLE AVE. MOORESVILLE 28155	IM 049 A AC 704 663-4443
FAHL, JAMES COX 24 SECOND AVENUE, N. E. HICKORY 28601	GS 018 A AC 704 328-2231	FAULL, CLIFFORD EDWARD 3 EASTGATE SYLVA 28779	ORS 050 A AC 704 586-5531	FERGUSON, WILLIAM CLAY 2680 REYNOLDS DRIVE WINSTON-SALEM 27104	GS /TS 034 A AC 919 765-8020
FAIL, PHILIP JACKSON 913 HARPER AVENUE, S.W. LENOIR 28645	GP 014 AC 704 758-2353	FAUSCH, MARK DAVID 1201-C WAYNE MEMORIAL DR. GOLDSBORO 27530	IM 096 AC 919 734-7530	FERNALD, GERALD WALLACE N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514	PD /ID 032 A AC 919 966-2069
FAILLACE, DEON F. 1790 METROMEDICAL DR. FAYETTEVILLE 28304	GS 026 AC 919 323-2626	FAX, JOHN NICHOLAS, JR. 204 W. 28TH STREET LUMBERTON 28358	ORS 078 A P AC 919 739-4313	FERNANDEZ, CHARLES RAYMOND 1350 S. KINGS DRIVE CHARLOTTE 28207	ID /IM 060 A AC 704 372-8750
FAIRCHILD, KAREN DIANE 4012 HILLGRAND DR. DURHAM 27705	032 A S 919 383-5160	FAYEZ, JAMIL ABDEL-LATIF BOWMAN GRAY SCH. OF MEDICINE WINSTON-SALEM 27103	OBG /END 034 AC 919 748-2368	FERRARI, CAROLYN JEAN 685 FILLGATE DR. WINSTON-SALEM 27104	034 A S 919 766-9068
FAJARDO, AGAPITO LACSON 407 BEAMAN ST. CLINTON 28328	GP 082 A AC 919 592-1462	FEARRINGTON, ERIC 2 MEDICAL PAVILION GREENVILLE 27834	CD /IM 074 AC 919 752-3185	FERREE, CAROLYN RUTH BLACK 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	TR 034 A P * AC 919 748-4981
FAJGENBAUM, DAVID MONIEK 3410 EXECUTIVE DRIVE RALEIGH 27619	ORS 092 A AC 919 872-5296	FEATHERSTON, MARK W. 134 LANDBURY DR. DURHAM 27707	032 A S 919 493-9264	FERREE, CHARLES ELLIOT 3535 RANDOLPH RD. CHARLOTTE 28211	IM 060 A AC 704 365-0760
FALES, ROBERT MARTIN 407 W. RENOVAH CIRCLE WILMINGTON 28403	GS 065 A L/RT 919 762-1285	FEDDER, MARC 208-D W. CENTER STREET P. O. BOX 557 LEXINGTON 27292	IM /ID 029 A P AC 704 249-4296	FERRELL, PAUL BRENT 808 SCHENCK ST. SHELBY 28150	RHU /IM 023 A AC 704 482-1482
FALK, RONALD JONATHAN 3034 OLD CLINIC BLDG./NEP. UNC SCHOOL OF MEDICINE CHAPEL HILL 27599	NEP /IM 032 AC	FEDOR, JOHN MICHAEL 1960 RANDOLPH ROAD CHARLOTTE 28207	CD /IM 060 A AC 704 373-1500	FERRELL, WM. GREGORY 707 GALES AVE. WINSTON-SALEM 27103	034 R 919 748-2011
FALLETTA, JOHN MATTHEW BOX 2916, DUMC DURHAM 27710	PHO 032 AC 919 684-3401	FEE, BRUCE EDGAR 1350 S. KINGS DRIVE CHARLOTTE 28207	R 060 AC 704 372-8750	FERRY, SENECA TAYLOR, II P. O. BOX 8 SMYRNA 28579	EM /FP 016 A P AC 919 729-7831
FALLS, DARRYL LEE #9 MEDICAL PARK MOREHEAD CITY 28557	OBG 016 AC 919 726-0107	FEESER, SCOTT ALAN 700 MORRENE RD. B7 DURHAM 27705	032 A S 919 383-7092	FETTER, BERNARD FRANK DUKE UNIV. MEDICAL CENTER DURHAM 27710	PTH /DMP 032 A * AC 919 684-3685
FALVO, SAMUEL CATANZARO 511 SIXTH AVENUE, WEST HENDERSONVILLE 28739	CRS /GS 045 A AC 704 693-9566	FEEZOR, CHARLES NOEL 6 FINETREE ROAD SALISBURY 28144	FP 080 A L 704 633-1787	FEUER, ABE LAWRENCE 1006 FAIRFIELD DR. GASTONIA 28054	OTO 036 L/RT 704 864-2222

FEWELL, JOSEPH EURANUS, JR. 420 N. CENTER STREET HICKORY 28601	PS 018 A P AC 704 322-8380	FISHER, EDWARD CARL 1023 EDGEHILL ROAD CHARLOTTE 28207	OBG 060 A AC 704 373-1541	FLEMING, STEPHEN G. 30 DOCTORS PARK BOONE 28607	ORS 095 AC 704 264-1100
FICKLEN, CONWAY HAMILTON PO BOX 10338 WILMINGTON 28405	OBG 065 A RT 919 256-3554	FISHER, ERNEST WOODROW 102 GEORGIA ROAD FRANKLIN 28734	FP 056 A L/RT 704 524-5752	FLEMING, WILLIAM LEROY UNC, DEPT. OF FAMILY MED. CHAPEL HILL 27514	GPM /IM 032 A L/RT 919 966-5744
FIELD, BOB LEWIS 1239 W. HENDERSON ST. SALISBURY 28144	FP 080 A L 704 636-0732	FISHER, JOHN APPEL DEPUTY DIRECTOR, MED. SERV. O'BERRY CENTER, BOX 247 GOLDSBORO 27530	PD 096 AC 919 731-3670	FLETCHER, JOHN DAVID 5244 INVERNESS DRIVE DURHAM 27712	PH /PD 032 AC 919 688-8018
FIELDS, KARL BERTRAND 1411 GARLAND DR. GREENSBORO 27408	FP 041 AC 919 379-4133	FISHER, KYLE S. 301 BIRCH ST. BOONE 28607	AN 095 A P AC 704 264-4691	FLETCHER, ROBERT GEORGE 401 N. MAIN STREET WINSTON-SALEM 27102	OM /FP 034 A AC 919 741-3024
FIELDS, THOMAS DUDLEY 604 E. 12TH ST. WASHINGTON 27889	U 007 A AC 919 946-0136	FISHER, MARSHALL LOUIS 140 E. 83RD ST., APT. 11-C NEW YORK, NY 10028	P 060 L/RT 212 535-8747	FLETCHER, ROBERT HILLMAN UNC, DEPT. OF MEDICINE CHAPEL HILL 27514	IM /PH 032 AC 919 966-1274
FIGESTHALER, WM. MATTHEW 113 COLERIDGE COURT CARRBORO 27510	032 A S 919 942-2723	FISHER, OTIS NORWOOD P. O. BOX 13005 GREENSBORO 27415	R 041 A AC 919 379-4360	FLETCHER, SUZANNE WRIGHT UNC, DEPT. OF MEDICINE CHAPEL HILL 27514	IM /PH 032 AC 919 966-2276
FILLIPO, DREW CRAIG 311 E. PATTERSON PLACE CHAPEL HILL 27514	032 A S 919 967-4626	FISHER, SAMUEL RANKIN BOX 3805, DUMC DURHAM 27710	HNS /OTO 032 A * AC 919 684-4201	FLEURY, ROBERT ANDRE PO BOX 56 SOUTHERN PINES 28387	P /ALD 063 A AC 919 692-6471
FILSTON, HOWARD CHURCH BOX 3815, DUMC DURHAM 27710	PDS /GS 032 A AC 919 684-3478	FISHER, WILLIAM SLOAN, III 175 CHARLOIS BLVD. STE. 101 WINSTON-SALEM 27103	OTO 034 A AC 919 768-3361	FLICK, CONRAD L. BOX 2734, DUMC DURHAM 27710	032 A S 919 471-4905
FINA, MICHAEL FRANCIS 1901 S. HAWTHORNE RD., #310 WINSTON-SALEM 27103	GE /IM 034 A AC 919 760-4340	FISHMAN, JOHN JAY 5301 WRIGHTSVILLE AVE. WILMINGTON 28401	AN 065 A P AC 919 395-8100	FLICKINGER, EDWARD GARNER 305 GRANVILLE DRIVE GREENVILLE 27834	GS 074 A AC 919 551-4629
FINCHER, ROBERT CHARLES, JR. 107 SPENCER STREET HIGH POINT 27260	P /PH 040 A L/RT 919 883-8914	FITCH, DUANE DOUGLAS 1704 S. TARBORO ST. WILSON 27893	GE /IM 098 A AC 919 291-7001	FLOOD, ROY DEVONNE BOX #7, SPRING BRANCH ROAD MURFREESBORO 27855	FP 008 A AC 919 398-3323
FINDLAY, JEAN MARJORIE HEY 14 CLEARWATER DR. DURHAM 27707	PD 032 AC 919 286-2202	FITCH, ROBERT DOUGLAS BOX 2911, DUMC DURHAM 27710	ORS /PDS 032 A AC 919 684-3104	FLORES, RODOLFO FLORES P. O. BOX 96 DANBURY 27016	FP /IM 034 A AC 919 593-8281
FINESTONE, DOUGLAS HOWARD ECU SCHOOL OF MED. DEPT. OF PSYCHIATRY GREENVILLE 27858	PYM /PYA 074 A AC 919 551-2986	FITZ, THOMAS EDMUNDS 2133 9TH ST. NW HICKORY 28601	IM /CD 018 A L/RT 704 324-6346	FLOURNOY, JOHN EPPES KINSTON CLINIC, NORTH DOCTORS DRIVE KINSTON 28501	R 054 A AC 919 527-7077
FINGER, FREDERICK ELI, III 1900 RANDOLPH RD., STE. 502 CHARLOTTE 28207	NS 060 A AC 704 372-8860	FITZGERALD, DWIGHT MELVIN ROUTE #2, BOX 196 CONOVER 28613	GS /TS 018 P AC 704 322-8485	FLOWE, BENJAMIN HUGH 56 LAKE CONCORD ROAD, N.E. CONCORD 28025	GS /TS 013 A AC 704 786-1105
FINK, EMMA SLOOP BOX 160 CROSSNORE 28616	FP 006 A P L 704 733-4367	FITZGERALD, JOHN HILL 626 CLARK DRIVE LINCOLNTON 28092	GP /PD 055 A L 704 735-8257	FLOYD, ANDERSON GAYLE 302 N. THOMPSON STREET WHITEVILLE 28472	GP 024 L/RT 919 642-2150
FINK, GARY LEE BROWN ST., P. O. BOX 610 FAITH 28041	IM 080 A AC 704 279-2981	FITZGERALD, ROBERT GREESON P. O. BOX 856 ROXBORO 27573	GP 073 A AC 919 599-1131	FLOYD, HERBERT MYNATT 3551 BUENA VISTA ROAD WINSTON-SALEM 27106	AN 034 A AC 919 748-8611
FINKLEA, LEE KILPATRICK 250 CHARLOIS BLVD. WINSTON-SALEM 27103	PD 034 A AC 919 768-4730	FITZPATRICK, HUGH, III 117 S. MAIN ST. ASHEBORO 27203	EM 076 AC 919 625-5340	FLOYD, WALTER LAWRENCE BOX 2997, DUMC DURHAM 27710	CD /IM 032 AC 919 684-2845
FINKLEA, ORION TOWNSEND 1333 ROMANY ROAD CHARLOTTE 28204	U 060 AC 704 372-5180	FITZPATRICK, JOHN FRANCIS RANDOLPH PATHOLOGY P. O. BOX 1948 ASHEBORO 27203	PTH /IM 076 A RT 919 629-3282	FLYTHE, WILLIAM HENRY 1131 GATEHOUSE ROAD HIGH POINT 27260	IM 040 A L 919 882-8933
FINLEY, JAMES LEO BRODY 1F79, ECU SCH. OF MED. GREENVILLE 27834	PTH 074 A AC 919 551-4495	FLANAGAN, BRIAN FRANCIS 618 MOREHEAD AVE. APT. #1 DURHAM 27707	032 A S 919 383-7627	FOGLEMEN, ROSS LEE, JR. KINSTON CLINIC KINSTON 28501	FP 054 A AC 919 527-7194
FINN, RICHARD CONNELL 250 CHARLOIS BOULEVARD WINSTON-SALEM 27103	OBG 034 A AC 919 768-4730	FLANNERY, JOHN EDWARD 53 MAIN STREET HAMLET 28345	IM 077 A AC 919 582-0004	FOIL, MARY BETH ECU DEPT. OF SURGERY GREENVILLE 27858	GS 074 A AC
FINN, WILLIAM FRANCIS, JR. 854 BRENT ST. WINSTON-SALEM 27103	EM 034 A R 919 760-2462	FLEISHMAN, HENRY ARNOLD 515 THOMPSON ST., STE. B EDEN 27288	GS /CD 079 A AC 919 623-9118	FOLDS, WILLIAM FRANKLIN 5043 COUNTRY CLUB ROAD WINSTON-SALEM 27104	FP 034 AC 919 768-9275
FIORILLI, MARIO GRAZIA 220 SMITH CHURCH ROAD ROANOKE RAPIDS 27870	ID /IM 042 A AC 919 535-3001	FLEISHMAN, LAWRENCE MARK 7110 LAWYER'S ROAD CHARLOTTE 28211	IM 060 AC 704 568-6500	FOLGER, JOHN RUSSELL, JR. 207 E. MAIN ST. BREVARD 28712	FP /PH 088 A AC 704 966-9633
FISCHER, GARY JAY P. O. BOX 13005 GREENSBORO 27415	DR 041 A AC 919 379-4140	FLEISHMAN, MALCOLM P. O. BOX 35126 FAYETTEVILLE 28303	IM /CD 026 A P * AC 919 484-0144	FOLLMER, RONALD LESTER PO BOX 32861 CHARLOTTE 28232	N 060 A AC 704 338-4053
FISCHER, JANET JORDAN N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514	ID /IM 032 AC 919 966-2536	FLEISHMAN, STEPHEN BAER 2619 TORCROSS DR. CUMBERLAND MENTAL HEALTH DEPT. FAYETTEVILLE 28304	P /CHP 026 A P AC 919 323-0601	FOLLO, PAIGE BILL 1209 MAGNOLIA STREET GREENSBORO 27401	PD 041 A AC 919 273-2879
FISCHER, MARTIN JOSEPH 520 BILTMORE AVENUE ASHEVILLE 28801	TS /GS 011 A AC 704 252-7357	FLEMING, CHRISTOPHER PAUL 202 W. 28TH ST. LUMBERTON 28358	OPH 078 A * AC 919 739-0606	FONTRIER, TOINETTE HELEN 8220 WHITE WATER DR. CLEMMONS 27012	AN 034 AC 919 766-4321
FISCHER, NEWTON D. UNC SCHOOL OF MEDICINE CHAPEL HILL 27514	MFS /OTO 032 A AC 919 966-3341	FLEMING, DUARD FRANCIS, JR. 425 STANTONSBURG ROAD GREENVILLE 27834	N 074 A * AC 919 752-4848	FORAUER, ANDREW R. 1919 ACADEMY ST. APT. 19 WINSTON-SALEM 27103	034 A S 919 748-0755
FISH, HARRY GUSTAV, JR. 100 NASH MEDICAL ARTS MALL ROCKY MOUNT 27801	GS 064 A RT 919 443-9084	FLEMING, LAURENCE EDWIN 1116 PROVIDENCE ROAD CHARLOTTE 28207	ABS 060 A L/RT 704 332-6896	FORBES, THOMAS EARL P. O. BOX 659 REIDSVILLE 27320	FP 079 A L/RT 919 349-5324
FISHER, CARL ELLIS 902-C COX ROAD GASTONIA 28054	PD 036 A AC 704 867-5356	FLEMING, PAUL ARTHUR 3613 HAWORTH DR. RALEIGH 27609	GYN /PYM 092 AC 919 781-5550	FORD, BLANCHARD FRED, JR. P. O. BOX 336 SHALLOTTE 28459	FP 010 A L 919 754-6474
FISHER, EARL ELLIOTT, JR. 1700 S. TARBORO STREET WILSON 27893	PD 098 A AC 919 291-4370	FLEMING, ROBERT HENRY 2800 BLUE RIDGE BLVD., STE 501 RALEIGH 27607	PD 092 A AC 919 781-7490	FORD, C. STEPHEN 105 BRANTLEY CIRCLE HIGH POINT 27262	N 040 AC 919 841-4233

FORD, CHARLES PHILLIP, JR. 5216 EMERALD DR. EMERALD ISLE 28594	OM 054 AC 919 354-3018	FOSTER, WILLIAM LEICESTER, JR. DUMC, DEPT. OF RADIOLOGY DURHAM 27710	R 032 AC 919 286-0411	FRANKLIN, ROBERT CHARLES 500 CEDARHURST GREENVILLE 27834	FP 074 AC 919 752-7133
FORD, MARSHA DEAN CHARLOTTE MEM. HOSP. PO BOX 32861 CHARLOTTE 28232	EM /IM 060 A AC 704 338-3181	FOSTER, WILLIAM WADE 3320 EXECUTIVE DR., STE. 111 RALEIGH 27609	OPH 092 A P AC 919 876-2427	FRANKLIN, SAMUEL C., JR. 4026 CHAPRA DR. WILMINGTON 28403	032 A S 919 791-0484
FORD, ROBERT VIRGIL, JR. 3175 MAPLEWOOD AVENUE WINSTON-SALEM 27103	PD 034 A AC 919 768-7030	FOULKS, GARY NEAL BOX 3802, DUKE UNIV. EYE CTR. DURHAM 27710	OPH 032 A * AC 919 684-6417	FRASER, DONALD DOYLE 1350 S. KINGS DR. CHARLOTTE 28207	D 060 AC 704 372-8750
FORDHAM, CHRISTOPHER C., III UNC, 103 SOUTH BLDG. 005-A CHAPEL HILL 27514	IM /NEP 032 A AC 919 962-1365	FOUSHEE, J. HENRY SMITH, JR. 718 FORSYTH MEDICAL PARK WINSTON-SALEM 27103	PTH 034 A P AC 919 768-2351	FRASER, HELEN R. 4116 POMFRET LANE CHARLOTTE 28211	060 A AC
FORE, STEVEN RONALD 200 E. NORTHWOOD ST. STE. 216 GREENSBORO 27401	OBG 041 A AC 919 275-5391	FOUSHEE, JOHN CALDWELL 1710 CARTHAGE ST. SANFORD 27330	GS 053 A L/RT 919 775-7146	FRASER, HUGH ERSKINE, JR. 1030 PROFESSIONAL VILLAGE GREENSBORO 27401	D 041 A AC 919 373-1383
FORE, WILLIAM WHATELY ECU SCH. OF MEDICINE 2N72 GREENVILLE 27858	END /IM 074 A P * AC 919 551-2571	FOUST, JOHN WORTH 3535 RANDOLPH ROAD CHARLOTTE 28211	OT 060 A P * AC 704 365-0711	FRASER, ROBERT WELLINGTON, III PO BOX 32861 CHARLOTTE 28232	TR 060 A AC 704 338-2272
FOREHAND, MARY L. 3318 HEALY DR. WINSTON-SALEM 27103	PD 034 A AC 919 765-8490	FOWLER, HENRY JACKSON P. O. BOX 38 WALNUT COVE 27052	GP 034 A AC 919 591-4306	FRAZIER, ARNOLD RAY CHARLOTTE MEMORIAL HOSP. P. O. BOX 32861 CHARLOTTE 28232	PUD /IM 060 A AC 704 331-2121
FOREMAN, ARTHUR S. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	AN 034 A AC 919 724-4210	FOWLER, JOHN ALVIS 2721 SPENCER ST. DURHAM 27705	PYA /CHP 032 L/RT 919 489-5339	FRAZIER, CLAUDE ALBEE DOCTOR'S PARK ASHEVILLE 28801	A 011 A AC 704 254-1650
FOREMAN, FRANK LEROY 706 HARTNESS ROAD STATESVILLE 28677	D 049 AC 704 873-0545	FOWLER, WILLIAM BRIGHT 675 BILTMORE AVENUE ASHEVILLE 28803	IM 011 A AC 704 252-1830	FRAZIER, RICHARD ELLIS 120 PROFESSIONAL DRIVE ROANOKE RAPIDS 27870	FP 042 A AC 919 537-9176
FOREMAN, ROBERT HUGH 603 DOLLEY MADISON RD. GREENSBORO 27410	FP 041 * AC 919 294-6190	FOWLER, WILLIAM EDWARD 106 SCALES PL., B-1 GREENVILLE 27834	FP 074 A S 919 758-2908	FREDERICK, CHARLES E. 612 WAYCROSS DR. GREENSBORO 27410	AN 041 A AC 919 299-6343
FOREMAN, SUSAN DOWNER 505 BREMERTON DR. GREENVILLE 27834	PD 074 AC 919 752-7141	FOX, EARL RUSSELL 1830 DELAWARE AVE. CAPE MAY, NJ 08204	RHU /IM 070 AC 609 884-6391	FREEDMAN, STEVEN MITCHELL PO BOX 40999 RALEIGH 27629	N 092 A * AC 919 782-3456
FORGY, BYRON KEITH 341 E. PARKER ROAD MORGANTON 28655	GS 012 A AC 704 433-6390	FOX, ELISABETH JUNE BOX 3083, DUMC DURHAM 27710	AN 032 AC 919 681-3560	FREEL, PAUL DUANE 404 HILLCREST DRIVE GREENVILLE 27834	074 A S 919 355-7807
FORMAN, MARK STUART 803 GREEN ST. DURHAM 27701	032 A S	FOX, JOE THOMAS, JR. 1900 RANDOLPH ROAD CHARLOTTE 28207	P 060 AC 704 333-7722	FREEMAN, DAVID FRANKLIN ASHE PLACE CHAPEL HILL 27514	PYA /CHP 032 AC 919 942-4867
FORREST, TERRY LEE PO BOX 10907 GOLDSBORO 27532	OPH 096 A AC 919 734-8440	FOX, JONATHAN C. BOX 3163, DUMC DURHAM 27710	IM /CD 032 A R 919 684-8111	FREEMAN, DOUGLAS G., JR. 3831 MERTON DRIVE RALEIGH 27609	RHU /AI 092 A AC 919 781-9633
FORREST, WILLIAM WOMBLE WESLEY LONG HOSPITAL P. O. DRAWER X-3 GREENSBORO 27402	PTH 041 A AC 919 854-6463	FOX, POWELL GRAHAM, JR. 3320 WAKE FOREST RD. STE. 100 PO BOX 17908 RALEIGH 27609	U 092 * AC 919 790-0036	FREEMAN, NANCY ROUSER PO BOX 1409 CANTON 28716	FP 044 AC 704 627-2211
FORRESTER, JAMES SUMMERS P. O. BOX 459 STANLEY 28164	FP /GPM 036 A AC 704 263-4716	FOX, RAYMOND MORRIS, JR. P. O. BOX 910 JACKSONVILLE 28541	GYN /GP 067 A P AC 919 347-2133	FREEMAN, PERCY LEE LAKE WYLIE, RT. #5, BOX 410-G CLOVER, SC 29710	U 036 L/RT 803 831-8598
FORSHEY, ALAN GRAY 105-B SOUTH MAIN NEWTON 28658	FP 018 AC 704 465-3928	FOX, RICHARD FRANKLIN 208 W. WENDOVER AVE. GREENSBORO 27401	NEP /IM 041 P AC 919 379-9708	FREEMAN, TYLER IRA 8355 BAR HARBOR LN. CHARLOTTE 28210	IM /OM 013 A AC 704 552-6772
FORSTNER, JAMES ROBERT 250 E. 11TH ST. SOUTHPORT 28461	FP 010 A AC 919 457-9564	FOY, DAVID MARK N-1 DOCTOR'S DR. ASHEVILLE 28801	FP 011 AC 704 252-8885	FREEMAN, WILLIAM HARRISON P. O. DRAWER 1398 ALBEMARLE 28001	GS 084 AC 704 982-0161
†FORSYTH, H. FRANCIS 2865 BARTRAM ROAD DECEASED-5-14-88 WINSTON-SALEM 27106	ORS 034 A L/RT 919 724-1334	FOY, JANE M. 300 E. NORTHWOOD ST. GREENSBORO 27401	PD 041 * AC 919 373-2000	FREEMAN, WILLIAM TOWNSEND P. O. BOX 2245 MORGANTON 28655	AN 012 A P AC 704 438-2168
FORT, LYNN, III 3535 RANDOLPH ROAD, 201-W CHARLOTTE 28211	GS /TS 060 A AC 704 364-8100	FRAASA, ROBERT CONRAD 4625 COLONY RD. H CHARLOTTE 28226	FP 060 A AC 704 535-4011	FREI, TIMOTHY EDWARD AHOSKIE MEDICAL ASSOC., INC. PO BOX 340 AHOSKIE 27910	IM 008 A AC 919 332-4155
FORT, WILKINSON DAVIS 1000 N. FIFTH STREET ALBEMARLE 28001	OBG 084 A P * AC 704 982-8112	FRANCIS, EDWIN HOWARD 9 VILLAGE GREEN SOUTHERN PINES 28387	EM 063 A RT 919 295-7777	FRENCH, THOMAS NASH LAURINBURG SURGICAL CLI. PO BOX 1808 LAURINBURG 28352	U 083 AC 919 276-3541
FORTIER, KENNETH JOSEPH 2800 BLUE RIDGE BLVD. STE. 502 RALEIGH 27607	OBG 092 A AC 919 781-5513	FRANCIS, JOHN ARLIE PO BOX 990 EDENTON 27932	OBG 021 AC 919 482-7407	FRENCH, WHITNEY JAMES 3310 BROOKVIEW HILL BLVD. SUITE 203 WINSTON-SALEM 27103	IM 034 A AC 919 765-9631
FORTNEY, AUSTIN POWELL P. O. BOX 579 JAMESTOWN 27282	IM 040 A AC 919 454-3151	FRANCIS, ROBERT DEAN 1027 FLEMING STREET HENDERSONVILLE 28739	ORS /HS 045 A AC 704 692-5781	FRESKA, VICTOR ATTILIO ROUTE #2 OAK BLUFF AT BRANDYWINE BAY MOREHEAD CITY 28557	GP /R 016 A AS 919 726-5587
FORTNEY, SIDNEY RAY 68 LAKE CONCORD ROAD, N.E. CONCORD 28025	IM /END 013 A AC 704 782-3135	FRANK, JAMES LAWRENCE 1828 HILLDALE ROAD DURHAM 27705	ORS 032 A AC 919 286-1249	FRICK, DONNA ELLIOTT 109 CONNER DR., BLDG #3, STE. 203 CHAPEL HILL 27514	P 032 AC 919 933-5600
FORTUNE, BENJAMIN FLETCHER 906 W. CORNWALLIS DRIVE GREENSBORO 27408	AN 041 A L/RT 919 272-7755	FRANK, JEFFREY H. 606 N. ELM ST. HIGH POINT 27262	N 040 A AC 919 889-8877	FRIED, FLOYD ALAN UNC, DEPT. OF SURGERY CHAPEL HILL 27514	U 032 A * AC 919 966-2571
FOSTER, BOB MAXWELL P. O. BOX 427 MOCKSVILLE 27028	FP 034 A * AC 704 634-2108	FRANK, JOE LEE, JR. 515 S. PEMBROKE AVENUE AHOSKIE 27910	R 008 A P * AC 919 332-2390	FRIED, MICHAEL DAVID 120 CONNER DR., STE. 101 PO BOX 3317 CHAPEL HILL 27514	OBG 032 AC 919 544-3591
FOSTER, JOHN THOMAS P. O. BOX 2588 HICKORY 28603	OPH 018 A AC 704 322-2050	FRANKEL, NICHOLAS BOX 308 HICKORY 28603	DR /NR 018 A AC 704 322-2644	FRIEDBERG, R. C. 718-A IREDELL ST. DURHAM 27705	PD 092 AC 919 286-3909
FOSTER, REX BENTLEY, III 1200 DILWORTH RD. CHARLOTTE 28203	AN 060 A AC 704 338-2372	FRANKLIN, EARL RUFFIN 3803-A COMPUTER DR. RALEIGH 27609	PD 092 AC 919 782-5273		

FRIEDLAND, EDWARD L. 632-A MATTHEWS-MINT HILL RD. MATTHEWS 28105	NEP /IM 060 AC 704 847-0157	FUNCIK, THOMAS 237-D JACKSON CIRCLE ODUM VILLAGE CHAPEL HILL 27514	A 032 S 919 933-6737	GALL, STANLEY ADOLPH, JR. 2907 MONROE AVE. DURHAM 27707	GS /CDS 032 A R 919 684-8111
FRIEDMAN, ALAN DAVID 100 VICTORIA ROAD ASHEVILLE 28801	U 011 704 254-8883	FUNDERBURK, AMON LEX 3080 TRENWEST DR. WINSTON-SALEM 27103	IM /END 034 AC 919 768-2370	GALLAGHER, EDGAR GIVENS, JR. 1013 SCHALL PLACE JACKSONVILLE 28540	GS /TS 067 A AC 919 353-7848
FRIEDMAN, ALLAN HOWARD BOX 3807, DUMC DURHAM 27710	NS 032 A * AC 919 681-6421	FURMAN, JEFFREY WILLIAM 110 S. ESTES DR. CHAPEL HILL 27514	FP /HYP 032 AC 919 967-8291	GALLAGHER, JOHN JOSEPH 1960 RANDOLPH ROAD CHARLOTTE 28207	CD /IM 060 A AC 704 373-1503
FRIEDMAN, EDNA CHARNEY 5161 COLLINS AVENUE, APT. 412 MIAMI BEACH, FL 33140	PD /AN 018 A L/RT 305 864-2880	FURMAN, LOWELL BENJAMIN STATE FARM ROAD BOONE 28607	GS /CDS 095 AC 704 264-2340	GALLAGHER, KATHLEEN A. 130 LAKE CONCORD RD. PO BOX 2870 CONCORD 28025	DR 013 A AC 704 786-0214
FRIEDMAN, MITCHELL DIV. OF PULMONARY DISEASES UNC, DEPT. OF MEDICINE CHAPEL HILL 27514	PUD /IM 032 AC 919 966-2532	FURMAN, RICHARD WARREN 702 STATE FARM ROAD BOONE 28607	TS /GS 095 A P AC 704 264-2340	GALLAGHER, TIMOTHY JOSEPH P. O. BOX 2959 103 DOCTOR'S BUILDING ASHEVILLE 28802	DR 011 A AC 704 255-4167
FRIEDRICH, THOMAS CHARLES 1104 OAK HILL DR. MONROE 28110	ORS 090 A P AC 704 289-4595	FURR, CARL AUGUSTUS, JR. 1054 BURRAGE ROAD, N. E. CONCORD 28025	OBG 013 A AC 704 788-4151	GALLANIS, CRAIG T. 1333 MADISON AVE. DECEASED-1988 WINSTON-SALEM 27103	034 A S 919 722-6835
FRITZ, RICHARD THOMAS PO BOX 88 RED OAK 27868	R 064 AC 919 443-8083	FURR, SARA MARCELLA 2521 MEMORIAL DR. GREENVILLE 27834	074 A S 919 756-9596	GALLEMORE, WARREN GHOLSON P. O. BOX 5904 HIGH POINT 27262	IM 040 A AC 919 889-1191
FROEDGE, JERRY KEITH 240 18TH STREET CIRCLE, SE HICKORY 28602	PD 018 A AC 704 322-2550	FURR, WILLIAM STEPHEN 1871 WALL ST. #4 MEMPHIS, TN 38134	ORS 000 A R 901 382-7999	GALLIS, HARRY ANTHONY BOX 3306, DUKE HOSPITAL DURHAM 27710	ID /IM 032 * AC 919 684-3279
FROHBOSE, FREDERICK ALEXANDER RT. #1, BOX 93-E CHAPEL HILL 27514	032 A S 919 929-3592	FURTH, EUGENE DAVID ECU, DEPT. OF MEDICINE GREENVILLE 27834	IM /END 074 A AC	GALLOWAY, JAMES BRUCE GALLOWAY DR. ASHEVILLE 28803	ORS 011 L/RT 704 274-2236
FROHBOSE, WILLIAM JOSEPH 212 PIEDMONT AVENUE ROCKY MOUNT 27801	U 064 A L/RT 919 443-3136	FUSSELL, FITZHUGH LEE, JR. 120 PROFESSIONAL DRIVE ROANOKE RAPIDS 27870	GP 042 AC 919 537-9176	GALLOWAY, JAMES HERVEY 2617 ROYSTER ROAD RALEIGH 27608	FP 092 A L/RT 919 781-7547
FROMSON, GERALD ALAN 250 CHARLOIS BOULEVARD WINSTON-SALEM 27103	IM 034 A AC 919 768-4730	FUTRELL, THOMAS MILTON 201 W. HOLLY HILL ROAD THOMASVILLE 27360	FP 029 A AC 919 475-9164	GALLOWAY, JAMES MADISON, JR. PO BOX 427 AYDEN 28513	FP 074 AC 919 746-3116
FROTHINGHAM, THOMAS ELIOT BOX 3937, DUMC DURHAM 27710	PD /ID 032 AC 919 684-6870	GABLE, RONALD SELMAN 33 LAKE CONCORD ROAD, N.E. CONCORD 28025	OPH 013 AC 704 786-2015	GALLUP, KENNETH RAYNOR, JR. 2825 LYNDBURST AVE., STE. 101 WINSTON-SALEM 27103	PTH /FOP 067 A AC 919 765-0888
FRUCHT, DAVID MARTIN 4138 DEEPWOOD CIRCLE DURHAM 27707	032 A S 919 493-0760	GABLE, WALTER DELAY ONSLow MEMORIAL HOSPITAL JACKSONVILLE 28540	067 A AC 919 353-7803	GALPHIN, CLAUDE MABRY 6 DR'S PARK GREENVILLE 27834	HEM /IM 032 AC 919 966-4431
FRY, JOHN RUDOLPH 20/20 PLAZA 90 ASHELAND AVENUE ASHEVILLE 28801	OPH 011 A P AC 704 253-5656	GABRIEL, DON ALEXANDER UNC, DIV. OF HEM/ONCOLOGY CHAPEL HILL 27514	032 AC 919 966-4431	GALUSZKA, ALBIN ADOLPH 604 E. 12TH STREET WASHINGTON 27889	U 007 A AC 919 946-0136
FRY, TERRY LENTZ UNC, 610 CLINICAL SCI. 229-H CHAPEL HILL 27514	OTO /HNS 032 A * AC 919 966-3341	GABY, NANCY SUE 622 S. SUNSET DR. WINSTON-SALEM 27103	P 034 A AC 919 748-4558	GAMBLE, ELIZABETH RHODES 607 WINSTEAD RD. GREENVILLE 27834	IM /GER 074 AC 919 756-7901
FRYE, JOSEPH CRAIG 3535 RANDOLPH RD., STE. 102 CHARLOTTE 28211	R 060 A AC 704 365-0343	GACHET, FRED SMITH, JR. 1205 N. CENTER STREET HICKORY 28601	GYN 018 A P AC 704 328-2901	GAMBLE, JOHN REEVES, JR. P. O. BOX 250 LINCOLNTON 28092	GS /GP 055 P * AC 704 735-3023
FU, HUNG-JEN 525 BECKER DR. PO BOX 1322 ROANOKE RAPIDS 27870	GS /TS 042 AC 919 537-2153	GADA, PRESTON HERBERT 2800 BLUE RIDGE BOULEVARD RALEIGH 27607	GS /TS 092 A P AC 919 781-7412	GAMBLE, WILLIAM HEDRICK 920 CHERRY ST. GREENSBORO 27401	CD /IM 041 A AC 919 273-7900
FULBRIGHT, DEBORAH KAY 327 N. GRAHAM-HOPEDALE RD. BURLINGTON 27215	PTH 001 A AC 919 334-5161	GADD, DUWAYNE DOUGLAS PINEHURST SURGICAL CLINIC PINEHURST 28374	U 063 A AC 919 295-0252	GAMMON, WALTER RAY 404 WHITEHEAD CIRCLE CHAPEL HILL 27514	D 032 A AC 919 966-3322
FULCHER, WILLIAM L., III PO BOX 657 SNOW HILL 28580	FP 074 AC 919 747-2921	GADDY, JOE ELLIS, JR. 2810 MAPLEWOOD AVENUE WINSTON-SALEM 27104	CD /IM 034 A AC 919 768-0437	GANCHI, PARHAM AMIR 1911 ERWIN RD. APT. B DURHAM 27705	032 A S 919 684-5680
FULGHUM, EDWIN MORTON, JR. PO BOX 1460 STATESVILLE 28677	OBG 049 AC 704 878-2011	GADDY, ROBERT EDWIN, JR. 3900 BROWNING PLACE RALEIGH 27609	IM /CD 092 A AC 919 781-9650	GANGAROSA, LISA M. 1713 JAMES ST. DURHAM 27707	GS /GP 055 P * AC 704 735-3023
FULGHUM, JAMES SPENCER, III 3009 NEW BERN AVE. PO BOX 14027 RALEIGH 27610	NS 092 A AC 919 832-4448	GAGE, LAWRENCE E. EASTERN CAROLINA IM, PA PO BOX 68 POLLOCKSVILLE 28573	IM /CD 025 A AC 919 224-4591	GAMBLE, WILLIAM HEDRICK 920 CHERRY ST. GREENSBORO 27401	CD /IM 041 A AC 919 273-7900
FULGHUM, MARY SUSAN KIRK 100 S. BOYLAN AVENUE RALEIGH 27603	GYN 092 A AC 919 832-5529	GAGE, LUCIUS GASTON, JR. 1350 S. KINGS DRIVE CHARLOTTE 28207	A /RHU 060 A AC 704 372-8750	GAMMON, WALTER RAY 404 WHITEHEAD CIRCLE CHAPEL HILL 27514	D 032 A AC 919 966-3322
FULK, ROBERT VERNON, JR. 2311 DELANEY AVENUE WILMINGTON 28403	OTO 065 AC 919 762-8754	GAGLIANO, LOUIS ANTHONY P. O. BOX 1975 GOLDSBORO 27530	P /GER 096 A AC 919 734-8604	GAMBLE, JOHN REEVES, JR. P. O. BOX 250 LINCOLNTON 28092	GS /GP 055 P * AC 704 735-3023
FULLER, CORODON S., JR. RT. #1, BOX 61 MORAVIAN FALLS 28654	PH /GP 097 A L/RT 919 838-3334	GAGLIANO, MARTHA ELLEN 306 S. GREGSON ST. DURHAM 27705	PD 032 A AC 919 688-6349	GAMBLE, WILLIAM HEDRICK 920 CHERRY ST. GREENSBORO 27401	CD /IM 041 A AC 919 273-7900
FULLER, WAYNE T. 611 RAVENCROFT CT. FAYETTEVILLE 28304	026 A AC 919 488-1167	GAINEY, JOHN WHITE, JR. P. O. DRAWER 97 MOREHEAD CITY 28557	GP 016 A AC 919 726-3406	GAMMON, WALTER RAY 404 WHITEHEAD CIRCLE CHAPEL HILL 27514	D 032 A AC 919 966-3322
FULP, CHARLES J., JR. 112 GREENFIELD RD. CHAPEL HILL 27516	032 A R 919 966-1461	GAITHER, JAMES COMER ROUTE #2, BOX 199 CONOVER 28658	IM 018 A AC 704 322-1128	GAMMON, WALTER RAY 404 WHITEHEAD CIRCLE CHAPEL HILL 27514	D 032 A AC 919 966-3322
FULTON, JAMES WALKER 400 N. ELM ST. HIGH POINT 27260	OBG 040 A P AC 919 889-4353	GAITHER, ROBERT HUTH 1000 N. FIFTH STREET ALBEMARLE 28001	OBG 084 A P AC 704 982-8112	GAMMON, WALTER RAY 404 WHITEHEAD CIRCLE CHAPEL HILL 27514	D 032 A AC 919 966-3322
		GALENTINE, PAUL GUY, III 3535 RANDOLPH RD., STE. 202 CHARLOTTE 28211	OPH 060 A AC 704 364-8576	GAMMON, WALTER RAY 404 WHITEHEAD CIRCLE CHAPEL HILL 27514	D 032 A AC 919 966-3322

GARDELLA, JOHN EUGENE 125 BALDWIN AVE. CHARLOTTE 28204	PUD 060 A AC 704 374-1696	GASKIN, ERNEST REED 100 QUEENS RD. CHARLOTTE 28204	OPH 060 A P AC 704 332-1156	GELBURD, GREGORY STUART 401 STERLING ST. WINDSOR 27983	FP 008 A AC 919 794-3043
GARDNER, FRANCIS SIDNEY, JR. 1219 WALTER REED ROAD FAYETTEVILLE 28304	OBG 026 A AC 919 323-2103	GASKIN, JOHN STOVER, JR. 206 W. MAIN ST. PO BOX 126 LOCUST 28097	FP 084 A AC 704 888-6156	GELFAND, DAVID WILLIAM 853 BUTTONWOOD DRIVE WINSTON-SALEM 27104	R 034 AC 919 748-2481
GARDNER, JEROME BATCHELOR PO BOX 18568 RALEIGH 27619	OBG 092 A AC 919 782-1273	GASKIN, LEWIS JAMES P. O. BOX 18139 RALEIGH 27619	AN 092 A P * AC 919 781-7420	GELOT, DEEPAK R. E-20 RIDGEWOOD APTS. 404 JONES FERRY RD. CARRBORO 27510	032 A S 919 929-3248
GARDNER, WILLIAM RONALD 420 N. CENTER STREET HICKORY 28601	GS /VS 018 A AC 704 327-9178	GASKIN, LEWIS REED 100 QUEENS RD. CHARLOTTE 28204	OPH 060 A P AC 704 332-1156	GELOT, RAGHUVIR BAXIRAM RT. #1, BOX 6-B AHOSKIE 27910	OTO 008 AC 919 332-5917
GARFUNKEL, JOSEPH MORRIS 229 HUNTINGTON DR. CHAPEL HILL 27514	PD 032 A AC 919 966-5215	GASKINS, RAYMOND ALBERT, JR. 126 THORNCLIFF FAYETTEVILLE 28303	FP /OM 026 AC 919 323-3183	GENIEC, PAUL P. O. BOX 5666 HIGH POINT 27262	OTO /PS 040 AC 919 885-0071
GARG, SHYAM LAL HAMPSTEAD MEDICAL CTR. HAMPSTEAD 28443	IM 065 A AC 919 270-2722	GASQUE, BOYD BENNETT, JR. P. O. DRAWER 1527 LUMBERTON 28359	DR 078 A P AC 919 738-8222	GENTLING, PETER ALLEN 5-D DOCTOR'S PARK ASHEVILLE 28801	GS 011 A P AC 704 252-2457
GARISON, GARY BROWN 3423-A MELROSE ROAD FAYETTEVILLE 28304	CD /IM 026 A AC 919 484-6154	GASQUE, MAC ROY 5 FORTUNE COVE RD. BREVARD 28712	OM /PH 088 A L 704 884-2503	GENTRY, JOHN BILLY 307 S. POSTON STREET SHELBY 28150	PTH 023 A AC 704 482-0241
GARLAND, RUSSELL TYSON 6824 SHILOH RIDGE LN. CHARLOTTE 28212	ORS 060 A R 704 563-2784	GATES, LAWRENCE KEITH, JR. 1710 VISTA DURHAM 27701	IM 032 A R 919 682-5274	GEORGE, LYNN DARCY PO BOX 304 BLOWING ROCK 28605	AN /FP 095 A P AC 704 295-3633
GARLAND, WESLEY SCOTT R. J. REYNOLDS, MEDICAL DEPT. WINSTON-SALEM 27102	OM 034 A AC 919 741-5695	GATLIN, KEITH A., JR. 624 QUAKER LN., STE. 103-C HIGH POINT 27262	CD 040 A AC 919 885-6168	GEORGIAD, GREGORY S. BOX 3960, DUMC DURHAM 27710	PS /GS 032 A AC 919 684-3039
GARMON-BROWN, OPHELIA EUGENIA 402 E. SUGARCREEK RD. CHARLOTTE 28213	FP 060 AC 704 535-8245	GATLING, H. BEE ROUTE #1, BOX 28 MILTON 27305	PH 073 AC 919 234-8656	GEORGIAD, NICHOLAS GEORGE BOX 3098, DUMC DURHAM 27710	PS 032 A * AC 919 684-2854
GARNER, JO FRANCIS, II 204 DOCTOR'S DR. BOONE 28607	D 095 P AC 704 264-4553	GAUL, JOHN STUART, JR. 2600 E. 7TH ST. CHARLOTTE 28204	ORS /HS 060 A AC 704 372-9820	GERATZ, JOACHIM DIETER UNC, DEPT. OF PTH, BBB 228-H CHAPEL HILL 27514	PTH 032 A AC 919 966-4294
GARNER, TIMOTHY B. 717 LOCKLAND AVE. WINSTON-SALEM 27103	NS 034 A R 919 748-2011	GAULT, JANICE ANN 910 CONSTITUTION, APT. 1007 DURHAM 27705	032 A S 919 383-7712	GERBE, RONALD WILLIAM 109 CONNER DR. CHAPEL HILL 27514	OTO /HNS 032 A P AC 919 967-5599
GARRABRANT, EDGAR CORNELIUS 3010 ANDERSON DR. PO BOX 18946 RALEIGH 27619	OTO 092 A * AC 919 787-7171	GAUNT, GEORGE LOREN, JR. 2034 RANDOLPH RD. CHARLOTTE 28207	OS 060 A AC 704 372-4600	GERDES, JOSEPH JOHN 1648 PROVIDENCE RD. CHARLOTTE 28207	DR 013 A P AC 704 786-0214
GARRARD, ROBERT LEMLEY 1000 RIDGECREST DR. GREENSBORO 27410	P /N 041 A * L/RT 919 292-0175	GAVIGAN, JAMES RICHARD 2 DOCTOR'S PARK GREENVILLE 27834	U 074 A P * AC 919 752-5077	GEROCK, HENRY 200 DOCTOR'S DRIVE, SUITE M JACKSONVILLE 28540	FP 067 A AC 919 353-7600
GARRETT, CATHERINE GAELYN 42-J STRATFORD HILLS APTS. CHAPEL HILL 27514	032 A S 919 968-8124	GAVIGAN, THOMAS JOSEPH 125 BALDWIN AVENUE CHARLOTTE 28204	GE 060 A AC 704 338-6300	GERRARD, EDWARD ROLLAND 1202 N. CENTER STREET HICKORY 28601	U 018 P AC 704 322-4340
GARRETT, CHARLES LEROY, JR. ONSLow MEMORIAL HOSPITAL JACKSONVILLE 28540	PTH /FOP 067 A P * AC 919 353-3498	GAWOROWSKI, JOANNA MARIA P. HIGHLAND HOSPITAL P. O. BOX 1101 ASHEVILLE 28802	P 011 A AC 704 254-3201	GESING, BERNARD FRANCIS 4030 BRIDGEWOOD LN. CHARLOTTE 28226	FP 060 A AC 704 542-6577
GARRETT, JOHN BOSTIAN, JR. 631 COX ROAD GASTONIA 28054	U 036 A AC 704 864-7764	GAY, CHARLES HOUSTON 2320 QUEENS ROAD, EAST CHARLOTTE 28207	PD 060 A L/RT 704 333-7479	GESZLER, GERIANNE 5238 N. WILLOWHAVEN DR. DURHAM 27712	OBG 032 A R 919 489-6008
GARRETT, JOHN BOSTIAN, SR. 2926 MAIN ST. PO BOX 220 WALKERTOWN 27051	FP 034 A AC 919 595-2751	GAY, ROBERT MILTON 1200 N. ELM STREET GREENSBORO 27401	PTH /CLP 041 A P AC 919 379-4074	GETTINGER, GLEN SCOTT 211 RIVA RIDGE DR. FAIRVIEW 28730	AN /IM 011 A AC 704 254-1969
GARRETT, NORMAN HESSON, JR. 1038 PROFESSIONAL VILLAGE GREENSBORO 27401	IM /END 041 A AC 919 378-9131	GAY, WILTON CARLYLE, JR. 609 CEDARHURST RD. GREENVILLE 27834	FP 074 AC 919 756-4593	GETZ, DONALD DAVID 1616 MEDICAL CENTER DRIVE WILMINGTON 28401	ORS 065 A P AC 919 762-2655
GARRETT, WILLIAM ELWOOD, JR. BOX 3435, DUMC DURHAM 27710	ORS 032 A AC 919 684-6658	GAYLORD, GREGG M. 115 CARDINAL DR. GREENVILLE 27858	DR 074 A AC 919 752-5000	GHOSTINE, SALIM Y. 101 ROBESON ST. #410 FAYETTEVILLE 28301	NS 026 AC 919 483-5050
GARRISON, HERBERT G., III 114 GARNER RD. GREENVILLE 27834	EM 074 A R 919 758-6245	GAZAK, JOHN MICHAEL 1900 RANDOLPH RD. STE. 816 CHARLOTTE 28207	U 060 A AC 704 334-3033	GIANTURCO, DANIEL THOMAS 2925 FRIENDSHIP ROAD DURHAM 27705	P 032 AC 919 684-4335
GARRISON, RALPH BERNARD P. O. BOX 1169 HAMLET 28345	FP 077 A L/RT 919 582-2140	GEARY, LEON WALLACE 2609 N. DUKE ST., STE. 504 DURHAM 27704	PUD /A 032 A P * AC 919 471-4466	GIBBS, JAMES S. 1830 S. HAWTHORNE RD. WINSTON-SALEM 27103	GE /IM 034 A AC 919 765-0463
GARRISON, ROBERT LEE 225 HAWTHORNE LANE CHARLOTTE 28204	GS 060 A * AC 704 377-1349	GEBEL, EMILE LOUIS 1413 N. LAFAYETTE STREET SHELBY 28150	OPH 023 A AC 704 482-6767	GIBBS, STUART WYNN 2647 ARMSTRONG CIR. GASTONIA 28054	R 036 A L/RT 704 865-5883
GARRISON, ROBERT WALTER 15 MEDICAL PARK MOREHEAD CITY 28557	U 016 AC 919 247-2101	GEDDIE, KENNETH BAXTER 201 GREENSBORO RD., BOX 198 HIGH POINT 27260	PD 040 A L/RT 919 882-4171	GIBLIN, THOMAS RICHARD 1900 RANDOLPH ROAD, #300 CHARLOTTE 28207	PS 060 A P * AC 704 332-4161
GARROU, BENJAMIN WESLEY, SR. 560 MALCOLM BLVD. RUTHERFORD COLLEGE 28671	IM 012 P AC 704 874-0522	GEER-BRENTON, LINDA LOU 2700 MEDICAL OFFICE PLACE GOLDSBORO 27530	DR 096 AC 919 734-1866	GIBSON, CLAYTON T. 109 COUNTRY CLUB DR. CONCORD 28025	ORS /HS 013 A AC 704 786-5122
GARSDIE, WILLIAM BLAKE 1112 DRESSER COURT RALEIGH 27609	PS 092 A AC 919 872-2616	GEERTGENS, PAMELA A. 311 S. LASALLE ST. APT. 47B DURHAM 27705	032 A S 919 286-3921	GIBSON, JACKSON V. PO BOX 887 TROY 27371	IM 062 AC 919 572-3779
GARSDIE, WM. B., JR. D-8 VILLAGE GREEN CHAPEL HILL 27514	032 A * S 919 342-5531	GEGICK, CHARLES GEORGE 1022 PROFESSIONAL VILLAGE GREENSBORO 27401	END /IM 041 AC 919 378-1143	GIBSON, JAMES FRANKLIN 1916 WILKINS DRIVE SANFORD 27330	GS /ADM 053 A * AC 919 776-5191
GARVEY, ALFRED HAMILTON 200 E. NORTHWOOD ST., STE. 302 GREENSBORO 27401	U 041 A AC 919 275-6115	GEHWEILER, JOHN ANDREW, JR. P. O. BOX 231 WAYNESVILLE 28786	R 044 AC 704 452-1517	GIBSON, JOHN MCNEILL 212 S. TRYON ST., STE. 1500 CHARLOTTE 27202	IM 060 A AC 704 333-6544

GIBSON, LLOYD R. 20 HOSPITAL DR. BREVARD 28712	ORS 045 AC 704 884-2055	GINN, FRED LEGRAY CAPE FEAR VALLEY HOSPITAL FAYETTEVILLE 28302	PTH 026 A AC 919 323-6149	GO, JOAN MAYCHU 4 RIVER BIRCH RD., APT. K DURHAM 27705	032 A S 919 383-7019
GIBSON, ROBERT WYLIE 190 CHARLOIS BOULEVARD WINSTON-SALEM 27103	P/N 034 A AC 919 768-6930	GINN, THOMAS MOSS 319 MOCKSVILLE AVE. SALISBURY 28144	IM 080 A AC 704 637-3538	GOBEL, WILLIAM KENNETH P. O. BOX 1886 ASHEBORO 27203	FP 076 A AC 919 672-0090
GIDUZ, THOMAS TRACY 323 BLUE RIDGE RD. CARRBORO 27510	P 032 R 919 967-1036	GINN, WILLIAM M., JR. 2800 BLUE RIDGE, STE. 205 RALEIGH 27607	CD/IM 092 AC 919 782-0414	GOCKERMAN, JON PAUL DUKE COMP. CARE CTR. P. O. BOX 3877 DURHAM 27710	ON/HEM 032 A AC 919 684-6283
GIFFORD, ALLEN LOTHROP 615-A HIBBARD DR. CHAPEL HILL 27514	032 A S 919 933-5893	GIOANNINI-BROWN, CAROL ANN 5009 N. GLEN DRIVE RALEIGH 27609	PTH 032 A AC 919 470-4000	GOCO, ISAIAS ISMAEL 1901 S.HAWTHORNE RD., STE. 220 WINSTON-SALEM 27103	GS/CDS 034 AC 919 768-4710
GILBERT, CHARLES FRANKLIN PITT CO. MEM. HOSP.-LAB. MED. GREENVILLE 27834	PTH 074 A AC 919 551-4495	GIOFFRE, RONALD ANTHONY PO BOX 14580 315 W. WENDOVER AVE. GREENSBORO 27415	ORS 041 A AC 919 275-0724	GODBOLD, RONALD LEE 281 MCDOWELL STREET ASHEVILLE 28803	D 011 A P AC 704 252-5679
GILBERT, DAVID BRANSON 1756 METROMEDICAL DRIVE FAYETTEVILLE 28304	CD/IM 026 A AC 919 323-1322	GIRAGOS, JOHN G. 20 W. COLONY PLACE APT. 260 DURHAM 27705	P/PYA 032 A AC 919 493-1810	GODEHN, DONALD JOHN, JR., 506 PARK HILL CT., STE. #1 HENDERSONVILLE 28739	D 045 A AC 704 693-0275
GILBERT, GEORGE GAYLORD 6 CRANBOURN CT. GREENSBORO 27405	U 041 A P * L/RT 919 282-0168	GISH, LARRY MORGAN 611 MOCKSVILLE AVENUE SALISBURY 28144	IM 080 A AC 704 633-7220	GODWIN, GWENDOLYN R. Q-2 DOCTORS PARK APTS. GREENVILLE 27834	074 A S 919 752-5092
GILBERT, MICHAEL T. 1134 N. ROAD STREET ELIZABETH CITY 27909	OPH 070 A P AC 919 338-0148	GITELMAN, HILLEL JONATHAN N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514	NEP/IM 032 AC 919 966-2561	GODWIN, HAROLD LACY 1601-B OWEN DRIVE FAYETTEVILLE 28304	ADM 026 A * AC 919 323-1152
GILBERT, PAUL PRESSLY 2300-B RANDOLPH ROAD CHARLOTTE 28207	ORS 060 AC 704 375-5955	GITT, KENNETH DARYL 708 S. SOUTH STREET MOUNT AIRY 27030	OBG 086 AC 919 786-4522	GODWIN, HERMAN ALLEN, JR. 2711 RANDOLPH RD. #100 CHARLOTTE 28207	HEM/IM 060 AC 704 373-0700
GILBERT, RICHARD LESLIE, JR. 213 W. CORNWALLIS DR. GREENSBORO 27408	000 A R 919 758-1862	GIVENS, DAVIDSON HOWARD 1399 WESTGATE CENTER DR. WINSTON-SALEM 27103	CD/IM 034 P AC 919 768-4261	GODWIN, WINSTON YUVAWN, JR. 2300 RANDOLPH RD. CHARLOTTE 28207	GS 060 A AC 704 376-0327
GILBERT, STANLEY KEITH, JR. 1300 MEDICAL DRIVE FAYETTEVILLE 28304	ORS/HS 026 A AC 919 484-2171	GIVENS, GEORGE HOWARD, JR. P. O. BOX 308 TAYLORSVILLE 28681	FP 002 A AC 704 632-2270	GOETZL, UGO 1830 HILLDALE ROAD DURHAM 27705	N/P 032 AC 919 383-5531
GILES, JOHN HENRY 350 E. PARKER ROAD MORGANTON 28655	GS 012 P AC 704 437-7388	GLASGOW, DOUGLAS MCKAY 2000 WENDOVER RD. CHARLOTTE 28211	IM/GER 060 A L/RT 704 375-5674	GOFF, DAVID ALBERT 7202 FALLS OF NEUSE RD. RALEIGH 27615	IM/PD 092 AC 919 848-9911
GILGOR, ROBERT SAMUEL 891 WILLOW DRIVE CHAPEL HILL 27514	D 032 A * AC 919 942-3106	GLASS, FREDERICK WILLIAM BOWMAN GRAY SCH. OF MED. WINSTON-SALEM 27103	EM/GS 034 A * AC 919 748-4626	GOFF, JACOB BENJ. M., JR. P. O. BOX 1727 STATESVILLE 28677	U 049 AC 704 873-3766
GILL, KENNETH ARNOLD, JR. 624 QUAKER LN, STE. 302, BLDG B HIGH POINT 27262	D/DMP 040 A AC 919 887-3195	GLASS, PETER STANLEY A. BOX 3094, DUMC DURHAM 27710	AN 032 A AC 919 684-5045	GOINS, JAMES ROBERT 210 13TH AVENUE PLACE, NW HICKORY 28601	OBG 018 AC 704 322-3017
GILL, LOWELL HARLEY 1822 BRUNSWICK AVENUE CHARLOTTE 28207	ORS 060 A AC 704 373-0544	GLASSMAN, STUART LEWIS 835 FLEMING ST. HENDERSONVILLE 28739	GS/VS 045 A AC 704 692-1191	GOLBY, MARY BLUE 904 BROAD STREET DURHAM 27705	IM 032 A AC 919 286-4900
GILLEN, HOWARD WILLIAM 1301 CYPRESS GROVE DR. WILMINGTON 28401	N 065 A P AC 919 762-8501	GLASSON, JOHN 2609 N. DUKE ST. DURHAM 27704	ORS 032 A P * AC 919 471-8431	GOLD, BENJAMIN MILLER 1730 LAFAYETTE CIRCLE ROCKY MOUNT 27801	OBG 064 A RT 919 442-4756
GILLIAM, CHARLES FRANKLIN 200 ARTHUR DRIVE THOMASVILLE 27360	PD 029 A AC 919 475-2348	GLATZ, FRANK ROBERT, JR. 3303 HEALY DR., STE. A WINSTON-SALEM 27103	OTO 034 A AC 919 768-4866	GOLDBERG, JOEL STEVEN RT. #1, BOX 2602 HILLSBOROUGH 27278	AN 032 A AC 919 443-2125
GILLIAM, FRANCIS R., III 603 DUNBAR ST. DURHAM 27701	IM/CD 032 A R 919 684-3901	GLEATON, HUGH ELBERT, JR. 643 FIFTH AVENUE, WEST HENDERSONVILLE 28739	OPH 045 A AC 704 692-9146	GOLDBERG, MARC ANDREW BOX 2860, DUMC DURHAM 27710	032 A S 919 383-8675
GILLIAM, JOHN HUGH, III 300 S. HAWTHORNE ROAD BOWMAN GRAY SCH. OF MED WINSTON-SALEM 27103	GE/IM 034 A AC 919 748-4601	GLEN, DULANEY 250 CHARLOIS BOULEVARD WINSTON-SALEM 27103	IM 034 A AC 919 768-4730	GOLDBERG, TREVOR IAN 1600 E. THIRD STREET CHARLOTTE 28204	OTO 060 A AC 704 372-3300
GILLIATT, CECIL LEE, JR., 101 GROVER STREET SHELBY 28150	PD 023 A AC 704 482-1435	GLENN, CHANNING P. O. BOX 278 ELIZABETHTOWN 28337	GP 009 A L/RT 919 862-3721	GOLDMAN, ALAN LAWRENCE 2800 BLUE RIDGE BLVD., STE. 501 RALEIGH 27607	PD 092 AC 919 781-7490
GILLIGAN, KENDALL ALLEN 109 ROBIN LANE WAYNESVILLE 28786	EM 044 AC 704 456-6021	GLENN, DAVID LOCKE, JR. 561 FLEMING ST. HENDERSONVILLE 28739	GS 045 AC 704 693-1778	GOLDMAN, JAMES OSWALD, JR. COASTAL GROUP, INC. PO BOX 15309 DURHAM 27704	EM/ADM 032 A AC 919 383-0355
GILLILAND, KERRY JAY 153 CEDARLAKE TR. WINSTON-SALEM 27104	034 AC 919 768-4261	GLENN, DOROTHY NORMAN 1319 PARK LANE GASTONIA 28052	OBG 036 A L 703 235-9656	GOLDNER, JOSEPH LEONARD BOX 3706, DUMC DURHAM 27710	ORS/HS 032 A AC 919 684-2628
GILMER, PETER WINSTON 2609 N. DUKE ST. DURHAM 27704	ORS 032 A AC 919 471-8431	GLENN, JOHN CAPERS, JR. 514 WOOD STREET TROY 27371	R/NM 062 A AC 919 572-3475	GOLDNER, RICHARD DOUGLAS BOX 3480, DUMC DURHAM 27710	ORS/HS 032 A AC 919 684-6461
GILMORE, BROOKS WEBSTER 342 N. ELM STREET GREENSBORO 27401	IM 041 A P AC 919 274-6373	GLINSKI, RONALD PETER ROUTE #1, BOX 46A WHITEVILLE 28472	U/PTH 024 A AC 919 642-5832	GOLDSTON, WILLIAM ROBERT 2800 BLUE RIDGE BLVD., STE. 207 RALEIGH 27607	OBG 092 AC 919 781-5510
GILMORE, SAMUEL JOSEPH KINSTON CLINIC, NORTH, STE. E KINSTON 28501	OBG 054 A AC 919 522-4333	GLD, ALBERT PAUL 152 MUIRFIELD DR. WINSTON-SALEM 27104	GS/TS 034 L/RT 919 725-3702	GOLEMBE, BARRY LOUIS 1350 S. KINGS DRIVE CHARLOTTE 28207	PD/PHO 060 AC 704 372-8750
GILMOUR, MONROE TAYLOR 1300 BAXTER ST., STE. 163 CHARLOTTE 28204	IM 060 A * L/RT 704 375-0287	GLOVER, JAMES BUNYAN CAROLINA CLINIC WILSON 27893	OBG 098 A AC 919 291-9010	GOLEY, ALEXANDER FAIRLEY 1509 VAUGHN ROAD BURLINGTON 27215	IM 001 AC 919 228-6000
GILPIN, JOHN W. 1206 W. 4TH ST., #2 WINSTON-SALEM 27101	DR 034 A R 919 748-4316	GLOVER, JOHN SNOW 1851 E. THIRD STREET CHARLOTTE 28204	OBG 060 AC 704 332-8103	GOLLBERG, HAROLD RONALD 445 BILTMORE CENTER, STE. 304 ASHEVILLE 28801	P/GER 011 A * AC 704 252-1421
GIMESH, JOHN SIGMUND 3415-C MELROSE ROAD FAYETTEVILLE 28304	PD 026 A AC 919 484-8163	GLUGOVER, DONALD BENJAMIN 76 MONTANYA VIEW VALDESE 28690	ORS 012 A P AC 704 874-3379	GOMEZ, RAUL FERNANDO P. O. BOX 40237 FAYETTEVILLE 28304	P 026 AC 919 484-9634

GONZALEZ, GEO. DANIEL 515 THOMPSON ST. EDEN 27288	GS /VS 079 A AC 704 623-9118	GOTTSEGEN, DANIEL LEO 200 E. NORTHWOOD ST., STE. 216 A GREENSBORO 27401	OBG 041 AC 919 275-5391	GRANT, JOHN PALMER BOX 3105, DUMC DURHAM 27710	GS /NTR 032 AC 919 684-3314
GONZALEZ, JORGE JOSE 2131 S. 17TH STREET WILMINGTON 28401	IM /END 065 AC 919 343-0161	GOUBRAN, MICHEL 4007 N. ROXBORO ST. DURHAM 27704	OBG /END 032 A P AC 919 693-2131	GRANT, JOSEPH DURHAM 2701 MEDICAL OFFICE PLACE GOLDSBORO 27530	ORS 096 A AC 919 736-2157
GOOD, KEVIN S. 425 STANTONSBURG RD. GREENVILLE 27834	N 074 A AC 919 752-4848	GOUDARZI-LANGROUDI, M. K. 219 E. MAIN ST. WALLACE 28466	GS /GP 031 A AC 919 285-7942	GRANT, TERRY ALAN 2905-A CEDAR CREEK RD. GREENVILLE 27834	074 A S 919 758-6820
GOODCHILD, NIGEL THOMAS 1200 N. ELM ST. GREENSBORO 27401	TR 041 A AC 919 379-4143	GOUGH, JOHN E. E-1 100 DAVID DR. GREENVILLE 27858	074 A S 919 758-6279	GRANT, WILLIS JACKSON, III 250 CHARLOIS BLVD. WINSTON-SALEM 27103	P 034 A AC 919 768-4730
GOODE, DAVID JOHN BOWMAN GRAY, DEPT. OF PSY. WINSTON-SALEM 27103	P 034 AC 919 748-4142	GOUGH, WILLIAM, III 445 BILTMORE CENTER, STE. 306 ASHEVILLE 28801	RHU /IM 011 P AC 704 258-9533	GRAVATT, BENJAMIN THOMAS 202 DOCTOR'S BUILDING ASHEVILLE 28801	AN 011 A AC 704 254-1969
GOODE, THOMAS VANCE, III P. O. BOX 1068 STATESVILLE 28677	GS 049 AC 704 873-7253	GOULSON, DAN T. 20-B DAVIE CIRCLE CHAPEL HILL 27514	032 A S 919 920-2128	GRAVELLE-CAMELO, SHERYL RT. #2, BOX 304 ROCKY MOUNT 27801	074 A S 919 442-7752
GOODEN, MICHAEL DEAN 2400 WAYNE MEM. DR., STE. K GOLDSBORO 27530	OBG 096 A P AC 919 734-3344	GOWEN, CLARENCE WM., JR. ECU SCHOOL OF MEDICINE GREENVILLE 27834	PD /NPM 074 A AC 919 551-4812	GRAVES, JOHN W. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	NEP /IM 034 AC 919 748-4593
GOODFIELD, PETER 510 7TH AVENUE, WEST HENDERSONVILLE 28739	CD 045 A AC 704 692-2231	GOWEN, MARILYN ALLEY ECU, DEPT. OF PEDIATRICS GREENVILLE 27858	PD /PDA 074 A AC 919 551-4772	GRAVLEE, GLENN PAGE 1205 CLOVER STREET WINSTON-SALEM 27101	AN 034 A 919 748-4498
GOODHALL-GUNN, PATRICIA PO BOX 983 NEW BERN 28560	AN 025 A AC 919 633-6117	GOWER, DAVID JOHN N. C. BAPTIST HOSPITAL WINSTON-SALEM 27103	NS 034 R 919 748-4038	GRAY, CHARMAINE D. PO BOX 238 HOOKERTOWN 28538	PD 074 AC 919 747-2817
GOODIN, THOMAS ELLIOTT, III 701 5TH AVE., NE CONOVER 28613	AN 018 AC 704 322-0860	GOWER, VERLIA COLE 918 MADISON AVENUE WINSTON-SALEM 27103	034 A S 919 723-8602	GRAY, CRAIGAN LUTHER 143 ASHELAND AVENUE ASHEVILLE 28801	OBG 011 A AC 704 258-9191
GOODMAN, BENJAMIN WARREN 24 SECOND AVENUE, N. E. HICKORY 28601	FP 018 A * AC 704 328-2231	GRADY, RICHARD DWIGHT P. O. BOX 2406 709 PROFESSIONAL DR. NEW BERN 28560	OTO /HNS 025 P AC 919 638-2666	GRAY, CYRUS LEIGHTON P. O. BOX 5007 HIGH POINT 27262	R 040 L 919 887-1955
GOODMAN, DAVID K. 321 GENTRY ST. JEFFERSON 28640	074 A S 919 355-5287	GRAEUB, CHARLES M., JR. 2021 LA DORA DR. HIGH PCINT 27260	EM 040 A AC 919 884-6009	GRAY, DAVID M. 732 E. PARK AVENUE CHARLOTTE 28203	EM 060 AC 704 372-7544
GOODMAN, DONALD BRUCE, JR. 6708 ALBEMARLE RD. CHARLOTTE 28212	FP 060 AC 704 536-4903	GRAHAM, CHARLES PATTISON 201 FOREST HILLS DRIVE WILMINGTON 28403	GS 065 A L/RT 919 762-0385	GRAY, MARY JANE UNC STUDENT HEALTH SERVICE CAMPUS BOX 7470 CHAPEL HILL 27599	OBG /GYN 032 AC 919 966-2281
GOODSON, JOHN PHILLIP 3814 BROWNING PLACE RALEIGH 27609	GS 092 AC 919 781-0710	GRAHAM, DAVID ERIC P. O. BOX 459 201 SADIE DR. MATTHEWS 28105	GP /AM 060 P AC 704 847-8664	GRAY, PATRICK HAMPTON 302 GLASGOW LANE GREENVILLE 27834	OBG 074 A R 919 551-4100
GOODSON, PHILLIP RICHARD 1308 DAVIE AVENUE STATESVILLE 28677	OBG 049 A P AC 704 873-1436	GRAHAM, FREDERICK WILLIAM, JR. 375 SUNSET AVE. ASHEBORO 27203	FP 076 A AC 919 625-4215	GRAY, ROBERTA SKINNER ECU DEPT. OF PEDIATRICS GREENVILLE 27834	PNP 074 A AC 919 551-4963
GOODWIN, BONNIE JEANNE PO BOX 68 POLLOCKSVILLE 28573	IM /ON 025 A AC 919 633-1010	GRAHAM, GLORIA FLIPPIN 702 BROAD STREET WILSON 27893	D 098 A P * AC 919 291-5600	GRAY, TIMOTHY KENNEY UNC, DEPT. OF MEDICINE CB #7005, OLD CLINIC BLDG. CHAPEL HILL 27599	END /IM 032 AC 919 966-3336
GOODWIN, JAMES OSCAR MEDICAL ARTS BUILDING RUIN CREEK ROAD HENDERSON 27536	OBG 091 A AC 919 492-8576	GRAHAM, JOHN BORDEN UNC SCHOOL OF MEDICINE CHAPEL HILL 27514	PTH /HEM 032 L/RT 919 966-4318	GREASON, FRANCES CRAWFORD 106 SCALES PL. M-2 GREENVILLE 27834	074 A S 919 633-1817
GOODWIN, JOEL SEXTON 315 MOCKSVILLE AVENUE SALISBURY 28144	OBG 080 A AC 704 636-9270	GRAHAM, JOHN CALHOUN, JR. 106 S. WATER ST. PO BOX 250 ELIZABETH CITY 27909	DR /NM 070 A AC 919 335-2652	GRECO, PETER PAUL P. O. BOX 2908 1914 NEUSE BLVD. NEW BERN 28561	D 025 AC 919 633-1817
GORDON, JOSEPH GROVER 1801 HATTIE CIRCLE WINSTON-SALEM 27105	R 034 A RT 919 748-4316	GRAHAM, WALTER RALEIGH 743 HEMPSTEAD PLACE CHARLOTTE 28207	OPH 060 A L/RT 704 334-6014	GREEN, ARTHUR GERRISH, III 1511 WESTOVER TERRACE GREENSBORO 27408	IM /FP 041 AC 919 373-1184
GORDON, MICHAEL ALAN 1816 DOCTORS DR. SANFORD 27330	GS 053 A AC 919 775-7146	GRAHAM, WILLIAM ALEXANDER 2247 CRANFORD ROAD DURHAM 27706	OBG 032 A L/RT 919 489-5214	GREEN, EDWIN JAY 1317 N. ELM ST. STE. #2 GREENSBORO 27401	041 AC 919 373-1676
GORDON, SHELLEY G. RT. #3, BOX 103 WINTERVILLE 28590	074 A S 919 355-5963	GRAINGER, WADE KENTON PO BOX 696 SKYLAND 28776	FP 011 A AC 704 684-7801	GREEN, FRANCIS WEATHERLY 1009 N. 6TH ST. ALBEMARLE 28001	IM 084 A P AC 704 982-8169
GOSS, FREDERICK UHL 611 MOCKSVILLE AVE. SALISBURY 28144	IM 080 A AC 704 633-7220	GRANADOS, JUAN L. 3000 NEW BERN AVE. RALEIGH 27610	OBG 092 AC 919 755-8184	GREEN, HAROLD D. 3619 DEWSBURY ROAD WINSTON-SALEM 27104	CD 034 A L/RT 919 765-5078
GOSSETT, ROBERT PETER 1001 N. WASHINGTON ST. SHELBY 28150	U 023 A AC 919 482-2011	GRANGER, RONALD EUGENE 1821 GREEN STREET DURHAM 27705	OBG 032 A AC 919 286-1250	GREEN, JAMES PRESTON 176 BECKFORD DRIVE HENDERSON 27536	FP 091 A P AC 919 492-2161
GOTTLIEB, JUSTIN L. 3222 COACHMAN'S WAY DURHAM 27705	032 A S 919 489-7372	GRANOVETTER, DAVID ALAN 3831 MERTON DRIVE RALEIGH 27609	RHU /AI 092 A AC 919 781-9633	GREEN, JULIUS ALPHEUS, JR. P. O. BOX 19366 RALEIGH 27615	R 092 A AC 919 787-8221
GOTTLIEB, LOUIS NATHAN 631 COLISEUM DRIVE WINSTON-SALEM 27106	OPH 034 A AC 919 723-1041	GRANT, GEORGE REDD, JR. 3101 ESSEX CIRCLE RALEIGH 27608	IM 092 A * AC 919 782-2631	GREEN, PAUL, JR. 315 G MOCKSVILLE AVE. SALISBURY 28144	GYN 080 A AC 704 638-0023
GOTTOVI, DANIEL 1202 MEDICAL CENTER DRIVE WILMINGTON 28401	PUD /IM 065 A P * AC 919 341-3300	GRANT, GREGORY 2561 HENDERSONVILLE RD. PO BOX 549 ARDEN 28074	OBG 045 P AC 704 687-1435	GREEN, RAY LYMAN 1216 DAVIE AVE. STATESVILLE 28677	OBG 049 A AC 704 873-1436
GOTTSCHALK, BERNARD J. 1202 MEDICAL CENTER DR. WILMINGTON 28401	HEM /ON 065 AC 919 762-2990	GRANT, HUGH JUDD, JR. 100 S. BOYLAN AVENUE RALEIGH 27603	OBG 092 A AC 919 832-5529	GREEN, ROBERT LEE, JR. FALSTAFF ROAD HOLLY HILL HOSPITAL RALEIGH 27610	P /N 032 AC 919 755-1840

GREEN, ROBERT LORENZA 3155 MAPLEWOOD AVENUE WINSTON-SALEM 27103	R 034 A AC 919 773-3873	GRIFFIN, ASHTON THOMAS, III 2400 WAYNE MEMORIAL DRIVE GOLDSBORO 27530	FP 096 A P AC 919 735-8601	GRIVAS, NICHOLAS ELLSWORTH 1928 RANDOLPH RD. STE. 100 CHARLOTTE 28207	NS 060 A AC 704 377-9312
GREENBERG, WILLIAM ROGER P. O. BOX 2188 MONROE 28110	AN 090 A P AC 704 289-3247	GRIFFIN, EZRA DANIEL, JR. 449 N. WENDOVER ROAD CHARLOTTE 28211	OBG 060 A AC 704 364-3760	GROAT, RICHARD ARNOLD 1321 N. ELM STREET GREENSBORO 27401	PTH 041 AC 919 274-9005
GREENE, ELEANOR E.W. 701 SHAMROCK RD. HIGH POINT 27260	OBG 040 A AC 919 885-0149	GRIFFIN, HAROLD WALKER 1610 10TH ST. DR. NW HICKORY 28601	OPH 018 A L/RT 704 327-8526	GROAT, ROBERT LANIER 1317 N. ELM ST., STE. #4 GREENSBORO 27401	OPH 041 AC 919 378-1442
GREENE, JOSEPH ELMO 303 OLD HIGHWAY 74 MARSHVILLE 28103	GP /OM 090 A AC 704 624-2125	GRIFFIN, JOSEPH LAIRD P. O. BOX 2640 LENOIR 28645	OBG 014 A AC 704 758-2300	GROBEN, PAMELA ANNE 327 GRAHAM-HOPEDALE RD. BURLINGTON 27215	PTH 001 AC 919 228-1371
GREENE, PHILLIP 603 E. ROOSEVELT BLVD. MONROE 28110	GP 090 A AC 704 283-8193	GRIFFIN, MARION WILSON 218-D FOUST ST. ASHEBORO 27203	GS /TS 076 A AC 919 625-6188	GROCE, JAMES GRAY 508 RALPH DR. CARY 27511	P 092 AC 919 733-5540
GREENE, RALPH LEON, JR. 3535 RANDOLPH ROAD CHARLOTTE 28211	IM 060 A AC 704 365-0760	GRIFFIN, RICHARD MADISON 27 13TH AVENUE, N.E. HICKORY 28601	OPH 018 A P AC 704 322-6040	GRODE, HARVEY E. WILSON CLINIC WILSON 27893	IM /ON 098 A AC 919 291-7001
GREENE, ROBERT HADLEY 2001 OAKLAWN AVENUE CHARLOTTE 28216	FP 060 A L/RT 704 332-7506	GRIFFIN, ROBERT ASHLEY APPALACHIAN HALL, BOX 5534 ASHEVILLE 28813	P /N 011 A AC 704 253-3681	GRODE, MICHAEL JAMES 149 PROVIDENCE ROAD CHARLOTTE 28207	PD 060 AC 704 372-6525
GREENE, WALTER BLAIR UNC, 237 BURNETT-WOMACK CHAPEL HILL 27514	ORS 032 A AC 919 966-3691	GRIFFIN, STEPHANIE D. RT. 1, BOX 260 MACCLESFIELD 27852	074 A S 919 827-5567	GROMET, MATTHEW 3535 RANDOLPH ROAD CHARLOTTE 28211	DR 060 AC 704 365-0343
GREENFIELD, JOS. C., JR. BOX 3246, DUMC DURHAM 27710	IM /CD 032 AC 919 681-6147	GRIFFIN, THOMAS LAFAYETTE 1700 S. TARBORO ST. WILSON 27893	U 098 A AC 919 299-2200	GROOVER, CALTON DOUGLAS P. O. BOX 32861 CHARLOTTE 28232	PTH 060 AC 704 338-3227
GREENHOOT, JERRY HARVEY 1010 EDGEHILL ROAD NORTH CHARLOTTE 28207	NS 060 A AC 704 376-1605	GRIFFIN, THOMAS RAY P. O. BOX 328 TROUTMAN 28166	FP 049 A AC 704 528-4588	GROSS, JEFFREY LOUIS 128 MEMORIAL DRIVE JACKSONVILLE 28540	ORS 067 A P AC 919 353-4500
GREENMAN, MAXWELL 309 S. LAUREL AVENUE CHARLOTTE 28207	OPH 060 A AC 704 372-4380	GRIFFIN, WILLIAM RAY, JR. 30 HILLTOP ROAD ASHEVILLE 28803	P /N 011 A AC 704 253-3681	GROSSHANDLER, STANLEY LOUIS 1108 DRESSER CT. RALEIGH 27609	AN 092 AC 919 872-5330
GREENWOOD, JAMES BROOKS, JR. PO BOX 18248 4101 CENTRAL AVE. CHARLOTTE 28218	FP 060 A AC 704 537-0020	GRIFFIN, WILLIAM RUSSELL, JR. 3535 RANDOLPH ROAD, STE. 103 CHARLOTTE 28211	ORS 060 A AC 704 365-2111	GROSSMAN, HERMAN LEWIS BOX 3834, DUMC DURHAM 27710	PDR /PD 032 AC 919 681-2711
GREENWOOD, ROBERT SAMUEL UNC, 751 CLINICAL SCI. 229-H CHAPEL HILL 27514	CHN /PD 032 A AC 919 966-2528	GRIFFITH, MARY IRENE 515 S. HAWTHORNE RD. WINSTON-SALEM 27103	GYN 034 A L/RT 919 722-2255	GROSSMAN, SARAH RONA 2061 CRAIG ST., APT. #2 WINSTON-SALEM 27103	034 A * S 919 723-3868
GREER, THOMAS BYWATER P. O. BOX 18568 RALEIGH 27619	OBG 092 A AC 919 782-1273	GRIFFITHS, MARIAN FOLSOM 316 N. GRAHAM-HOPEDALE RD. BURLINGTON 27215	N 001 A AC 919 227-3621	GROSSNICKLE, MARK EARL 3603 CRYSTAL COURT DURHAM 27705	DR 032 A S 919 477-8535
GREGANTI, MAC ANDREW UNC, DEPT. OF IM CHAPEL HILL 27514	IM 032 AC 919 966-2276	GRIGG, CLAUD MCNEILL 217 TRAVIS AVENUE CHARLOTTE 28204	IM /CD 060 A AC 704 372-3350	GROVE, DAVID DWIGHT 1511 WESTOVER TERRACE GREENSBORO 27408	IM 041 A * AC 919 373-1184
GREGG, CHARLES ELI 108 BALLY HO DR. LEWISVILLE 27023	AN 034 A AC 919 748-4791	GRIGGS, BOYCE POWELL 334 W. SYCAMORE STREET LINCOLNTON 28092	FP 055 AC 704 735-3691	GROVES, ROBERT BLAINE RT. #1, BOX 275-B PURLEAR 28665	R 097 AC 919 651-8100
GREGORY, HUGH STANLEY 411 WESTERN BLVD., STE. A JACKSONVILLE 28540	OTO 067 A AC 919 455-4847	GRIGGS, JAMES PHILIP, JR. P. O. BOX 172 WINTERVILLE 28590	074 A S 919 756-9608	GRUBB, STEPHEN ALLEN 101 CONNER DR. STE. 200 CHAPEL HILL 27514	ORS 032 A AC 919 929-7796
GREGORY, JERRY GLEN ECU, DEPT. OF PSYCHIATRY GREENVILLE 27858	P 074 A AC 919 551-2660	GRIGGS, THOMAS RUSSELL UNC, DEPT. OF MED. & PTH CHAPEL HILL 27514	CD /IM 032 AC 919 966-5207	GRUBB, STEPHEN DALE PIREWAY RD. PO BOX 675 TABOR CITY 28463	FP 024 A P AC 919 653-2113
GREIG, JOHN HAMILTON 4401 COLWICK ROAD #702 CHARLOTTE 28211	AN 060 AC 704 366-9408	GRIGSBY, HARDIN BLAND P. O. BOX 310 CONOVER 28613	GYN 018 A AC 704 328-8146	GRUBB, WALTER LEE, JR. 3535 RANDOLPH RD. STE. 102 CHARLOTTE 28211	DR 060 A P AC 704 365-0343
GREISS, FRANK CHRISTIAN, JR. BOWMAN GRAY SCH. OF MED. WINSTON-SALEM 27103	OBG 034 A AC 919 748-4039	GRIM, KENNETH BOYD 124 FIRST ST. NW LONG BEACH 28461	PTH /CLP 032 A L/RT 919 278-9424	GRUHN, WILLIAM BRYANT 1350 S. KINGS DRIVE CHARLOTTE 28207	IM /RHU 060 A AC 704 372-8750
GRESALFI, THOMAS J., JR. 606 WALTER REED DR. GREENSBORO 27403	P 041 AC 919 299-0108	GRIMES, JOHN HARLIN 2609 N. DUKE ST., STE. 302 DURHAM 27704	U 032 A AC 919 471-8423	GUAJARDO, CESAR 20 W. COLONY PL., STE. 160 DURHAM 27705	PYA /P 032 AC 919 489-2878
GREVIOUS, STEPHEN SCOTT 1641-P NORTHWEST BLVD. WINSTON-SALEM 27104	034 A S 919 724-4541	GRIMM, RUBY ANN 738 BRYANT ST. STATESVILLE 28677	ON /HEM 049 A AC 704 873-2219	GUALTIERI, CAMILLO THOMAS UNC, DEPT. OF PSYCHIATRY CHAPEL HILL 27514	P /CHP 032 A AC 919 966-5161
GREWAL, SATPAL KAUR CRAVEN COUNTY HOSPITAL PO BOX 5117 NEW BERN 28560	TR 025 AC 919 633-8730	GRIMMETT, MATTHEW HILL 829 SHORELINE DRIVE, WEST SUNSET BEACH 28459	R /PD 010 A L/RT 919 579-2091	GUARINO, GUY JOSEPH ROUTE #2, BOX 197 CONOVER 28613	PTH 018 A AC 704 322-3821
GRICE, ORMOND DREW 800 HOSPITAL DR. STE. #6 NEW BERN 28560	GS 025 AC 919 633-3557	GRIMSON, BAIRD SANFORD CB #7040, UNC, 733 BURNETT-WOMACK CHAPEL HILL 27599	OPH 032 A AC 919 966-5296	GUERRA, MARC FRANCIS 912 CONNELLY SPRINGS RD. LENOIR 28645	FP 014 AC 704 728-8224
GRIER, JOHN CALVIN, JR. P. O. BOX 819 PINEHURST 28374	P 063 A * L 919 295-6166	GRIMSON, KEITH SANFORD 3313 DEVON ROAD DURHAM 27707	GS 032 A L 919 489-2241	GUEST, CHRIS WARREN 102 POMONA DRIVE GREENSBORO 27407	IM /GP 041 A P * AC 919 299-0000
GRIER, MICHAEL WILLIAM 30 CHOCTAW STREET ASHEVILLE 28801	GE /IM 011 A AC 704 254-0881	GRINE, WILLIAM BARK 1704 TARBORO STREET WILSON 27893	U 098 A AC 919 291-7001	GUGELMANN, RICHARD JOHN 919 KILDAIRE FARM ROAD CARY 27511	PD /ADL 092 AC 919 467-6666
GRIER, RAYMOND EDWARD 403 WILLOUGHBY BLVD. GREENSBORO 27408	AN 041 AC 919 275-9741	GRISHAM, JOE WHEELER UNC, DEPT. OF PTH-228H CHAPEL HILL 27599	PTH /GE 032 A AC 919 966-4678	GUILFORD, WILLIAM BONNER 3535 RANDOLPH RD., STE. 102 CHARLOTTE 28211	DR 060 AC 704 365-0343
GRIFFIN, ADRIAN MARK PO BOX 1623 913 WORTH ST. MOUNT AIRY 27030	EM /P 086 A * AC 919 786-2001	GRISTINA, ANTHONY GEORGE 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	ORS 034 A AC 919 748-3952	GUITERAS, GEORGE PATRICK 110 S. ESTES DR., SUITE 205 CHAPEL HILL 27514	FP 032 AC 919 967-8291

GULLEDGE, SIDNEY LOY, III 3400 EXECUTIVE DR., STE. 101 RALEIGH 27609	OPH 092 A P AC 919 878-0220	HAAS, ALI EKREM 6 BLUEBERRY HILL PITTSBORO 27312	PS 032 R 919 966-4131	HALL, BRENT DWAYNE DOCTOR'S PARK APTS, #P-7 GREENVILLE 27834	074 A S 919 752-7222
GULLEY, MARCUS MARCELLUS DEPARTMENT OF PSYCHIATRY WINSTON-SALEM 27103	P 034 A AC 919 748-4554	HABEL, DAVID CHRISTOPHER 3 LANDOVER COURT DURHAM 27713	032 A S 919 489-8161	HALL, COLIN DAVID UNC, DEPT. OF NEUROLOGY CHAPEL HILL 27514	N 032 A AC 919 966-5522
GULLEY, PAUL HUDSON 180-B PARKWOOD DR. ELKIN 28621	IM /END 086 A AC 919 835-3136	HABERKERN, ROY CONRAD 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	CHP 034 AC 919 748-4220	HALL, DANIEL CRAWFORD 809 LONG DRIVE ROCKINGHAM 28379	FP 077 AC 919 895-9075
GULYN, ANNA BAUHOFFER 117 PINETREE ROAD SALISBURY 28144	GP 080 P AC 704 636-2351	HACKLANDER, SHELLEY W. 2357-D ARDMORE TERR. WINSTON-SALEM 27103	034 A * S 919 761-8652	HALL, DONALD GAMMON 1960 RANDOLPH ROAD CHARLOTTE 28207	CD 060 A AC 704 373-1503
GULYN, BOHDAN EMANUEL 117 PINETREE ROAD SALISBURY 28144	P /GP 080 A 704 633-7770	HADDAD, MICHEL GEORGE 300 S. HAWTHORNE RD. BOX 487 WINSTON-SALEM 27103	034 A S 919 723-7442	HALL, GREGORY GRAYSON 2144 ECHO LANE WILMINGTON 28403	AN 065 AC
GUNNELLS, JAMES CAULIE BOX 2991, DUMC DURHAM 27710	NEP /IM 032 A AC 919 684-5038	HADI, HAMID A. ECU SCHOOL OF MEDICINE DEPT. OF OB/GYN GREENVILLE 27858	074 AC 919 551-4662	HALL, JAMES BRYAN CHARLOTTE MEMORIAL HOSP. P. O. BOX 32861 CHARLOTTE 28232	OBG /ON 060 A P AC 704 331-3149
GUNTER, JUNE U. 1411 N. MANGUM STREET DURHAM 27701	PTH 032 A L/RT 919 688-3457	HADLER, NORTIN MARVIN UNC, DEPT. OF MEDICINE CHAPEL HILL 27599	RHU /IM 032 AC 919 966-4191	HALL, JAMES GRAYSON P. O. BOX 158 DOBSON 27017	FP 086 A P * AC 919 386-8270
GUNTER, WM. B., JR. 1821 GREEN ST. DURHAM 27705	OBG 032 A AC 919 286-1258	HADLEY, ROBERT PURCELL P. O. BOX 1328 WASHINGTON 27889	PTH 007 A AC 919 946-9074	HALL, JAMES SAMUEL 3415-C MELROSE ROAD FAYETTEVILLE 28304	PD 026 A AC 919 484-8163
GUNTHER, ROBERT CLARENCE 25 LAWRENCE PLACE ASHEVILLE 28801	AN 011 A AC 704 252-1016	HAGAMAN, LEN DOUGHTON 300 CHERRY DR. BOONE 28607	GP 095 L/RT 704 264-3923	HALL, JOHN HOWLAND 1301 W. WENDOVER AVE. WENDOVER MEDICAL PK. GREENSBORO 27408	D 041 A AC 919 272-3152
GUPTA, AMIT GIRISH BOX 2763, DUMC DURHAM NC 27710	032 A S 919 489-5105	HAGINS, DAVID MICHAEL KINSTON CLINIC NORTH KINSTON 28501	OBG 054 A AC 919 522-4333	HALL, JOHN HOWLAND, JR. 237 E. VINELAND RD. AUGUSTA, GA 30904	034 A S 404 738-2112
GUPTA, GOOL KAPADIA 2704 MEDICAL OFFICE PLACE GOLDSBORO 27530	PUD /IM 096 P AC 919 736-4724	HAGLER, DAN N. 125 BALDWIN AVE. CHARLOTTE 28204	IM /ID 060 A AC 704 338-6300	HALL, JOHN MOIR 357 IVY CIRCLE ELKIN 28621	GP 086 A L/RT 919 835-4534
GUPTA, JAGMOHAN DASS 2704 MEDICAL OFFICE PLACE GOLDSBORO 27530	CD /IM 096 AC 919 736-4724	HAHN, MICHAEL WAYNE 801 MCCARTHY BLVD. NEW BERN 28560	OBG 025 A AC 919 633-3942	HALL, JOSEPH CULLEN 305 STUART DRIVE SALISBURY 28144	OBG 080 A P L/RT 704 633-9508
GURKIN, WORTH WICKER, JR. 1907 HERITAGE CIRCLE TARBORO 27886	PD 033 A AC 919 758-6752	HAHNER, MATTHEW 407 S. GREENE ST. WADESBORO 28170	GS 004 A AC 704 694-4193	HALL, LOCKSLEY S. L.C. HOOTS MEMORIAL HOSPITAL YADKINVILLE 27055	GS 086 A * AC 919 679-2041
GURLEY, JUDITH M. 5002 MCCORMICK RD. DURHAM 27713	032 A S 919 967-0440	HAINER, BARRY LEWIS 602 QUEEN ANNE'S ROAD GREENVILLE 27834	FP 074 A AC 919 551-4166	HALL, MARY NOLAN PO BOX 32861 CHARLOTTE MEM. HOSP. CHARLOTTE 28232	FP 060 AC 704 338-3172
GUSDON, JOHN PAUL, JR. 3240 NOTTINGHAM ROAD WINSTON-SALEM 27104	OBG 034 AC 919 748-4039	HAINES, CARROLL FOGG, JR. 515 THOMPSON ST., STE. A EDEN 27288	OPH 079 A P AC 919 627-5271	HALL, WARNER LEANDER, JR. P. O. BOX 18568 RALEIGH 27619	OBG 092 A AC 919 782-1273
GUSTKE, SUSAN SHAW 4100 STRANAVAR PLACE RALEIGH 27612	IM /HEM 092 * AC 919 733-5431	HAINES, RICHARD LITTLETON HIGHWAY 17, P. O. BOX 565 HAMPSTEAD 28443	IM /GP 065 AC 919 270-3561	HALL, WILLIAM ERNEST 611 WICKER STREET SANFORD 27330	FP 053 P AC 919 774-6023
GUTMAN, ROBERT ALLAN 2609 N. DUKE ST., STE. 604 DURHAM 27704	NEP /IM 032 A P AC 919 477-3005	HAIR, GLENN EDGAR 3314 MELROSE ROAD FAYETTEVILLE 28304	OT /OTO 026 A P AC 919 323-1463	HALL, WILLIAM JAMES, JR. P. O. BOX 2406 NEW BERN 28560	OTO 025 A * AC 919 638-2666
GUTTER, GUIDO PETER 300 CRUTCHFIELD RD. DURHAM 27704	PS 032 AC 919 471-3406	HAIRFIELD, THEODORE VINCENT 328 MULBERRY ST., SW LENOIR 28645	GP 014 AC 704 754-3329	HALPERIN, EDWARD CHARLES BOX 3085, DUMC DURHAM 27710	TR 032 A P * AC 919 684-3196
GUTTLE, SANFORD DENNIS 1 TRADE STREET GRANITE FALLS 28630	FP 018 A AC 704 396-3136	HAISTY, WESLEY KENNETH, JR. 300 S. HAWTHORNE ROAD WINSTON-SALEM 27103	CD /IM 034 A AC 919 748-4673	HALPERN, EMILY ALYSSA 304 CEDARWOOD LN. CARRBORO 27510	032 A S 919 933-9037
GUY, CLIFFORD RICHARD 250 CHARLOIS BOULEVARD WINSTON-SALEM 27103	CD /IM 034 A P * AC 919 768-4730	HAITHCOCK, WILLIAM DANA, JR. 1219 WALTER REED ROAD FAYETTEVILLE 28304	OBG 026 A AC 919 323-2103	HAMBRIGHT, RUFUS ROBERTS 1309 N. ELM STREET GREENSBORO 27401	GYN 041 A AC 919 273-2563
GUYTON, SCOTT PAUL 2039 CRAIG ST. WINSTON-SALEM 27103	034 A S 919 777-8689	HAIZLIP, THOMAS MATTHEWS 5201 REMBERT DRIVE RALEIGH 27612	CHP /P 092 AC 919 733-5344	HAMBRIGHT, WESLEY F. 245 MEMORIAL DR. JACKSONVILLE 28540	OBG 067 A AC 919 353-4333
GWYN, PAUL PERKINS, JR. 2901 MAPLEWOOD AVENUE WINSTON-SALEM 27103	PS /GS 034 A AC 919 765-8620	HAJISHEIKH, MOOSA P. O. BOX 1537 ROCKINGHAM 28379	CD /IM 077 A AC 919 997-3177	HAMBY, GEORGE WALTERS DOCTOR'S BUILDING, WILLOW DR. CHAPEL HILL 27514	P 032 AC 919 929-6155
GWYNN, THOMAS LEA P. O. BOX 340 YANCEYVILLE 27379	GP 001 A AC 919 694-6311	HALE, JOHN CHARLES 10 DOCTOR'S PARK GREENVILLE 27834	GS /CDS 074 A P AC 919 758-1747	HAMBY, JAMES LAWRENCE WATAUGA MED. ARTS. BLDG. BOONE 28607	U 095 A P * AC 704 264-5150
GWYNNE, JOHN THOMAS 234 HUNTINGTON DRIVE CHAPEL HILL 27514	END 032 AC 919 966-3338	HALE, LAURA POPE 6512 CRAIG ROAD DURHAM 27712	032 A S 919 471-0865	HAMER, ALFRED WILSON, JR. 2203 S. STERLING ST., STE. 132 MORGANTON 28655	OBG 012 AC 704 437-6122
HA, KHIE SEM 229 S. MAIN STREET RED SPRINGS 28377	FP 078 AC 919 843-4117	HALE, LESLIE MORGAN 110 CONNER DR. STE. #2 CHAPEL HILL 27514	OPH 032 A AC 919 942-8701	HAMIL, SHARON SWEDE OLD U. S. HIGHWAY 70 BLACK MOUNTAIN 28711	FP 011 AC 704 669-5478
HAAK, EDWARD DECKER, JR. 208 FOUST ST. P. O. BOX 2839 ASHEBORO 27203	IM /CD 076 A AC 919 625-4020	HALE, ROBERT VERNON 110 CONNER DR. STE. #2 CHAPEL HILL 27514	OPH 032 A AC 919 942-8701	HAMILTON, BRIAN HUGH LAUREL RIDGE APTS. #32 HIGHWAY 54 BYPASS CHAPEL HILL 27516	032 A S 919 967-9462
HAAKENSON, GARY ALVIN 3126 BLUE RIDGE RD. RALEIGH 27612	OBG 092 AC 919 782-3865	HALE, WAYNE A. 1125 N. CHURCH ST. GREENSBORO 27401	FP 041 A AC 919 379-3582	HAMILTON, BUFORD LINDSAY, JR. P. O. BOX 8 STONY POINT 28678	FP /GP 049 A AC 704 585-2953
HAAR, FREDERICK BEHREND 610 S. OAK STREET GREENVILLE 27834	PD 074 A L 919 752-2039	HALL, BAHNSON DAVID 315 MOCKSVILLE AVENUE SALISBURY 28144	OBG 080 A AC 704 636-9270		

HAMILTON, GENE THOMAS	ORS 074	HANNA, RICHARD TINSLEY	FP /HYP 060	HARDY, WINFIELD	FP 011
6 MEDICAL PAVILION	A AC	6900 FARMINGDALE DRIVE	A AC	P. O. BOX 696	AC
GREENVILLE 27834	919 752-4613	CHARLOTTE 28212	704 536-1362	SKYLAND 28776	704 684-7801
HAMILTON, GEORGE EDWARD, JR.	P 034	HANNAH, FRANK THOMAS	OPH 023	HARE, RANSOM BRYANT, JR.	U 065
908 ARBOR ROAD	AC	313 S. WASHINGTON STREET	A P AC	839 HANOVER DR.	A L/RT
WINSTON-SALEM 27104	919 725-7777	SHELBY 28150	704 482-0696	GRIFFIN, GA 30223	
HAMILTON, JAMES PRESSLY	PDS 060	HANRAHAN, LEO ROBERT, JR.	PTH /BLB 074	HARE, ROY ALLEN	IM 032
2104 RANDOLPH ROAD	A AC	ECU SCHOOL OF MEDICINE	A P * AC	2609 N. DUKE STREET	A AC
CHARLOTTE 28207	704 377-3900	DEPT. OF PATHOLOGY		DURHAM 27704	919 471-8481
HAMILTON, ROBERT WILLIAM	NEP /IM 034	GREENVILLE 27834	919 551-2806	HARGETT, FRANKLIN	FP /GER 074
BOWMAN GRAY SCH. OF MED.	AC	HANSCOM, ALFRED CARLETON	EM /FP 011	1705 W. 6TH ST.	A AC
WINSTON-SALEM 27103	919 748-4304	RT. #11, BOX 260	A AC	GREENVILLE 27835	919 551-2189
HAMILTON, WILLIAM GODFREY	FP 011	HENDERSONVILLE 28739	704 693-7623	HARGRAVE, RONALD PAUL	EM 000
P. O. BOX 429	AC	HANSEN, ALFRED ROY	EM /FP 032	2620-F CELANESE RD.	A AC
FAIRVIEW 28730	919 628-2225	UNC, BURNETT-WOMACK, 229H	A AC	ROCK HILL, SC 29730	803 329-2222
HAMMER, DONALD EDWIN	GS 060	CHAPEL HILL 27514	919 966-5643	HARKER, MARGARET NELSEN	GP 016
2206 CUMBERLAND AVENUE	A AC	HANSEN, KIMBERLEY J.	GS 034	P. O. DRAWER 897	A * AC
CHARLOTTE 28203	704 375-3504	300 S. HAWTHORNE RD.	A AC	MOREHEAD CITY 28557	919 247-3476
HAMMER, DOUGLAS IRA	EM /GPM 092	WINSTON-SALEM 27103	919 748-4443	HARKINS, PAUL DUANE	ORS /HS 041
P. O. BOX 30788	A AC	HANSON, JOHN STEPHEN	GE /IM 060	1505 WESTOVER TERR.	A P AC
RALEIGH 27622	919 847-8821	2711 RANDOLPH RD.	AC	GREENSBORO 27408	919 275-0927
HAMMES, STEPHEN R.	032	CHARLOTTE 28207	704 373-0700	HARLAN, STEVEN DANE	R 018
3611 UNIV. DR. 6E	A S	HANSPAL, PRITHVI PAL SINGH	U 076	P. O. BOX 308	A AC
DURHAM 27707	919 684-8243	171 MCARTHUR STREET	A AC	HICKORY 28603	704 322-2644
HAMMETT, ELLIOTT BRIAN	P 032	P. O. BOX 1509	919 625-3997	HARLESS, JAMES M.	034
V. A. HOSPITAL	A AC	ASHEBORO 27203	PUD /IM 011	307 FOXCROFT DR.	A S
DURHAM 27701	919 286-0411	HAPKE, EDITH JOSEPHINE	A AC	WINSTON-SALEM 27103	919 768-4780
HAMMOCK, RONALD MACK	U 067	70 WOODFIN PL., STE. 304	704 254-8878	HARLEY, STEWART JACQUES	ORS 044
200 DOCTOR'S DR. SUITE C	A AC	ASHEVILLE 28801	D /IM 060	114 HOSPITAL DRIVE	AC
JACKSONVILLE 28540	919 353-9994	HARBEN, DOUGLAS JAMES	A P AC	CLYDE 28721	704 452-2218
HAMMOND, ALFRED FRANKLIN, JR.	GP 025	3535 RANDOLPH RD., STE. 101-W	704 364-6110	HARLEY, WILBUR JONES	OM /GPM 034
1514 TRENT BOULEVARD	A L/RT	CHARLOTTE 28211	OBG 049	241 FLINTSHIRE RD.	A AC
NEW BERN 28560	919 637-6066	HARBERTS, ARTHUR STANLEY	AC	WINSTON-SALEM 27104	919 768-4469
HAMMOND, CHARLES B.	OBG /END 032	P. O. BOX 1460	704 878-2011	HARMAN, JOHN SIMON	U 001
BOX 3853, DUMC	AC	STATESVILLE 28677	CD /IM 060	1610 VAUGHN ROAD	A AC
DURHAM 27710	919 684-3008	HARBOLD, NORRIS BROWN, JR.	A AC	BURLINGTON 27215	919 227-2761
HAMMOND, WILLIAM HOWARD, JR.	GP 036	1960 RANDOLPH ROAD	704 373-1503	HARMEL, MEREL HILBER	AN 032
224 S. NEW HOPE RD.	AC	CHARLOTTE 28207	034	BOX 3094, DUMC	A AC
GASTONIA 28054	704 867-3621	HARBOURNE, KEVIN S.	A S	DURHAM 27710	919 684-2945
HAMMONDS, ROBERT EUGENE	OTO /PS 013	1641 NORTHWEST BLVD., APT. D	919 724-7390	HARMON, PERRY MONROE	OBG 026
113 COUNTRY CLUB DR.	A AC	WINSTON-SALEM 27104	ORS 032	1811 LAKESHORE DR.	AC
CONCORD 28025	704 788-2154	HARDAKER, WILLIAM T., JR.	A AC	FAYETTEVILLE 28305	919 484-3271
HAMPTON, JAMES HARRIS, JR.	FP 034	BOX 3956, DUMC	919 684-5334	HARMON, RAYMOND HARRIS	OPH 095
P. O. BOX 325	A AC	DURHAM 27710	FP 049	120 HIGHLAND AVENUE	A L/RT
LEWISVILLE 27023	919 945-5846	HARDAWAY, JOHN STEGER	AC	BOONE 28607	704 264-8669
HAMPTON, JAMES WELDON	OBG 039	527 BROOKDALE DR.	704 872-7429	HARNED, HERBERT SPENCER, JR.	PDC 032
1016 COLLEGE ST. EXT.	A AC	STATESVILLE 28677	FP 023	803 SPRING DELL LANE	L/RT
OXFORD 27565	919 693-1082	HARDEMAN, RICHARD AUSTIN	AC	CHAPEL HILL 27514	919 966-4601
HAMRICK, ALGER VASON, III	FP 092	616 E. MARION STREET	704 487-6338	HAROUNY, VICTOR ROBERT	OBG 060
1109 DRESSER COURT	AC	SHELBY 28150	AN 034	150 PROVIDENCE RD.	A AC
RALEIGH 27609	919 872-4900	HARDIE, GREGORY STEVEN	A AC	CHARLOTTE 28207	704 377-0461
HAMRICK, JOHN CARL	GS 023	408 FORSYTH MEDICAL PK	919 768-7680	HARPER, DAVID KEITH	OPH 013
P. O. BOX 668	A L/RT	WINSTON-SALEM 27103	FP 078	500 LAKE CONCORD RD., NE	A AC
SHELBY 28150	704 487-5132	HARDIN, JAMES BENFORD	A AC	CONCORD 28025	704 782-1127
HAMRICK, JOHN CARL, JR.	ORS 023	206 W. 28TH STREET	919 739-8164	HARPER, JAMES ROBINSON	IM /CD 032
110 W. GROVER STREET	A AC	LUMBERTON 28358	IM 081	891 W. WILLOW DRIVE	AC
SHELBY 28150	704 487-1177	HARDING, ROBERT WILLIAM	AC	CHAPEL HILL 27514	919 942-5123
HAMRICK, LADD WATTS, JR.	IM /NM 013	NORRIS-BIGGS CLINIC	IM 092	HARPER, LARRY OLEN	IM /END 001
68 LAKE CONCORD ROAD, N.E.	A AC	RUTHERFORDTON 28139	919 872-4850	KERNODLE CLINIC, INC.	A P AC
CONCORD 28025	704 782-3135	HARDISON, CYNTHIA STOLTZE	OBG /GE 026	BURLINGTON 27215	919 227-3621
HAMSTEAD, STEVEN LYNN	IM 074	1212 CEDARHURST DR.	A AC	HARPER, MARGARET A.	OBG 034
201 N. MAIN ST.	A R	RALEIGH 27609	919 323-3301	300 S. HAWTHORNE RD.	919 748-4595
FARMVILLE 27828	919 830-1512	HARDISON, JOE WILLIAM	IM /GE 092	WINSTON-SALEM 27103	
HAN, GWANG SOO	OBG 050	1320 MEDICAL DRIVE	AC	HARPER, MATT CLEVELAND, JR.	GP 054
19 CENTRAL STREET	A AC	FAYETTEVILLE 28304	919 872-4850	CHERRY HOSP., CALLER BOX 8000	AC
SYLVA 28779	704 586-4096	HARDISON, JOSEPH H., JR.	FP 026	GOLDSBORO 27530	919 522-3162
HANCOCK, GEORGE MARVIN	GS 014	3320 WAKE FOREST RD.	A AC	HARPER, ROBERT NORMENT, JR.	GE /IM 092
401 MULBERRY ST. SW, STE. 101	A AC	RALEIGH 27609	919 323-0085	P. O. BOX 18700	AC
LENOIR 28645	704 758-5501	HARDISON, LEWIS BENJAMIN	IM 098	1212 CEDARHURST DR.	919 872-4850
HANCOCK, MILLIE PITTS	A /PD 018	P. O. BOX 64369	A AC	RALEIGH 27609	
221 - 13TH AVENUE PLACE, N.W.	A * AC	FAYETTEVILLE 28306	919 291-7001	HARPER, ROBERT NORMENT, SR.	P 092
HICKORY 28601	704 322-1275	HARDISON, MITCHELL DALE	AC	3153-G GLENWOOD PROF. VILL.	A AC
HANCOCK, RICHARD PAUL	GS /TS 043	BRENTWOOD MEDICAL CENTER	919 872-4850	RALEIGH 27608	919 782-1555
702 TILGHMAN DR.	A AC	WILSON 27893	GYN /OBS 060	HARPER, WAYNE LEE	IM 092
DUNN 28334	919 892-8120	HARDMAN, EDWARD FRANCIS	A	2501 NORTH ST.	AC
HANCOCK, WILLIAM FRANKLIN, JR.	PTH 001	1000 HUNTINGTON PARK DRIVE	704 366-1962	RALEIGH 27607	919 783-4800
1303 W. DAVIS ST.	A P AC	DECEASED--4-15-88	NS 074	HARPOLD, GARY JOE	N 034
BURLINGTON 27215	919 226-0196	CHARLOTTE 28211	A * AC	300 S. HAWTHORNE ROAD	A AC
HAND, LEROY CORBETT, JR.	FP /EM 070	HARDY, IRA MAY, II	919 752-5156	WINSTON-SALEM 27103	919 748-4494
ROUTE #1, BOX 490	L/RT	125 MOYE BOULEVARD	032	HARR, CHARLES DULANEY	GS 034
CAMDEN 27921	919 335-0531	GREENVILLE 27834	A R	719 WESTVIEW DRIVE	A R
HANNA, DONALD PAUL	PS 092	HARDY, JAMES JOSEPH	919 942-7438	WINSTON-SALEM 27103	919 748-2011
103 BAINES COURT	A AC	130 RIDGE TRAIL	N 074	HARR, DEBRA M. B.	TR 034
CARY 27511	919 383-7975	CHAPEL HILL 27516	A AC	719 WESTVIEW DR.	A R
HANNA, LINDA J.	NR /GS 034	HARDY, JOHN GREGG	919 752-4848	WINSTON-SALEM 27103	919 748-4981
706 DRUID OAKS	A R	425 STANTONSBURG ROAD			
ATLANTA, GA 30329	404 634-5198	GREENVILLE 27834			

HARRELL, LONNIE CLAYTON, III 150 PROVIDENCE ROAD CHARLOTTE 28207	OBG 060 A AC 704 377-0461	HARSHBARGER, JOHN LYNN 1202 MEDICAL CENTER DR. WILMINGTON 28401	RHU /A 065 AC 919 341-3350	HATCHER, PAUL ARTHUR BOX 2922, DEPT. OF UROLOGY DUKE MEDICAL CENTER DURHAM 27710	U /AM 000 R 617 876-1376
HARRELL, WADE WHITLEY 319 WESTWOOD AVENUE HIGH POINT 27262	OPH 040 A AC 919 883-7867	HARSTON, PHILLIP REED 2711 RANDOLPH RD. STE. 512 CHARLOTTE 28207	OBG 060 AC 704 333-4104	HATCHER, WALTER BENJAMIN 3225 JURA DR. FAYETTEVILLE 28303	000 A R
HARRELL, WARREN LAMAR, JR. 1237 BROOKWOOD DRIVE SHELBY 28150	R 023 A P AC 704 482-3880	HART, ELZIE FRANKLIN, JR. 350 E. PARKER ROAD MORGANTON 28655	OTO /PS 012 A AC 704 433-6410	HATTAWAY, ALEXANDER C., III 3010 ANDERSON DR. PO BOX 18946 RALEIGH 27619	OTO /HNS 092 A AC 919 787-7171
HARRELL, WILLIAM FLETCHER, JR. 1142 N. ROAD ST. ELIZABETH CITY 27909	PD 070 A L/RT 919 338-6359	HART, OLIVER JAMES, JR. 1806 S. HAWTHORNE ROAD WINSTON-SALEM 27103	U 034 A AC 919 768-0735	HATTEN, HOMER PAUL, JR. PRESBYTERIAN HOSP. DEPT. RAD A P. O. BOX 33549 CHARLOTTE 28233	DR 060 AC 704 371-4057
HARRELSON, JOHN MILES BOX 3023, DUMC DURHAM 27710	ORS /PTH 032 A AC 919 684-5304	HART, OLIVER JAMES, SR. 1930 GEORGIA AVENUE WINSTON-SALEM 27104	U 034 A L/RT 919 722-6598	HAUCH, THOMAS WRAY 1350 S. KINGS DRIVE CHARLOTTE 28207	ON /HEM 060 A AC
HARRINGTON, LEE, JR. 2340 OLIVET CHURCH ROAD WINSTON-SALEM 27106	OM /IM 034 A L/RT 919 924-4179	HART, ROBERT ERIC C-5 211 CHURCH ST. CHAPEL HILL 27514	032 A S 919 967-0370	HAUPT, RONALD ANTHONY ROUTE #2, BOX 294 LANSING 28643	EM /FP 095 AC 919 384-3708
HARRIS, BRUCE C. PO BOX 1460 STATESVILLE MEDICAL GROUP STATESVILLE 28677	GS 049 AC 704 878-2011	HART, ROBERT WILLIAM, III 221 13TH AVENUE PL., NW HICKORY 28601	FP 018 A P AC 704 322-5800	HAVEN, ANDREW EDDY 2245 STANTONSBURG RD., STE. H GREENVILLE 27834	OBG 074 A AC 919 757-3131
HARRIS, CARLTON MCKENZIE 1026 PROFESSIONAL VILLAGE GREENSBORO 27401	IM 041 A AC 919 272-7108	HART, TIMOTHY BERTRAND 1212 CEDARHURST DRIVE RALEIGH 27609	IM /PUD 092 AC 919 872-4850	HAVERKAMP, JOHN 619 PARK AVE. GOLDSBORO 27530	D 096 A * AC 919 734-0944
HARRIS, CHARLES I., JR. PO BOX 1088 DECEASED-5-13-88 WILLIAMSTON 27893	GP 007 L 919 792-7026	HARTLE, EDGAR OWEN 821 MT. VERNON AVE. CHARLOTTE 28203	EM 060 AC 704 334-8419	HAWES, ANNE COLCLOUGH 2608 E. SEVENTH ST. CHARLOTTE 28204	N 060 AC 704 377-9323
HARRIS, CHARLES ODELL 400 CRUTCHFIELD ST. STE. B DURHAM 27704	OBG 032 * AC 919 471-1573	HARTMAN, MARJORIE LYNN 413 YATES CT. #B CHAPEL HILL 27514	034 A S 919 725-8909	HAWES, CHARLES FOREST P. O. BOX 486 ROSE HILL 28458	GP 031 A L/RT 919 289-2739
HARRIS, CHARLES THEODORE, JR. 401 FESBROOK COURT CHARLOTTE 28226	AN 060 L/RT	HARTMANN, THOMAS MICHAEL 180 PATTON MOUNTAIN RD. ASHEVILLE 28804	DR 011 AC 704 254-4617	HAWES, MARY LINDA 100 NASH MEDICAL ARTS MALL ROCKY MOUNT 27801	IM /NEP 064 AC 919 443-9084
HARRIS, CHARLES WALKER 125 BALDWIN AVE. CHARLOTTE 28204	CD /IM 060 A AC 704 374-1696	HARTNESS, ALBERT R. RT. #2, BOX 386-B DENVER 28037	FP 049 A AC 919 483-9385	HAWES, SAMUEL PINCKNEY, III 1333 ROMANY ROAD CHARLOTTE 28204	U 060 AC 704 372-5180
HARRIS, JEFFREY DAVISON HIGHWAY 127 NORTH P. O. BOX 6050 HICKORY 28601	FP 018 A P AC 704 495-8226	HARTNESS, ALVIN HUNTER PO BOX 43505 FAYETTEVILLE 28309	PD 026 A * AC 919 323-4571	HAWES, STEPHEN JAMES, JR. 1928 RANDOLPH RD., STE. 314 CHARLOTTE 28207	ID /IM 060 A AC 704 331-9413
HARRIS, LARRY COLEMAN P. O. BOX 40405 FAYETTEVILLE 28309	PD 026 A AC 919 323-4281	HARTNESS, JOHN FREDERICK, JR. 1307 DOVE STREET MONROE 28110	IM /EM 090 AC 704 289-6474	HAWK, ROBERT JOE 1220 ASHEVILLE HIGHWAY BREVARD 28712	OBG 088 A P AC 704 883-8115
HARRIS, LAWRENCE STANLEY ECU SCHOOL OF MEDICINE DEPT. OF CLINICAL PATH. GREENVILLE 27858	FOP /NA 074 A AC 919 551-4655	HARTNESS, WILLIAM RUFUS, JR. 615 CARR STREET SANFORD 27330	FP 053 A L 919 775-3491	HAWK, RODNEY JAMES 512 PARK HILL CT. HENDERSONVILLE 28739	OTO 045 A AC 704 693-0706
HARRIS, MICHAEL ALAN PO BOX 3120, CRS JOHNSON CITY, TN 37602	P 067 A AC	HARTSELL, CHARLES JACOB, JR. MOORE MEMORIAL HOSPITAL PINEHURST 28374	AN 063 AC 919 295-6861	HAWKINS, BARRY FUGH PO BOX 2958 CONCORD 28025	IM 013 L/RT 704 782-1101
HARRIS, MILTON DEAN 2810 MAPLEWOOD AVENUE WINSTON SALEM 27103	CD /IM 034 A AC 919 768-0437	HARTZOG, HENRY GERARD, III 3814 BROWNING PLACE RALEIGH 27609	GS 092 AC 919 781-0710	HAWKINS, HAL BURGESS 11 GREEN WAY WILKESBORO 28697	FP 097 A AC 919 838-5459
HARRIS, ROBERT THOMAS 2800 BLUE RIDGE RD., STE. 503 RALEIGH 27607	IM /PYM 092 AC 919 782-7500	HARVEY, BERTHA B. 3510 CANTERBURY RD. NEW BERN 28560	P 025 AC 919 633-4171	HAWKINS, JAMES HUBERT, JR. 316 1/2 S. MAIN STREET GRAHAM 27253	FP 001 A AC 919 228-9759
HARRIS, SAMUEL RANCHOR 7 MEDICAL PARK DRIVE LEXINGTON 27292	OBG 029 A AC 704 243-2431	HARVEY, WALLACE WATSON, JR. 312 NORTH ST. PORTSMOUTH, VA 23704	GP /AM 000 P AC 804 399-4216	HAWKINS, JAMES HUBERT, SR. P. O. BOX 476 GRAHAM 27253	GP 001 AC 919 227-7496
HARRIS, THOMAS REGINALD 808 SCHENCK STREET SHELBY 28150	PUD /IM 023 A P * AC 704 482-1482	HARVIN, ALLAN BRABHAM 2701 MEDICAL OFFICE PLACE GOLDSBORO 27530	ORS 096 A AC 919 736-2157	HAWKINS, SARALYN REID BOX 2793, DUMC DURHAM 27710	032 A S 919 490-5561
HARRIS, TYNDALL PEACOCK P. O. BOX 3118 CHAPEL HILL 27514	IM 032 A L/RT 919 489-7371	HASHEMI, ZIAOLLAH 1439-L HUTTON ST. WINSTON-SALEM 27103	034 A S	HAWORTH, CHESTER CARL, JR. 624 QUAKER LANE, SUITE 211-B HIGH POINT 27262	N /IM 040 A P AC 919 889-1496
HARRIS, WILLIAM RIX P. O. BOX 2588 HICKORY 28603	OPH 018 A P AC 704 322-2050	HASKETT, JOSEPH RAY, JR. EDENTON INTERNAL MED. PA PO BOX 2012 EDENTON 27932	IM 021 A AC 919 482-5171	HAWTHORNE, HENRY CLAIBORNE, JR 1920 S. 16TH STREET WILMINGTON 28401	PD 065 AC 919 763-2072
HARRISON, FRANK N.H., JR. 449 N. WENDOVER ROAD CHARLOTTE 28211	OBG 060 A AC 704 364-3760	HASLAM, JOHN BATTLE 200 DOCTOR'S BLDG. ASHEVILLE 28801	011 A AC 704 255-4100	HAYE, HENRY SOLOMON PO BOX 1229 JACKSONVILLE 28541	OBG 067 A AC 919 346-2182
HARRISON, LLOYD HERRITAGE 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	U 034 A * AC 919 748-4131	HASSELL, CHARLES M., JR. 1200 N. ELM STREET GREENSBORO 27401	PTH /DMP 041 A * AC 919 379-4074	HAYES, BENNETT ALLEN, JR. 1219 WALTER REED ROAD FAYETTEVILLE 28304	OBG 026 A AC 919 323-2103
HARRISS, WILLIAM FRED P. O. BOX 5007 HIGH POINT 27262	R 040 A AC 919 884-6037	HASSLER, ROBERT EMIEL DOCTORS COMPLEX, #4 SUPPLY 28462	OBG 010 A AC 919 754-9166	HAYES, DAVID ALLEN 1212 CEDARHURST DRIVE RALEIGH 27609	PUD /IM 092 A AC 919 872-4850
HARROLD, LAURIE J. 1606 W. FIRST ST., APT. 3 WINSTON-SALEM 27104	SM /PSF 034 A S 919 723-5882	HATCH, STEPHEN J. 167 FOREST VIEW CT. WINSTON-SALEM 27104	034 A S 919 765-4179	HAYES, DONALD MICHAEL SARA LEE CORP. PO BOX 2760 WINSTON-SALEM 27102	OM /IM 034 A AC 919 744-3708
HARSHAW, CHARLES WILLIAM, JR. P. O. BOX 20928 GREENSBORO 27420	CD /IM 041 A AC 919 275-8581	HATCHER, MARTIN ARMSTEAD 1305 W. WENDOVER AVENUE GREENSBORO 27408	N 041 A AC 919 275-0779	HAYES, HUGH HARRISON, JR. P. O. BOX 33549 CHARLOTTE 28233	R 060 A AC 704 371-4000

HAYES, JAMES WILLIAM KERNODLE CLINIC BURLINGTON 27215	ORS 001 AC 919 227-3621	HEDRICK, HOLLY LEE 910 CONSTITUTION DR. APT. 804 DURHAM 27705	032 A S 919 383-1708	HENDERSON, JOHN ARTHUR 117 RATHFARNHAM CIRCLE ASHEVILLE 28803	GS 011 A P * AC 704 254-2341
HAYES, JOHN TERRENCE 1342 WESTGATE CENTER DR. WINSTON-SALEM 27103	ORS 034 A AC 919 768-3595	HEDRICK, RICHARD ELI 1999 GEORGIA AVE. WINSTON-SALEM 27104	GS 034 A L/RT 919 724-5454	HENDERSON, JOHN PERCY, JR. 1701 SABRA DR. KINSTON 28501	U 054 A AC 919 527-3043
HAYES, RICHARD IVAN 3320 WAKE FOREST RD. RALEIGH 27609	OBG 092 A AC 919 876-8225	HEDRICK, RICHARD ELI, JR. 1806 S. HAWTHORNE RD. #102 WINSTON-SALEM 27103	OBG 034 A P AC 919 768-3632	HENDERSON, REX ARTHUR 36 WEMBLEY ROAD ASHEVILLE 28804	EM 011 A AC 704 255-3786
HAYES, WILLIAM CLAYTON P. O. BOX 540 WILKESBORO 28697	GP 097 AC 919 667-6871	HEDRICK, WILLIAM WESTON 7411 LIGON MILL RD. WAKE FOREST 27587	FP 092 * AC	HENDERSON, RICHARD C. UNC, 237 BURNETT-WOMACK DIV. OF ORS, 229H CHAPEL HILL 27514	ORS 032 AC 919 966-3691
HAYES, WILLIAM CLAYTON, JR. 635-A COX ROAD GASTONIA 28054	PD 036 AC 704 864-5437	HEFFINGTON, MARK WILLIAM P. O. BOX 510 CASHIERS 28717	FP 050 AC 704 743-2491	HENDERSON, RICHARD ROBERT 1522 VAUGHN ROAD BURLINGTON 27215	D 001 A * AC 919 227-0496
HAYGOOD, VANESSA PEARLINE 914 MONTICELLO ST. GREENSBORO 27410	OBG 041 AC 919 292-7010	HEGDE, SADANANDA B. 4384 FAYETTEVILLE RD. LUMBERTON 28358	CD /IM 078 A AC 919 738-1141	HENDRICKS, ANDREW ADAM 102 WEST 27TH STREET LUMBERTON 28358	D 078 A AC 919 738-7154
HAYNES, CARL LEWIS, JR. PO BOX 850 ROSE HILL 28458	FP 031 * AC 919 289-3027	HEINDEL, STEPHANIE W. SPRING GARDEN APT. #22 HOLLAND DR. CHAPEL HILL 27514	032 A S 919 968-9494	HENDRICKS, WILLIAM MONROE 407 S. COX ST. ASHEBORO 27203	D /A 076 A P * AC 919 625-8410
HAYNES, LAWRENCE BOWMAN 1205 KERSHAW DR. RALEIGH 27609	AN 092 A AC 919 782-2009	HEINIG, CHARLES FREDERICK 1822 BRUNSWICK AVENUE CHARLOTTE 28207	ORS /GS 060 A AC 704 373-0544	HENDRICKSON, STEVEN CRAIG BOX 2743, DUMC DURHAM 27710	032 A S 919 471-0258
HAYNES, WILLIAM LEE 5639 CHAPEL HILL RD. APT. 604 DURHAM 27707	032 A AC 919 684-8111	HEINIG, MICHAEL FORREST 831 CLEVELAND ST., APT. 223 GREENVILLE, SC 29601	ORS 000 A R 803 242-0673	HENDRIX, JOHN DAVID 1705 W. SIXTH STREET GREENVILLE 27834	D 074 AC 919 752-4124
HAYWARD, JAMES NEIL UNC, 751 CLINICAL SCI. BLDG. CHAPEL HILL 27514	N 032 A * AC 919 966-2526	HEIZER, MORTIMER DANTZLER 701 N. MAIN STREET FARMVILLE 27828	FP 074 AC 919 753-3193	HENGVELD, LOFTUS, JR. 107 IRON WOOD DRIVE GREENVILLE 27834	EM /AN 074 A RT 919 756-2047
HAYWOOD, HUBERT BENBURY, III 3320 WAKE FOREST RD. PO BOX 18700 RALEIGH 27609	ID /IM 092 AC 919 872-4850	HEIZER, WILLIAM DAVID UNC, DEPT. OF MEDICINE CHAPEL HILL 27514	IM /GE 032 AC 919 966-2511	HENLEY, DOUGLAS EUGENE 4092 PROFESSIONAL DR. HOPE MILLS 28348	FP 026 * AC 919 424-0123
HAYWOOD, HUBERT BENBURY, JR. 2109 BANBURY ROAD RALEIGH 27608	OPH 092 A * L/RT 919 782-0236	HELAK, JOSEPH WALTER 410 R. L. HONEYCUTT WILMINGTON 28403	CD /IM 065 A AC 919 341-3400	HENLEY, JOHN T., JR. 3314 MELROSE RD., STE. 100 FAYETTEVILLE 28304	OTO 026 A P AC 919 323-1463
HAZLEHURST, JOHN LIVINGSTON 16 MCDOWELL STREET ASHEVILLE 28801	GS 011 A AC 704 252-3366	HELLER, JOEL HARVEY 603 DOLLY MADISON GREENSBORO 27410	FP 041 AC 919 294-6190	HENLEY, NANCY S. 3500 WESTGATE DR., STE. 705 DURHAM 27707	IM 032 AC 919 493-8600
HAZZARD, SUSAN L. 500 N. DUKE ST., APT. 53-308 DURHAM 27701	IM /PD 032 A S 919 682-0819	HELMS, JEFFERSON BIVENS, JR. 1405 PLAZA DRIVE WINSTON-SALEM 27103	IM /CD 034 A AC 919 765-4131	HENLEY, THOMAS FRANKLIN 1309 N. ELM STREET GREENSBORO 27401	OBG 041 A AC 919 273-2563
HAZZARD, WM. RUSSELL 300 S. HAWTHORNE RD. DEPT. OF MEDICINE WINSTON-SALEM 27103	IM 034 A AC 919 748-4305	HELPPIE, JOANNE E. 510 7TH AVENUE, WEST HENDERSONVILLE 28739	IM 045 A AC 919 692-2232	HENNESSY, JOHN FRANCIS 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	ORS /ADM 063 AC 919 295-4130
HEADLEY, ROBERT NELSON 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	CD /IM 034 A AC 919 748-4331	HELMS, JEFFERSON BIVENS, JR. 1405 PLAZA DRIVE WINSTON-SALEM 27103	OPH 034 A L 919 723-1041	HENNING, MICHAEL ARTHUR 53 MAIN ST. HAMLET 28345	END /IM 034 AC 919 748-2076
HEALY, PATRICK K. 250 CHARLOIS BLVD. WINSTON-SALEM 27103	IM 034 AC 919 768-4730	HELTON, WILLIAM CHARLES 3020 NEW BERN AVE. #560 RALEIGH 27610	CDS /TS 092 A AC 919 833-8404	HENNING, EMIL HELLER, JR. P. O. BOX 126 SYLVA 28779	IM 077 A P AC 919 582-0004
HEARON, BRIAN PAUL 230 18TH ST. CIRCLE SE HICKORY 28602	CD /IM 018 A P AC 704 324-4804	HEMBREE, EUGENE EDWARD, JR. 1225 E. GARRISON BLVD. GASTONIA 28054	OBG 036 A AC 704 865-7417	HENNING, EMIL HELLER, JR. P. O. BOX 126 SYLVA 28779	GP /GER 050 A AC 704 586-4035
HEATH, HUNTER 109 ARBUTUS PLACE CHAPEL HILL 27514	IM /AI 067 L/RT 919 933-3716	HEMINGWAY, GEORGE CAPERS, JR. 101 CLINIC DRIVE TARBORO 27886	IM /PD 033 A AC 919 823-2105	HENRICH, W. DEAN 250 CHARLOIS BLVD. WINSTON-SALEM 27103	D /DMP 034 A AC 919 768-6221
HEATH, KAREN SUE 4628 KEG COURT FAYETTEVILLE 28304	FP 000 A R 919 485-2842	HEMMERLEIN, ARTHUR HANS 1209 RAINWOOD LANE RALEIGH 27605	EM /FP 092 A AC 919 755-3100	HENRICK, WILLIAM ROBERT RALEIGH ANES. ASSOCIATES P. O. BOX 18139 RALEIGH 27619	AN 092 A AC 919 781-7420
HEATH, STACEY MAURICE 202-A LINDBETH DR. GREENVILLE 27834	074 A S 919 355-2402	HENDEL, ROBERT CHARLES MEDICAL PARK DR., BLDG #1 BREVARD 28712	GS 088 A AC 704 884-2198	HENRY, HECTOR HIMEL, II 102 LAKE CONCORD ROAD, N.E. CONCORD 28025	U /PD 013 P AC 704 786-5133
HEATON, FREDERICK CHRISTIAN 3805 COMPUTER DR. RALEIGH 27609	OBG 092 A AC 919 781-6200	HENDERSON, ANDREW MCKNITT, JR. 252 W. MCLELLAND AVENUE MOORESVILLE 28115	GP 049 AC 704 664-5477	HENRY, OZMER LUCAS, JR. T B CONTROL UNIT DIVISION OF HEALTH SERVICES BLACK MOUNTAIN 28711	IM 011 A AC 704 669-3117
HEBERT, MARY ELIZABETH 311 S. LASALLE ST. APT. 8-I DURHAM 27705	032 A S 919 383-8780	HENDERSON, ANITA 104 E. NORTHWOOD ST. GREENSBORO 27401	FP 041 P AC 919 275-6445	HENSCHEN, GARY MAYES 606 WALTER REED DR. GREENSBORO 27403	P /PYA 041 A AC 919 299-0108
HEBERT, STEPHEN WILLIAM 1365 WESTGATE CENTER DR. SUITE N-1 WINSTON-SALEM 27103	P /N 034 A P AC 919 760-3220	HENDERSON, BRADLEY E. 902 COX RD. STE. A GASTONIA 28054	ORS 036 A AC 704 865-6487	HENSEL, WILLIAM ARTHUR 1125 N. CHURCH ST. GREENSBORO 27401	FP 041 A AC 919 379-4035
HEDBERG, ANN ELIZABETH 339 CRAFTON STE. #3 WINSTON-SALEM 27103	034 A S 919 722-5662	HENDERSON, CATHY LYNN 217 E. WOODSTOCK DR. GREENVILLE 27834	074 A S 919 756-8735	HENSON, DONALD LENTZ, JR. 24 SCOTT ST. GREENVILLE 27834	074 A S 919 756-7639
HEDGPETH, EDWARD MCGOWAN, JR. 1110 W. MAIN STREET DURHAM 27701	OPH 032 A AC 919 682-9341	HENDERSON, DAVID JAMES 601 W. HARRISON ST. PO BOX 2299 REIDSVILLE 27320	PD /A 079 AC 919 349-8402	HENSON, JOSEPH BASCOM, JR. 1107 W. FRIENDLY AVENUE GREENSBORO 27401	IM 041 L/RT 919 274-1567
HEDGPETH, JOSEPH ROWLAND 1302 LEXINGTON AVENUE THOMASVILLE 27360	OBG 029 A P * AC 919 475-6139	HENDERSON, DAVID YEARDLEY 3126 BLUE RIDGE RD. RALEIGH 27612	OBG 092 P AC 919 782-0363	HEPLER, JOHN DAVIS 403 WEST 27TH STREET LUMBERTON 28358	OBG 078 A AC 919 739-2846
HEDGPETH, WILLIAM CAREY P. O. BOX 1021 LUMBERTON 28358	GYN 078 A * L/RT	HENDERSON, GEORGE P., JR. PINEHURST SURGICAL CLINIC PINEHURST 28374	HNS /OTO 063 A AC 919 295-0242	HERAVI, CYRUS 302 HOSPITAL ROAD SPARTA 28675	GS 003 A AC 919 372-4343

HERBERT, PHILIP SIDNEY, JR.	P	007	HEYMAN, ALBERT	N /IM	032	HILL, WILLIAM HENRY	GP	084
1308 HIGHLAND DRIVE	*	AC	BOX 3203, DUMC	L		124 E. NORTH ST.	AC	
WASHINGTON 27889		919 946-8061	DURHAM 27710	919 684-2682		ALBEMARLE 28001	704 982-5812	
HERBERT, WILLIAM, N.P.	OBG /NPM	032	HEYMANN, ROBERT CURTIS	D	034	HILLER, CARL JULIEN	ORS	025
UNC, CB #7570			118 FORSYTH MEDICAL PARK	* AC		P. O. DRAWER 1694	A	AC
214 MACNIDER BLDG.	A	AC	WINSTON-SALEM 27103	919 765-1841		NEW BERN 28560	919 633-3256	
CHAPEL HILL 27599		919 966-1601	HIATT, JOHN DONALD, JR.	DR	041	HINDSLEY, J. PACK, JR.	U	007
HERBST, CHARLES ARTHUR, JR	GS /CRS	032	926 GREENWOOD DR.	A	AC	604 E. 12TH STREET	A	AC
UNC, 136 BURNETT-WOMACK	A	AC	GREENSBORO 27410	919 855-7707		WASHINGTON 27889	919 946-0136	
229-H			HICKEY, DOCIA ELIZABETH	NPM /PD	060	HINES, EDWARD LLOYD	ORS /HS	001
CHAPEL HILL 27514		919 966-5231	CHARLOTTE MEM. HOSP.	A	AC	723 EDITH STREET	AC	
HERFKENS, ROBERT JOHN	DR	032	PO BOX 32861			BURLINGTON 27215	919 227-4256	
BOX 3808, DUMC		AC	CHARLOTTE 28232	704 338-3156		HINES, MICHAEL HERBERT	GS	034
MRI SECTION			HICKLING, WILLIAM HENRY	CHN /N	041	723 FENIMORE ST.	A	R
DURHAM 27710		919 681-2711	1305 W. WENDOVER AVE.	A	AC	WINSTON-SALEM 27103	919 777-0226	
HERINGTON, DAVID S.	FP	012	GREENSBORO 27408	919 275-0779		HINMAN, ALANSON	PD /N	034
2203 S. STERLING ST.		AC	HICKMAN, HARRY STUART	PD	014	792 ROSLYN RD.	L/RT	
MORGANTON 28655		704 437-4211	623 MAIN STREET, S.E.	A	L	WINSTON-SALEM 27104	919 723-0458	
HERION, JOHN CARROLL	HEM /IM	032	HUDSON 28638	704 728-8484		HINMAN, HAVILAH EDWARD	OBG	011
N. C. MEMORIAL HOSPITAL		AC	HICKS, CHARLES HENRY	CD	092	7 RATHFARNUM RD.	A	L/RT
CHAPEL HILL 27514		919 966-4555	3400 EXECUTIVE DR.	A	AC	ASHEVILLE 28803	704 684-6243	
HERLONG, JAMES RENE		032	RALEIGH 27609	919 872-8920		HINN, ALBERT RICHARD		032
618 MOREHEAD AVE. #1	A	S	HICKS, CHARLES MONTGOMERY	PD	065	201 WEST BROOK DR.	A	R
DURHAM 27707		919 688-8011	1914 GLEN MEADE ROAD		AC	C-4 CHAMBERS RIDGE APTS.		
HERNANDEZ, LUIS NICHOLAS	AN	000	WILMINGTON 28403	919 762-2651		CARRBORO 27510	919 942-9613	
PO BOX 1533	A	AC	HICKS, J. ROBINSON	ORS	060	HINSHAW, HOWARD THOMAS	END /DIAO	060
SLIDELL, LA 70459			1350 KINGS DRIVE	A	AC	1350 S. KINGS DRIVE	AC	
HERNDON, WM. M., JR.	CD	060	CHARLOTTE 28207	704 372-8750		CHARLOTTE 28207	704 372-8750	
1413 ELIZABETH AVE.	A	AC	HICKS, MELISSA M.	FP	011	HINSON, JAMES NOAH	IM	080
CHARLOTTE 28204		704 372-8750	491 BILTMORE AVE.	AC		102 MOCKSVILLE AVE., STE. 204	A	AC
HERRERA, MARCOS A.	R	034	ASHEVILLE 28801	704 258-0635		SALISBURY 28144	704 633-3136	
300 S. HAWTHORNE RD.	A P	AC	HIDALGO, HECTOR JESUS	DR	032	HINSON, JONATHAN C.		034
WINSTON-SALEM 27103		919 748-2491	2609 N. DUKE ST.	A	AC	2841 TULLY SQUARE #F	A	S
HERRIN, ROBERT ALEXANDER	MFS	060	DURHAM 27704	919 471-8411		WINSTON-SALEM 27106	919 723-7554	
1628 E. MOREHEAD		AC	HIESTAND, FITZ GERALD, JR.	GE /IM	060	HINSON, TONY RAY		074
CHARLOTTE 28207		704 376-0216	1350 S. KINGS DRIVE	AC		RT. #1, BOX 434	A	S
HERRING, CHARLES LEONIDAS	IM	054	CHARLOTTE 28207	704 372-8250		GREENVILLE 27834	919 758-5643	
310 GLENWOOD AVENUE	A *	AC	HIGGINS, LLOYD MALCOLM	PTH	040	HIPP, EDWARD REGINALD, JR.	GS /TS	060
KINSTON 28501		919 523-0026	221 HILLCREST DRIVE	AC		1350 S. KINGS DRIVE	AC	
HERRING, JOHN HARVARD	OBG	084	HIGH POINT 27262	919 883-7047		CHARLOTTE 28207	704 372-8750	
1000 N. FIFTH STREET	A P	AC	HIGH, LARRY ALLISON	FP	064	HISLEY, JOHN CHARLES	OBG /NPM	060
ALBEMARLE 28001		704 982-8112	213 N. COLLINS ST.	L/RT		PO BOX 32861	A	AC
HERRING, RUFUS MCPHAIL, JR.	PD	082	NASHVILLE 27856	919 459-2432		CHARLOTTE 28232	704 331-3149	
403 FAIRVIEW STREET	*	AC	HIGH, LARRY ALLISON, JR.	OBG	064	HITTEL, GLENN PAUL	FP	078
CLINTON 28328		919 592-6011	132 FOY DRIVE	AC		4112 VANN DR.	A	AC
HERRING, THEODORE TILGHMAN	OM /GP	098	ROCKY MOUNT 27801	919 443-6622		LUMBERTON 28358	919 628-6711	
1704 S. TARBORO ST.		L/RT	HIGHLEY, FRANK SHAPLEY	P	060	HIX, MARK TIMOTHY	IM	033
WILSON 27893			427 S. SHARON AMITY RD. #B	A	AC	101 CLINIC DR.	A	AC
HERRING, WILLIAM ARTHUR, JR.	ORS	095	CHARLOTTE 28211	704 362-0866		TARBORO 27886	919 823-2105	
30 DOCTOR'S PARK		AC	HIGHSMITH, CHARLES	GS /ORS	062	HOBART, SETH GUILFORD, JR.	HNS /MFS	032
BOONE 28607		704 264-1100	P. O. BOX D	L/RT		1830 HILLDALE ROAD	A	AC
HERRING, WILLIAM BENJAMIN	IM /HEM	041	TROY 27371	919 576-5511		DURHAM 27705	919 383-5531	
1200 N. ELM ST.		AC	HIGHSMITH, GEORGE PERRY	IM	029	HOBSON, JACK BROWN	IM /HEM	060
GREENSBORO 27401		919 379-4062	309 PINEYWOOD ROAD	A	AC	125 BALDWIN AVE.	A P	AC
HERRINGTON, ROBERT THOMAS	PD /PDC	032	THOMASVILLE 27360	919 475-8121		CHARLOTTE 28204	704 374-1696	
N. C. MEMORIAL HOSPITAL		AC	HIGHTOWER, FELDA	GS /TS	034	HODGES, HORACE HAYDEN	IM /GE	060
CHAPEL HILL 27514		919 966-4601	1244 ARBOR RD. #233	A P *	L/RT	17224 DUE WEST DR.	L/RT	
HERSHEY, CHARLES DANA, JR.	AN	060	WINSTON-SALEM 27104	919 727-1661		CHARLOTTE 28217	704 588-0828	
PO BOX 32861	A P	AC	HILL, ARTHUR THEODORE, JR.	IM	011	HODGES, JAMES ROBINSON	FP	018
CHARLOTTE 28232		704 554-0239	147 ASHLAND AVENUE	A	AC	210 13TH AVENUE PLACE, N.W.	AC	
HERSHNER, GREGORY S.		000	ASHEVILLE 28801	704 258-1188		HICKORY 28601	704 328-2941	
491 BILTMORE AVE.	A	R	HILL, DENNIS LEROY	N	060	HODGES, JAMES THOMAS	ORS	001
ASHEVILLE 28801		704 258-0670	2608 EAST 7TH ST.	AC		GRAHAM-HOPEDALE ROAD	AC	
HERTENSTEIN, JAMES C.	OTO /HNS	011	CHARLOTTE 28204	704 377-9323		BURLINGTON 27215	919 227-3621	
131 MCDOWELL ST.	A	AC	HILL, EDWARD FELDIN	FP	007	HODGINS, LEWIS ROGER	AN	032
ASHEVILLE 28801		704 254-3517	501 W. 15TH ST.	AC		33 LANGGATE COURT	A	R
HERTLE, XAVER FRANZ	P	041	WASHINGTON 27889	919 975-2667		DURHAM 27713	919 544-2781	
106 E. NORTHWOOD STREET	A	AC	HILL, EDWARD GRAY, JR.	N /EM	040	HODGSON, JOHN D.	IM	024
GREENSBORO 27401		919 275-1614	606 N. ELM ST.	A	AC	PO BOX 1249	A	AC
HERTZ, LINDA ELLEN		034	HIGH POINT 27262	919 889-8877		WHITEVILLE 28472	919 642-0331	
2513-A MILLER PARK CIRCLE	A	S	HILL, HAYWOOD NORTHROP, JR.	IM	011	HOEKSTRA, JOHN ARTHUR	IM /AI	078
WINSTON-SALEM 27103		919 724-6413	445-BILTMORE CTR., STE. 407	A	AC	395 W. 27TH STREET	A	AC
HERTZBERG, BARBARA S.	R	032	ASHEVILLE 28801	704 258-0397		LUMBERTON 28358	919 739-7551	
BOX 3808, DUMC	A	AC	HILL, JAMES CARVER	FP /EM	092	HOELLERICH, VINCENT L.	AN	092
DURHAM 27710		919 684-2711	1316 YUBINARANDA CIRCLE	A P	AC	PO BOX 18139	A	AC
HERZOG, WILLIAM RAYMOND, JR.	CD /IM	032	CARY 27511	919 469-9635		RALEIGH 27619	919 783-3034	
11671 FREDERICK RD.		R	HILL, PATRICIA KAYE	P	049	HOELSCHER, KENNETH KING	PM	011
ELLCOTT CITY, MD 21043		202 994-3321	PO BOX 821	A	AC	PO BOX 15025	A	AC
HESS, PHILIP JOSEPH	CDS /TS	060	STATESVILLE 28677	704 873-8446		ASHEVILLE 28813	704 274-2400	
1960 RANDOLPH ROAD	A	AC	HILL, PAUL EDWARD	IM /FP	045	HOEPPNER, DAVID LAWRENCE	EM	065
CHARLOTTE 28207		704 373-1500	559 N. JUSTICE STREET	AC		3710 SHIPYARD	AC	
HESTER, DAVID ALAN	END /IM	011	HENDERSONVILLE 28739	704 692-0587		WILMINGTON 28403	919 791-0075	
445 BILTMORE CENTER, STE. 302		AC	HILL, STEPHEN THOMAS	OBG	044	HOFFMAN TED	AN	032
ASHEVILLE 28801		704 253-6812	PO BOX 427	AC		ROUTE #4, BOX 286	AC	
HESTER, T. OMA		074	LAKE JUNALUSKA 28745	704 456-7369		HILLSBOROUGH 27278	919 470-6180	
106 SCALES PL., L-6	A	S						
GREENVILLE 27834		919 752-5113						

HOFFMAN, BYRON JAY, JR. 421 N. HOLLY STREET SILER CITY 27344	IM 019 A * AC 919 663-3360	HOLLEMAN, JEREMIAH HENRY, JR. 1350 S. KINGS DR. CHARLOTTE 28207	GS /VS 060 A AC 704 372-8750	HOOKS, RICHARD EUGENE 123 N. SECOND STREET ST. PAULS 28384	GP 078 A P AC 919 865-5114
HOFFMAN, CARL MAURICE 307 N. LINDSAY STREET HIGH POINT 27262	OBG 040 A AC 919 885-0149	HOLLENBERG, BENNETT R. 2516-6 CRANBROOK LANE CHARLOTTE 28207	DR 060 A AC 704 342-0334	HOOLE, AXALLA JOHN UNC, BOX #2, BLDG. 226-H CHAPEL HILL 27514	IM 032 AC 919 966-2276
HOFFMAN, CARL WHITE BARKER--TEN MILE RD. PO BOX 1527 LUMBERTON 28358	R 078 A P AC 919 739-9788	HOLLINGSWORTH, WALTER C. 1851 E. 3RD ST., STE. 102 CHARLOTTE 28204	OBG 060 AC 704 376-1612	HOOPER, JOSEPH WARD, JR. 2216 GILLETTE DR. WILMINGTON 28403	U 065 L/RT 919 763-6251
HOFFMAN, CHARLES ANTHONY, JR. 513 OWEN DRIVE FAYETTEVILLE 28304	U 026 A P * AC 919 485-8801	HOLLISTER, WILLIAM GRAY 2008 N. LAKESHORE DRIVE CHAPEL HILL 27514	P /GPM 032 A L/RT 919 966-5277	HOOPER, ROBERT LESLIE C. J. HARRIS HOSPITAL, INC. SYLVA 28779	R 050 A AC 704 586-7000
HOFFMAN, EDNA TERESA MAURA 348 VALLEY ROAD FAYETTEVILLE 28305	OBG 026 P * AC 919 485-4755	HOLMES, GEORGE WASHINGTON 4235 STONEHENGE LN. WINSTON-SALEM 27106	ORS 034 A L/RT 919 722-6939	HOOPER, THOMAS EUGENE INTERNAL MEDICINE ASSOCIATES A P. O. BOX 3188 WILSON 27893	IM 098 AC 919 243-5505
HOFFMAN, ERIC D. BOX 2747, DUMC DURHAM 27710	032 A S 919 383-1448	HOLMES, MIRIAM LENZ 1609 MAPLE RIDGE COURT GREENSBORO 27405	GP 041 AC 919 288-7318	HOOTEN, JAMES PHILMON, JR. 3535 APOLLO DR. APT. J-213 METAIRE, LA 70003	ORS 032 A R 504 588-5337
HOFFMAN, JEFFREY DALE 214 HAMLIN PARK CHAPEL HILL 27514	032 A S 919 968-7604	HOLMES, ROBERT PEEL, III 702 NEWMAN ROAD MCCARTHY SQUARE NEW BERN 28560	IM 025 AC 919 633-5333	HOPE, HAROLD PAGAN, JR. 2300 RANDOLPH ROAD CHARLOTTE 28207	GS 060 A AC 704 376-0327
HOFFMAN, LEROY G., JR. PO BOX 10407 TRIANGLE ONCOLOGY SERVICES RALEIGH, 27605	TR /PD 092 A AC 919 755-3018	HOLSCHER, EDWARD CHARLES 1900 RANDOLPH ROAD, SUITE 918 CHARLOTTE 28207	CHP /P 060 AC 704 333-7724	HOPKINS, LAWRENCE DAVID 5105 RIVER CHASE RIDGE WINSTON-SALEM 27104	OBG 034 AC 919 722-9590
HOFFMAN, MARY JACQUELINE 537 S. HAWTHORNE RD. #12 WINSTON-SALEM 27103	034 A S 919 761-8294	HOLT, CHARLES RICHARD 17 CAMELOT RD., KINGS FOREST SALISBURY 28144	EM /GS 080 AC 704 637-7504	HOPKINS, MARBRY BENJAMIN, III 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	PTH 034 AC 919 748-2624
HOFFMAN, RUTH STERLING UNC STUDENT HEALTH SERVICE CAMPUS BOX 7470 CHAPEL HILL 27599	IM 032 AC 919 966-6551	HOLT, JAMES BEATTY ROUTE #5, BOX 40 PITTSBORO 27312	FP 019 A P AC 919 542-3251	HOPKINS, RICHARD GLENN PO BOX 770, WALKER ST. COLUMBUS 28722	GP 045 A AC 704 894-8266
HOGGARD, WILLIAM ALDEN, JR. PO BOX 726 110 S. POOL ST. ELIZABETH CITY 27909	FP 070 AC 919 335-0867	HOLT, JAMES DAVID 308 WILCOX ST. WARRENTON 27589	FP 093 A AC 919 257-3141	HOPPER, WILLIAM FALCON 721 GREEN VALLEY RD. GREENSBORO 27408	PUD /IM 041 AC 919 378-0774
HOGSHEAD, RALPH, JR. P. O. DRAWER 690 MORGANTON 28655	FP 012 A AC 704 437-8121	HOLT, JOHN PLUMMER 86 VICTORIA ROAD ASHEVILLE 28801	FP 011 A AC 704 255-8494	HOPPMANN, RICHARD A. ECU SCHOOL OF MEDICINE DEPT. OF INTERNAL MED. GREENVILLE 27834	RHU 074 A AC 919 551-2533
HOLBROOK, CARTER TATE, III ECU, DEPT. OF PEDIATRICS GREENVILLE 27834	PHO /PD 074 A * AC 919 551-4676	HOLT, THOMAS 209 FAIRVIEW STREET WARRENTON 27589	OPH /OTO 091 A L 919 257-3746	HORNBAKE, EARL RODNEY, III 1700 ST. DELIGHT CHURCH RD. NEW BERN 28560	IM 025 A P * AC 919 633-0363
HOLBROOK, JOSEPH SAM 211 N. RACE STREET STATESVILLE 28677	IM /CD 049 A L 704 872-1000	HOLT, WILLIAM REUBEN, JR. 1515 DOCTOR'S CIRCLE WILMINGTON 28401	CD /IM 065 AC 919 763-5182	HORNE, STEPHEN FRANCIS 1500 LAFAYETTE AVE. ROCKY MOUNT 27803	D 064 L 919 446-6638
HOLBROOK, ROBERT H. 3952 BUCKINGHAM CIR. LUMBERTON 28358	EM /FP 078 A AC 919 738-7231	HOLT, WINDSOR AUSTIN 3320 WAKE FOREST RD., STE.120 RALEIGH 27609	OBG 092 AC 919 876-8225	HORNER, DONALD STANLEY 1350 S. KINGS DRIVE CHARLOTTE 28207	OBG /PD 060 AC 704 372-8750
HOLBROOK, WILLIAM DOUGLAS 34 LUVAN WAY DEBORDIEU COLONY GEORGETOWN, SC 29440	P 060 A L/RT 919 758-7231	HOLTER, JOHN FREDERICK ECU SCHOOL OF MEDICINE PULMONARY DEPT GREENVILLE 27834	IM /PUD 074 A AC 919 551-4653	HORNER, JACK CHENOWETH 37 PACES WEST PLACE ATLANTA, GA 30327	GS 061 A L/RT 404 237-4651
HOLDERNESS, HOWARD, JR. 200 E. NORTHWOOD ST., STE. 400A GREENSBORO 27401	PS /GS 041 A P * AC 919 275-0919	HOLTHUSEN, GREGORY GRANT SALEM ORTHOPAEDIC ASSOC. PA A PO BOX 25007 WINSTON-SALEM 27114	ORS 034 A * AC 919 768-1270	HORNBY, RAE LYNNE C-9 CAROLINA APTS. CARRBORO 27510	032 A S 919 942-2517
HOLLADAY, GLENN CLYDE 2711 RANDOLPH RD., STE. 301 CHARLOTTE 28207	PD 060 A AC 704 332-6332	HOLTHUSEN, GREGORY GRANT SALEM ORTHOPAEDIC ASSOC. PA A PO BOX 25007 WINSTON-SALEM 27114	CD /IM 065 AC 919 763-5182	HORNSTINE, NORMAN MARK P. O. BOX 10968 SOUTHPORT 28461	FP 010 A L 919 457-6744
HOLLAND-ZIGLAR, AMY J. 111 RODNEY RD. GREENVILLE 27834	074 A S 919 758-9933	HOLTON, WALTER LEGGETT NORTH MAIN HIGHWAY PO BOX 1045 MANTEO 27954	FP 070 A P AC 919 473-3478	HORSLEY, WILLIAM NOLEN 28 E. WOODROW AVENUE BELMONT 28012	FP 036 L 704 825-5376
HOLLAND, GEORGE THOMAS 1511 ROBINHOOD ROAD DURHAM 27701	032 A S 919 682-8733	HOLYK, PETER ROMAN DOCTORS DR., STE. B KINSTON 28501	OPH 054 A AC 919 522-1611	HORTON, JAMES MARVIN 1350 S. KINGS DR. CHARLOTTE 28207	060 P AC 704 372-8750
HOLLAND, JAMES EUGENE 2573 STANTONSBURG ROAD GREENVILLE 27834	OPH 074 A AC 919 752-0313	HOMER, STEPHEN HUBERT 3111 MAPLEWOOD AVE., STE.104 WINSTON-SALEM 27103	ORS 034 AC 919 768-4110	HORTON, KEITH M. 5500 FORTUNES RIDGE DR. 79C DURHAM 27713	032 A R 919 471-8411
HOLLAND, JAMES P. 2810 MAPLEWOOD AVE. WINSTON-SALEM 27103	CD 034 A AC 919 768-0437	HOMESLEY, HOWARD DAVID DEPT. OF OBG, BOWMAN GRAY WINSTON-SALEM 27103	GYN /ON 034 A P AC 919 748-4022	HORTON, ROBERT MARSHALL 3039 ESSEX CIRCLE, BLDG. A RALEIGH 27608	FP 092 AC 919 782-2333
HOLLAND, MICHAEL DAY 1116 GREEN TEE LANE ROCKY MOUNT 27801	IM /NEP 064 AC 919 443-9084	HONEYCUTT, DANNY MORRIS 10724 PARK ROAD CHARLOTTE 28210	FP 060 A AC 704 542-6577	HORSVATH, LAURA JEAN 2609 N. DUKE ST. DURHAM RADIOLOGY ASSOC. DURHAM 27704	R 032 AC 919 471-8411
HOLLAND, RICHARD M. 522 N. ELAM AVE. GREENSBORO 27403	OBG 041 AC 919 299-2999	HONEYCUTT, LATTIE FULLER P. O. BOX 17947 RALEIGH 27619	DR 092 A AC 919 872-4800	HOSEA, ROBERT HAYWOOD KINSTON CLINIC, SUITE K KINSTON 28501	OTO /HNS 054 P AC 919 523-0687
HOLLAND, WALTER BOWLIN IREDELL EYE CLINIC PO BOX 591 STATESVILLE 28677	OPH 049 AC 704 872-4108	HONKANEN, FRANK A. BOX 3712, DUMC DURHAM 27710	032 R 919 684-3300	HOSKINS, JOHN ROBINSON, III 7 AMHERST RD. ASHEVILLE 28803	AN 011 A L/RT 704 274-5049
HOLLANDER, EDWARD MARSHALL 522 N. ELAM AVE. GREENSBORO 27403	OPH 041 A AC 919 854-0393	HOOD, CHRISTOPHER KENNEDY 1712 E. FOURTH STREET CHARLOTTE 28204	OBG 060 AC 704 375-9074	HOSTETLER, HERBERT JAMES PO BOX 730 WEST END 27376	AN 063 AC 919 295-4606
HOLLEMAN, IVAN LACY, JR. BOWMAN GRAY, DEPT. OF PATH. WINSTON-SALEM 27103	PTH 034 A AC 919 748-4311	HOOD, DAVID DEAN 1658 S. MARBLEHEAD RD. CLEMMONS 27012	AN 034 A AC 919 760-5259	HOUGH, WILLIAM AMOS, III 410 AVALON ROAD WINSTON-SALEM 27104	IM 034 A AC 919 768-4730
		HOOKER, MICHAEL PHILLIP 202 DOCTORS BLDG. ASHEVILLE 28801	AN 011 A AC 704 254-1969	HOUSER, FOREST MELVILLE 410 S. ELM STREET CHERRYVILLE 28021	GP 036 A L/RT 704 435-6803

HOUSTON, FRANK MATT 1030 PROFESSIONAL VILLAGE GREENSBORO 27401	D 041 A AC 919 373-1383	HUDSON, SARAH TILTON WILLCOX 1142 N. ROAD ST. ELIZABETH CITY 27909	PD 070 AC 919 353-6262	HUMPHREYS, DAVID HARDING 5 LIVINGSTON AT VICTORIA PLASTIC SURGERY CTR. ASHEVILLE 28801	PS 011 AC 704 253-3866
HOWARD, GEORGE ALBERT, III 100 PRESTON DR. JACKSONVILLE 28540	DR 067 A P AC 919 577-1171	HUDSON, WILLIAM RUCKER DUKE UNIV. MED. CTR. DURHAM 27710	OTO 032 A * AC 919 684-3834	HUMPHRIES, DAVID SCOTT 1350 S. KINGS DRIVE CHARLOTTE 28207	ORS 060 A AC 704 372-8750
HOWARD, JAMES FRANCIS, JR. UNC, 751 CLINICAL SCI. CB #7025 CHAPEL HILL 27599	N 032 A AC 919 966-5522	HUDSPETH, ALLEN SHERRILL 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	CDS /TS 034 A AC 919 748-4359	HUNDLEY, JAMES DAVENPORT 2001 S. 17TH STREET WILMINGTON 28401	ORS 065 A P * AC 919 763-7344
HOWARD, JOSEPH COOPER, JR. HOSPITAL PROF. BLDG. CLINTON 28328	GS 082 A RT 919 592-2167	HUEHOLT, THERESE MARIE NC MEMORIAL HOSP. DEPT. OF PSY. CHAPEL HILL 27514	P/CHP 032 R 919 481-1875	HUNSBERGER, KURT LEE 1142 N. ROAD STREET ELIZABETH CITY 27909	IM 070 A AC 919 338-4117
HOWARD, PAUL OSMON 555 CARTHAGE STREET SANFORD 27330	FP 053 A AC 919 774-6518	HUEY, THOMAS WALKER, JR. 1012 KINGS DRIVE CHARLOTTE 28283	GYN 060 A L 704 375-4216	HUNSTAD, JOSEPH P. 101 W. T. HARRIS BLVD. #A422 CHARLOTTE 28213	PS /HS 060 A AC 704 549-8793
HOWARD, T. CURRIN R-9 DOCTOR'S PARK APTS. GREENVILLE 27834	074 A S 919 758-8812	HUFF, OLSON C/O THOMS REHAB. HOSP. PO BOX 15025 ASHEVILLE 28813	PD 011 A P AC 704 255-8420	HUNT, CLYDE MCCOY, JR. 1048 OAKMONT DR. ASHEBORO 27203	AN 076 A P AC
HOWE, DONALD DOUGLAS 1225 E. GARRISON BLVD. GASTONIA 28054	OBG 036 P AC 704 865-7416	HUFFINES, WILLIAM DAVIS UNC, 314 BERRYHILL HALL 219-H CHAPEL HILL 27514	PTH /GP 032 A AC 919 966-1134	HUNT, OLIVER RAYMOND, JR. 1607 DOCTOR'S CIRCLE WILMINGTON 28401	CDS /TS 065 A AC 919 763-6571
HOWE, HAROLD RAGAN, JR. 811 MUSEUM DR. CHARLOTTE 28207	CDS /VS 000 A R 919 761-1699	HUFFMAN, ALLEN WILLIAM, JR. 1205 N. CENTER STREET HICKORY 28601	OBG 018 A AC 704 328-2901	HUNT, THOMAS HOLMES 3155 MAPLEWOOD AVENUE WINSTON-SALEM 27103	DR /NR 034 A * AC 919 760-5874
HOWELL, CHARLES MAITLAND, JR. 340 PERSHING AVENUE WINSTON-SALEM 27103	D 034 A * L 919 725-8422	HUFFMAN, JOHN MITCHEL, JR. 300 S. HAWTHORNE ROAD WINSTON-SALEM 27103	034 A S 919 722-9378	HUNT, WILLIAM BRYCE, JR. P. O. BOX 2157 NEW BERN 28560	PUD /IM 025 A AC 919 633-8608
HOWELL, EDGAR VASTON, JR. 400 E. WASHINGTON ST. PO BOX 1148 ROCKINGHAM 28379	ORS 077 A P * AC 919 997-4570	HUFFMAN, ROBERT EDWARD 146 VICTORIA ROAD ASHEVILLE 28801	P 011 A AC 704 253-3695	HUNT, WILLIAM JACK 1605 HEATHGATE PL. HIGH POINT 27260	IM 040 L 919 882-9814
HOWELL, FREDERICK LAWRENCE 2932 LYNDBURST AVENUE WINSTON-SALEM 27103	U 034 A AC 919 765-4021	HUFFSTUTTER, WILLIAM MAURICE 50 DOCTOR'S DR. STE. 210 ASHEVILLE 28801	CHN /N 011 A AC 704 252-8983	HUNTER, BILLY RAY 1328 ASHLEY SQUARE WINSTON-SALEM 27103	P 034 AC 919 765-5092
HOWELL, HARRY SLADE, JR. 624 QUAKER LANE, SUITE 116-B HIGH POINT 27262	GS /CDS 040 A P AC 919 886-4552	HUGGINS, MICHAEL B. 610 4TH AVE. NE CONOVER 28613	GS /VS 018 * AC 704 322-9105	HUNTER, CHARLES E., JR. 1414 MEDICAL CENTER DR. WILMINGTON 28401	CDS /TS 065 A AC 919 763-7363
HOWELL, JULIUS 1900 S. HAWTHORNE RD. STE. 480 WINSTON-SALEM 27103	PS /OTO 034 A L 919 760-1727	HUGHES, C. ANTHONY 120-A HUNTINGRIDGE RD. GREENVILLE 27834	074 A S 919 752-6434	HUNTER, DAVID MONTGOMERY 1828 ELIZABETH AVE. WINSTON-SALEM 27103	034 A R 919 748-4991
HOWELL, MARY LEE 3037 CARVER ST., APT. A-9 DURHAM 27705	OBG 032 A R 919 684-2484	HUGHES, CARLISLE BEE, JR. RT. 2, BOX 567 YADKINVILLE 27055	GS 086 A L/RT 919 679-8285	HUNTER, JAMES EDWARD 1057 RANDOLPH ROAD THOMASVILLE 27360	IM /BE 029 A AC 919 475-8121
HOWELL, NELSON NEIL 3535 RANDOLPH ROAD CHARLOTTE 28211	OTO /HNS 060 A * AC 704 365-0711	HUGHES, DOREEN L. 664 N. SPRING ST., APT. 4 WINSTON-SALEM 27101	034 A * S 919 722-5423	HUNTER, JOHN BALDWIN 618 E. MARION STREET SHELBY 28150	GS /GP 023 A L/RT 704 487-6022
HOWERTON, PHILIP THOMAS 2203 S. STERLING ST., STE. 176 MORGANTON 28655	R 012 A AC 704 438-2250	HUGHES, JACK 30 KIMBERLY DR. DURHAM 27707	U 032 A P * AC 919 489-9504	HUNTER, JOHN DANE 1202 MEDICAL CENTER DRIVE WILMINGTON 28403	ON /HEM 065 A P AC 919 762-2990
HOWIE, JOHN SANDALL 3129 ESSEX CIRCLE RALEIGH 27608	PYA /P 092 AC 919 782-0616	HUGHES, JAMES LEWIS PITT CO. MEM. HOSP. 228-2W GREENVILLE 27834	PD 074 A AC 919 355-2460	HUNTER, JOHN GRAY 2311 GRANVILLE RD. GREENSBORO 27408	GS /CRS 041 A L/RT 919 274-7998
HOWILER, WILLIAM EDWARD, JR. 1778 METROMEDICAL DRIVE FAYETTEVILLE 28304	GE 026 AC 919 323-5203	HUGHES, JOE DON P. O. BOX 1208 RUTHERFORDTON 28139	OBG 081 A AC 704 287-7383	HUNTER, ROBERT MERRILL 3020 NEW BERN AVE. #560 RALEIGH 27610	CDS /TS 092 A AC 919 833-8404
HOYLE, DAVID EMORY 5331 YARDLEY TERRACE DURHAM 27707	034 A S 919 493-9279	HUGHES, LOREN E. 401 W. DECATUR MADISON 27025	FP 079 AC 919 548-9618	HUNTLEY, DANNY EDWARD 6708 ALBEMARLE RD. CHARLOTTE 28212	FP 060 AC 704 536-4903
HSU, NORA BEAMAN ROUTE #1, BOX 8-B SUPPLY 28462	OBG 010 A AC 919 754-8113	HUGHES, LYNN ALLEN 11 ARDSLEY AVENUE, N. E. CONCORD 28025	OTO 013 A P * AC 704 788-1103	HURDLE, THOMAS GRAY 1786 METROMEDICAL DR. FAYETTEVILLE 28304	U 026 A AC 919 485-8151
HUBBARD, HAMPTON WOODSIDE PROF. BLDG. CLINTON 28328	U 082 A AC 919 592-7129	HUGHES, THOMAS PATRICK 1901 S. HAWTHORNE RD. #310 WINSTON-SALEM 27103	GE 034 A AC 919 725-8326	HURST, DANIEL JOHNSON 250 CHARLOIS BLVD. WINSTON-SALEM 27103	PUD /IM 034 A AC 919 768-4730
HUBBARD, ROBERT THOMAS 126 LAKE SHORE DRIVE ASHEVILLE 28804	FP 011 A RT 704 252-5103	HUGHES, WM. HENRY 1900 RANDOLPH RD. STE. 304 CHARLOTTE 28207	U /EM 060 AC 704 331-0846	HURST, DAVID MAURICE 1003 PINE NEEDLE LANE THOMASVILLE 27360	R /NM 029 A P AC 919 475-3056
HUBBARD, STEPHEN ADRIAN 2930 CLUB PARK ROAD WINSTON-SALEM 27104	EM /IM 034 A S 919 760-1226	HULKA, GREGORY F. BOX 2875, DUMC DURHAM 27710	OTO 032 A S 919 493-8258	HURT, JOE PAUL 163 MONTEITH BRANCH ROAD SYLVA 28779	PTH /NA 050 A AC 704 586-8721
HUBBERT, LEROY KARL 3253-G CALUMET DR. RALEIGH 27610	032 A S 919 755-0348	HULKA, JAROSLAV FABIAN UNC, DEPT. OF OB-GYN CHAPEL HILL 27514	OBG /OBS 032 AC 919 966-5287	HURWITZ, BARRIE J. BOX 3184, DUMC DURHAM 27710	N /IM 032 A AC 919 684-4126
HUCKS-FOLLISS, ANTHONY GEORGE P. O. BOX 2000 PINEHURST 28374	NS 063 A AC 919 295-1843	HULKOWER, STEPHEN D. 491 BILTMORE AVE. ASHEVILLE 28801	FP 011 AC 704 258-0670	HUSSEY, HOWARD SUMMERELL, JR. 908 ST. ANDREW STREET TARBORO 27886	FP 033 A L/RT 919 823-2534
HUDSON, EDWARD VALENTINE 1830 HILLDALE ROAD DURHAM 27705	OTO 032 A AC 919 383-5531	HULL, DIANA MILLER 200 WOODCROFT PARKWAY #430 DURHAM 27713	032 A R 919 684-1046	HUSSEY, MICHAEL BRUSH P. O. BOX 5388 HIGH POINT 27262	NS 040 A P AC 919 889-3242
HUDSON, RICHARD PAGE, JR. ECU SCHOOL OF MEDICINE DEPT. OF CLINICAL PATHOLOGY GREENVILLE 27858	FOP /PTH 074 A AC 919 551-4655	HULL, KEITH LOWELL, JR. PO BOX 40999 RALEIGH 27629	N /IM 092 A P AC 919 782-3456	HUTCHESON, JAMES STERLING 1350 S. KINGS DRIVE CHARLOTTE 28207	AI 060 AC 704 372-8750
HUDSON, RICHARD WOODARD PO BOX 729 PAMLICO MEDICAL CTR. PA BAYBORO 28515	FP 025 A P * AC 919 745-3191	HUMPHREY, JOHN EDWARD, JR. 2040 RANDOLPH RD. CHARLOTTE 28207	P 060 AC 704 334-0875	HUTCHINS, CHARLES HUBERT 750 COX ROAD GASTONIA 28054	PSF /OTO 036 A AC 704 867-7212

HUTCHINS, KENNETH RAYMOND 1350 S. KINGS DRIVE CHARLOTTE 28207	U 060 AC 704 372-8750	IRVING, RICHARD CARROLL RT. #9, 2589 HEBRON RD. HENDERSONVILLE 28739	AN /GER 045 A L/RT 704 692-9806	JACOBSON, PETER LARS P. O. BOX 1749 PINEHURST 28374	N /IM 063 A P AC 919 295-6868
HUTCHINS, ROBERT HAROLD 2015 S. LIVE OAK PARKWAY WILMINGTON 28403	IM 065 AC 919 343-8191	ISAACS, KIM LUISE 103 POLK'S TRAIL CHAPEL HILL 27514	IM 032 A R 919 968-1597	JACOBSON, ROBERT CARL P. O. BOX 18139 RALEIGH 27619	AN 092 A * AC 919 783-3034
HUTCHINSON, FORNEY, III 1822 BRUNSWICK AVENUE CHARLOTTE 28207	ORS 060 A P AC 704 373-0544	ISBEY, EDWARD K., III 495 BILTMORE AVE. ASHEVILLE 28801	OPH 011 A * AC 704 258-1586	JACOBSON, SEVERT HAROLD P. O. BOX 2000 PINEHURST 28374	NS 063 A AC 919 295-1291
HUTTO, EDITH E-11 WOODFIELD ASHEVILLE 28803	D 011 A RT 704 298-2954	ISBEY, EDWARD KENNETH, JR. 495 BILTMORE AVENUE ASHEVILLE 28801	OPH 011 A P AC 704 258-1586	JACQUES, ROBERT SAMUEL P. O. BOX 695 PITTSBORO 27312	EM /FP 063 A AC 919 295-7777
HWANG, YINNAH G. PO BOX 425 ZEBULON 27597	FP 092 A AC 919 269-4101	ISENHOWER, JOSEPH ANDREW 24 SECOND AVENUE, N.E. HICKORY 28601	FP 018 A AC 704 328-2231	JACUMIN, WALTER JOE P. O. BOX 700 VALDESE 28690	R /NM 012 A AC 704 879-9541
HYDE, AUSTIN TABER, JR. NORRIS-BIGGS CLINIC PO BOX 970	A /IM 081 AC 704 286-9036	ISRAEL, JAMES RAY 1365 WESTGATE CENTER DR. SUITE N-1 WINSTON-SALEM 27103	P 034 A P AC 919 760-3220	JAFFURS, WILLIAM J., JR. 5301 WRIGHTSVILLE AVE. WILMINGTON 28403	EM 074 A AC
IBRAHIM, GEORGE KAISSAR 11 WILLOWBRIDGE DR. #80 DURHAM 27707	U 032 A S 919 493-3695	ISRAEL, JOHN ROBERT 5 LIVINGSTON STREET ASHEVILLE 28801	PS 011 * AC 704 253-7000	JAIN, REKHA 5813 NORTH BOULEVARD RALEIGH 27604	IM /PD 092 AC 919 878-8620
IBRAHIM, KAISSAR SLEIMEN 712 WILKINS STREET SMITHFIELD 27577	GS /CDS 051 A AC 919 934-2360	ISSA, MAHMOUD A. 224 MEMORIAL DR. STE. A JACKSONVILLE 28540	GE /IM 067 AC 919 577-1444	JAMES, CHARLES GREENE 700 E. STONEWALL ST., STE. 130 CHARLOTTE 28202	IM 060 A AC 704 377-2188
IBRAHIM, MOUNIR LABIB 1400 MILLGATE DR. STE. A WINSTON-SALEM 27103	P /HYP 034 A P AC 919 768-2886	IVES, DONALD LELAND 303-B MASON FARM RD. CHAPEL HILL 27514	032 A S 919 933-6766	JAMES, CHARLES NEWTON P. O. BOX 518 CAROLEEN 28019	FP 081 A P AC 704 657-5371
IFFT, ROBIN DAWN 731 LYNN DEE DR. WINSTON-SALEM 27106	034 A S 919 765-3439	IWAOKA, ROBERT S. 1413 ELIZABETH AVE. CHARLOTTE 28204	IM 060 A AC 704 338-6300	JAMES, FRANCIS MARSHALL, III 15 GRAYLYN PLACE LANE WINSTON-SALEM 27106	AN 034 A P AC 919 723-4690
IGLEHART, JAMES DIRK BOX 3873, DUMC DURHAM 27710	GS /TS 032 A AC 919 684-6133	IZLAR, HENRY LEROY, JR. 306 S. GREGSON STREET DURHAM 27701	IM /CD 032 A AC 919 682-5562	JAMES, GEORGE W. 205 S. HAWTHORNE ROAD WINSTON-SALEM 27103	D 034 A * L 919 722-6155
IMBODEN, LEY INEZ 217 E. WOODSTOCK DR. GREENVILLE 27834	074 A S 919 756-8735	IZURIETA, HENRY 514 BEAUMONT ROAD FAYETTEVILLE 28304	IM 026 AC 919 485-8831	JAMES, JOHN CLAY ROUTE #3, BOX 436 MAIDEN 28650	GP 018 A AC 704 428-9740
IMBUS, HAROLD ROGER 4605-E DUNDAS DRIVE GREENSBORO 27407	OM 041 A AC 919 845-2303	JABEN, SCOTT LEONARD 309 S. LAUREL AVE. CHARLOTTE 28207	OPH 060 A AC 704 372-4380	JAMES, JOSEPH MCCRAW 2622 MIMOSA PLACE WILMINGTON 28403	R 065 A P AC 919 343-7069
INABNET, WILLIAM BARLOW 100 E. NORTHWOOD STREET GREENSBORO 27401	OTO /PSF 041 A AC 919 275-0507	JABLONOVER, ROBERT STEPHAN 136-A PUREFOY RD. CHAPEL HILL 27514	032 A S 919 968-0098	JAMES, PAUL ARTHUR PO BOX 549 BETHEL 27812	FP 074 A AC 919 825-0355
INGE, WELLFORD W., III 311 S. LASALLE ST. APT. 37B DURHAM 27705	032 A S 919 286-3311	JACKLIN, HAROLD NORMAN 1014 N. ELM STREET GREENSBORO 27401	OPH 041 A P AC 919 274-2149	JAMES, RICHARD THOMAS, JR. 217 TRAVIS AVENUE CHARLOTTE 28204	IM 060 A L/RT 704 372-3350
INGRAM, CHARLES HAL 229 CASCADE DR. HIGH POINT 27260	GS 040 L/RT 919 886-4552	JACKSON, CHARLES THOMAS 5950 FAIRVIEW RD., STE. 100 3 FAIRVIEW PLAZA CHARLOTTE 28210	OBG 060 AC 704 551-4200	JAMES, ROBERT MITCHELL 1137 S. MAIN ST. GRAHAM 27353	000 A R
INGRAM, HAYWOOD MELTON 1317 N. ELM ST. STE. #5 P. O. BOX 10037 GREENSBORO 27401	GS 041 A AC 919 274-8444	JACKSON, DAVID DEWITT P. O. BOX 191 MOUNT AIRY 27030	GS /CDS 086 AC 919 789-9176	JAMES, ROBERT TRUXTON 506 E. CHEVES ST., STE. 206 FLORENCE, SC 29501	NS 000 AC 803 669-2253
INGRAM, ROBERT GREGORY 1511 WESTOVER TERR., STE. 108 GREENSBORO 27408	IM 041 A AC 919 378-9906	JACKSON, DAVID STONE, JR. 300 S. HAWTHORNE ROAD WINSTON-SALEM 27103	FP 034 A AC 919 748-2832	JAMES, ROGER ALLEN 946 TUNNEL ROAD ASHEVILLE 28805	FP 011 A AC 704 298-7981
INJEIKIAN, JIRAIR ALEXAN 709 GROVER STREET SHELBY 28150	TS /GS 023 A AC 704 482-8371	JACKSON, DON VERNON, JR. 300 S. HAWTHORNE ROAD WINSTON-SALEM 27103	IM /ON 034 A AC 919 748-2088	JAMISON, EDGAR LAMONT 1243 IDLEWOOD RD. ASHEBORO 27203	OPH /OTO 076 A L/RT 919 625-6315
INMAN, CHARLES ERNEST 1212 S. WALNUT ST. FAIRMONT 28340	FP 078 A L/RT 919 628-7188	JACKSON, DONALD CHARLES P. O. BOX 2065 NEW BERN 28560	R 025 A AC 919 633-5057	JAMISON, JAMES P. 2531-D MILLER PARK CIR. WINSTON-SALEM 27103	034 A S 919 723-3562
IPAPO, VIRGILIO SORIANO 1309 E. FRANKLIN ST. MONROE 28110	GS /VS 090 P AC 704 289-3024	JACKSON, ELEANOR C. H. 730 WALNUT FOREST RD. #H WINSTON-SALEM 27103	034 A S 919 722-1325	JANEWAY, RICHARD 300 S. HAWTHORNE RD. BOWMAN GRAY SCH. OF MED. WINSTON-SALEM 27103	U /N/A 074 A AC 919 752-5077
IRANI, WALEED NABIL 12-D STRATFORD HILLS APTS. CHAPEL HILL 27514	032 A S 919 929-9907	JACKSON, FREEMAN RANDOLPH 107 ELMWOOD TERRACE GREENSBORO 27408	R 041 A P * AC 919 299-6815	JANOSKO, EDWARD ORESTES, II 224 KING GEORGE ROAD GREENVILLE 27834	P 032 A AC
IRELAND, PATRICK DAVID 315 LOCKLAND AVE. WINSTON-SALEM 27103	034 A S 919 723-2935	JACKSON, JOSEPH ALEXANDER, III 800 W. CEMETERY STREET SALISBURY 28144	OPH 080 A AC 704 633-0345	JANOWSKY, DAVID S. UNC, DEPT. OF PSYCHIATRY 231 MEDICAL SCH. WING B 207H CHAPEL HILL 27514	A AC 919 966-4738
IRIGARAY, PETER JOSEPH JOHN UMSTEAD HOSPITAL BUTNER 27509	P 032 A P AC 919 575-7233	JACKSON, MURRAY T., JR. P. O. BOX 1043 SYLVA 28779	R 050 A AC 704 586-8941	JANSON, JAN ALBERT 4818 NORTHBURY CIRCLE DURHAM 27712	IM /GE 032 A R 919 684-8111
IRONS, CARY FREDERICK, JR. 1104 W. ROCK SPRING ROAD GREENVILLE 27834	FP 074 A L/RT 919 752-3423	JACKSON, RICHARD DEWITT 1067 GREENHILL ROAD MOUNT AIRY 27030	GS 086 A L/RT 919 786-2400	JANTZ, ROBERT JOSEPH 1106 SOMERSET DR. LEBANON, TN 37087	FP 062 AC
IRONS, GEORGE VERNON, JR. 1413 ELIZABETH AVE. CHARLOTTE 28204	CD /IM 060 A AC 704 372-8750	JACOBS, GEORGE DANIEL 1225 E. GARRISON BLVD. GASTONIA 28054	OBG 036 P AC 704 865-7416	JARMAN, FONTAINE GRAHAM, JR. 12 LONGSTREET ROAD WELDON 27890	GS 042 A L/RT 919 536-2884
IRONS, MALENE GRANT 1104 W. ROCKSPRING GREENVILLE 27834	PD /GPM 074 A L/RT 919 752-3423	JACOBS, WILLIAM EDWARD 2215 RANDOLPH ROAD CHARLOTTE 28207	PS /GS 060 A AC 704 372-6846	JARMAN, WAYNE THOMAS 708 HARTNESS ROAD STATESVILLE 28677	GS 049 A AC 704 873-1024
IRONS, THOMAS GRANT ECU DEPT. OF PEDIATRICS GREENVILLE 27834	PD 074 A AC 919 551-2535	JACOBSON, MARK DAVID 3924 OLD VINEYARD RD., #55 WINSTON-SALEM 27104	034 A S 919 760-3389	JARMAN, WILLIAM HENRY, JR. 902 COX RD. STE. E GASTONIA 28052	ORS 036 A AC 704 867-2333

JAROSAK, PETER JAMES THE SAM RAVENEL CLINIC 1307 W. WENDOVER AVENUE GREENSBORO 27408	PD 041 AC 919 275-6335	JEON, MYUNG KIL MEDICAL ARTS CENTER PLYMOUTH 27962	GP 007 AC 919 793-5073	JOHNSON, KEVIN M. 2609 N. DUKE ST. DURHAM RADIOLOGY ASSOCIATES DURHAM 27704	DR 032 AC 919 471-8411
JAROW, JONATHAN P. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	U 034 AC 919 748-4131	JESSUP, PAMELA KAY H. 555 CARTHAGE ST. SANFORD 27330	FP 053 A P AC 919 774-6518	JOHNSON, LESLIE DONALD 319 N. GRAHAM-HOPEDALE RD. BURLINGTON 27215	DR 001 A AC 919 227-8111
JARRAH, AZMI SHAFIQ 100 MEDICAL HTS. MORGANTON 28655	PD /PNP 012 AC 704 433-9630	JETT, HARRIMAN HARDING 2104 RANDOLPH ROAD CHARLOTTE 28207	GS 060 A AC 704 377-3900	JOHNSON, MARTIN KAY 1904 N. CHURCH ST. GREENSBORO 27405	IM 041 A AC 919 379-4062
JARRAHI, ALI 2830 MAPLEWOOD AVENUE WINSTON-SALEM 27103	P /PH 034 A AC 919 768-2424	JEWELL, GARY WELCH 1408 FRANKLIN STREET MONROE 28110	GYN 090 A P * AC 704 289-2553	JOHNSON, MICHAEL DONALD 428 TOWN COLONY MIDDLETOWN, CT 06457	032 A S
JARRELL, JOHN ARTHUR, JR. BOX 3802, DUKE EYE CENTER DURHAM 27710	AN 032 A AC 919 684-2368	JIAMACHELLO, NICHOLAS 307 SYLVAN ROAD FAYETTEVILLE 28305	OBG 026 A RT 919 485-8729	JOHNSON, PAUL D. 110 W. GROVER ST. SHELBY 28150	OBG 023 A AC 704 487-5258
JARRELL, WILBURN ERIC 2007 SALEM ROAD MOUNT AIRY 27030	FP 086 A AC 919 786-5050	JILCOTT, RUPERT WADSWORTH, III KINSTON CLINIC NORTH, STE. H KINSTON 28501	IM 054 A P AC 919 522-1404	JOHNSON, PETER GRAHAM P. O. BOX 577 MOUNT GILEAD 27306	FP 062 AC 919 439-6831
JARRETT, DAVID LINCOLN 53 S. FRENCH BROAD ST. ASHEVILLE 28801	ORS 011 A AC 704 252-7180	JIMENEZ, EDGAR J. 143 ASHELAND AVE. ASHEVILLE 28801	OBG 011 A AC 704 258-9191	JOHNSON, RANDALL DIVAN 16 MCDOWELL STREET ASHEVILLE 28801	GS /CDS 011 A AC 704 252-3366
JARRETT, THOMAS EDWARD 624 QUAKER LANE, #205A HIGH POINT 27262	IM 040 AC 919 885-2111	JOBSON, VERNON WAKEFIELD 1901 S. HAWTHORNE RD. STE. 360 WINSTON-SALEM 27103	GYN /ON 034 A AC 919 765-1464	JOHNSON, ROBERT BRUCE 101 CARY PKWY. SW #210 CARY DERMATOLOGY CTR. CARY 27511	D 092 AC 919 467-8556
JARVIS, JAMES LUTHER 1516 PINEOLA LANE GASTONIA 28054	NM /R 036 AC 704 865-8679	JOHNSEN, ERIC MERRIMAN 1007 N. 6TH ST. ALBEMARLE 28001	FP 084 A AC 704 983-3121	JOHNSON, RONALD W. 172 ASHELAND AVE. ASHEVILLE 28801	FP 011 AC 704 252-1131
JASKI, THOMAS JOHN NORRIS-BIGGS CLINIC P. O. BOX 970 RUTHERFORDTON 28139	GE /IM 081 AC 704 286-9036	JOHNSEN, LYNN 524 BEAUMONT ROAD FAYETTEVILLE 28304	IM 026 A P * L 919 484-6080	JOHNSON, SAMUEL ANDREW APT. #4, CARRIAGE HOUSE GREENVILLE 27834	074 A * S 919 756-5093
JASMINE, MARK S. PO BOX 1606 CONCORD 28026	ORS 013 A AC 704 788-3155	JOHNSON, ALBIN WILLARD 2800 BLUE RIDGE BLVD., STE. 409 RALEIGH 27607	OPH 092 A AC 919 781-7400	JOHNSON, STEPHEN EDWARD 10501 LEAFWOOD COURT RALEIGH 27612	EM /IM 092 A AC 919 755-3100
JAYNES, GRACE S. PO BOX 1095 FAIRFIELD, TX 75840	GP 075 A L/RT 214 389-5662	JOHNSON, ANDREW FINLEY 1370 5TH ST. CIRCLE, NW HICKORY 28601	GP 018 AC 704 256-2185	JOHNSON, THOMAS DUANE DOCTORS PARK APTS. U-4 GREENVILLE 27834	074 A S 919 758-4458
JECK, LIDA MORAWETZ 800 EASTOWNE DR., STE. 204 CHAPEL HILL 27514	P /PYA 032 AC 919 493-5329	JOHNSON, ANN RHAMY 44 LAUREL RIDGE APTS. NC 54 BYPASS CHAPEL HILL 27516	032 A S 919 968-8850	JOHNSON, THOMAS GARY 132 35TH AVE., NW HICKORY 28601	DR 018 A AC 704 327-6342
JEFFERS, ROBERT GORDON 3803 COMPUTER DR. STE. 207 RALEIGH 27609	PD /ADL 092 AC 919 782-5273	JOHNSON, CHARLES ROSS 4000 BLUE RIDGE RD. STE. 100 RALEIGH 27612	P 092 AC 919 781-8700	JOHNSON, THOMAS MILTON 709 NORTH STREET SMITHFIELD 27577	FP 051 AC 919 934-8556
JEMSEK, JOSEPH GREGORY 1350 S. KINGS DR. CHARLOTTE 28207	ID /IM 060 A AC 704 372-8750	JOHNSON, CHARLES THOMAS, JR. 222 S. MAIN STREET RED SPRINGS 28377	FP 078 A AC 919 843-4576	JOHNSRUDE, IRWIN STANLEY P. O. BOX 328, RTE. #9 GREENVILLE 27834	DR 074 A AC 919 756-9280
JENKINS, ALBERT MILTON 400 SCOTLAND ST. RALEIGH 27609	R 092 A AC 919 787-4754	JOHNSON, CHERYL 4800 UNIVERSITY DR., APT. 3M DURHAM 27707	032 A S 919 286-1760	JOHNSTON, DAVID SOMERS 1822 BRUNSWICK AVENUE CHARLOTTE 28207	ORS 060 A P AC 704 373-0544
JENKINS, JOSEPH MCKENDRIE 604 E. 12TH STREET WASHINGTON 27889	U 007 A AC 919 946-0136	JOHNSON, DAVID SANDER 530 W. WEBB AVENUE BURLINGTON 27215	PD 001 AC 919 228-8316	JOHNSTON, FRANK RANDOLPH 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	TS /CDS 034 L/RT 919 748-4338
JENKINS, LARRY PARKER 121 YADKIN STREET ALBEMARLE 28001	OPH 084 A AC 704 983-1102	JOHNSON, DONALD CARL P. O. BOX 699 WASHINGTON 27889	OPH 007 P AC 919 946-3111	JOHNSTON, FRANK SMITH, JR. 3900 BROWNING PLACE RALEIGH 27609	IM 092 A AC 919 781-9650
JENKINS, SAMUEL GATLIN, JR. 1142 N. ROAD STREET ELIZABETH CITY 27909	GS 070 A AC 919 335-4890	JOHNSON, DONALD GENE 2212 DELANEY AVENUE WILMINGTON 28403	R /NR 065 A AC 919 383-7070	JOHNSTON, HARVEY WYLIE 101 W. T. HARRIS BLVD. CHARLOTTE 28213	U 060 A AC 704 547-1392
JENKINS, STANLEIGH EDWARD, JR. 501 HAYES STREET AHOSKIE 27910	FP 008 A AC 919 357-1226	JOHNSON, GALE DENNING 119 LUCKNOW SQUARE DUNN 28334	GS 043 AC 919 892-7893	JOHNSTON, JAMES WILLIAM KERNODLE CLINIC BURLINGTON 27215	OBG 001 L/RT 919 227-3621
JENKINS, WANDA LOUISE 211 LEPHILLIP COURT CONCORD 28025	OBG 013 A AC 704 786-1115	JOHNSON, GEORGE, JR. UNC. DEPT. OF SURGERY CB #7050 CHAPEL HILL 27599	VS /CDS 032 A AC 919 966-3391	JOHNSTON, JOHN GARDNER 1700 ABBEY PLACE CHARLOTTE 28209	PD 060 A AC 704 523-7232
JENNER, PAUL WM. 2425 PARK RD. PO BOX 36507 CHARLOTTE 28236	BLB 060 A AC 704 376-1661	JOHNSON, HEBER WELLINGTON 417 BRADLEY CREEK POINT WILMINGTON 28403	OBG /GS 065 A L 919 256-2040	JOHNSTON, WILLIAM WEBB BOX 3712, DUMC DURHAM 27710	PTH 032 A P AC 919 684-3587
JENNETTE, ALBERT TYSON 1700 S. TARBORO ST. WILSON 27893	ORS 098 A AC 919 291-1300	JOHNSON, HENRY WESLEY 3175 MAPLEWOOD AVENUE WINSTON-SALEM 27103	PD 034 A AC 919 768-7030	JOHNSTON, WM. ELLIOTT 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	AN 034 AC 919 748-3613
JENNINGS, JEROME EDWIN 410 FORSYTH MEDICAL PK WINSTON-SALEM 27103	ORS 034 A AC 919 765-1571	JOHNSON, JAMES ALFRED 606 N. ELM ST. HIGH POINT 27262	NS 040 A AC 919 889-8877	JOHNSTONE, WILLIAM MILLER, JR. 1608 BEAUMONT DR. GREENVILLE 27858	074 A S 919 758-7213
JENNINGS, JOHN LEE, JR. BOX 1399, 1100 E. ASH ST. GOLDSBORO 27533	D 096 A AC 919 734-0944	JOHNSON, JAMES C. RD-2 BOX 771 DANVILLE, PA 17821	DR 000 A R 717 275-2178	JOLLY, THOMAS LYNN 1500 W. ACADEMY ST. WINSTON-SALEM 27103	FP 034 A R 919 727-0550
JENNINGS, ROBERT BURGESS BOX 3712, DUMC DURHAM 27710	PTH /CLP 032 A AC 919 684-3528	JOHNSON, JAMES ERWIN 3308 MELROSE ROAD FAYETTEVILLE 28304	ORS 026 A P AC 919 484-4874	JOLLY, WILLIAM OSCAR, III 320 YADKIN STREET ALBEMARLE 28001	FP 084 A AC 704 982-9144
JENNINGS, ROYAL GREEN 624 QUAKER LANE, SUITE 302-B HIGH POINT 27262	D 040 A P * AC 919 887-3195	JOHNSON, JAMES NOLEN 213 DEER PARK LAKE DR. SPRUCE PINE 28777	FP 061 AC 919 783-5312	JONAS, JAROSLAV GEORGE 20 BEAVERBROOK ROAD ASHEVILLE 28804	ORS 011 A AC 704 255-0510
JENSEN, ROGER D. 491 BILTMORE AVE. ASHEVILLE 28801	FP 011 AC 704 258-0670	JOHNSON, JOY MOORING 4612 GUNSTON PL RALEIGH 27612	IM 092 AC 919 783-5312	JONES, ALBERT MCCRAY ROUTE #5, BOX 14 WASHINGTON 27889	OBG 007 RT 919 946-6544

JONES, ALLEN G. 624 QUAKER LN., STE. 2076 HIGH POINT, ND 27262	IM 040 AC 919 841-4233	JONES, JOSEPH KEMPTON 1001 S. HAMILTON ROAD CHAPEL HILL 27514	FP 032 A P * AC 919 968-4551	JORIZZO, JOSEPH L. 300 S. HAWTHORNE RD. DEPT. OF DERMATOLOGY WINSTON-SALEM 27103	D 034 A AC 919 748-2768
JONES, BILLY ERNEST ECU DEPT. OF MEDICINE GREENVILLE 27834	D 074 A AC 919 551-2555	JONES, JOSEPH REID, JR. P. O. BOX 387 KING 27021	GP 034 A AC 919 983-3113	JOSEPH, MICHAEL C. 5716 GENESSEE DR. DURHAM 27712	PD 032 AC 919 471-3278
JONES, CARL H., III 403 FAIRVIEW ST. CLINTON 28328	FP 082 AC 919 592-6011	JONES, MARY MCKEEL BRANCH'S ESTATES, BOX 76 GREENVILLE 27858	FP 023 A P R 919 756-6398	JOYCE, CHARLES WELDON 401 W. DECATUR ST. MADISON 27025	GP 079 AC 919 548-9618
JONES, CHAMP MCMILLIAN, JR. 2805 LYNDBURST AVE. WINSTON-SALEM 27103	FP 034 AC 919 768-8890	JONES, MICHAEL CHARLES 835 FLEMING STREET HENDERSONVILLE 28739	GS 045 AC 704 692-0238	JOYCE, DONALD GEORGE 3535 RANDOLPH ROAD, SUITE 103 A CHARLOTTE 28211	ORS 060 AC 704 365-2111
JONES, CHRISTOPHER 408 ROTARY AVE. GREENVILLE 27858	074 A * S 919 752-5110	JONES, MORRIS ALEXANDER, JR. 3643 N. ROXBORO ST. DURHAM 27704	R 032 A P AC 919 471-3411	JOYCE, GEORGE WILLIAM 624 QUAKER LANE, SUITE 213-B HIGH POINT 27262	IM /NEP 040 A P AC 919 883-4131
JONES, CLARA ISELEY 815 S. FIFTH ST. MEBANE 27302	GP 001 L/RT 919 563-1080	JONES, NORMAN NESBETH P. O. BOX 21886 GREENSBORO 27420	GP /GE 041 A AC 919 274-0097	JOYNER, GEORGE WILLIAM 375 LEXINGTON ROAD ASHEBORO 27203	GS 076 A L/RT 919 625-6465
JONES, CLAYTON JOE 107 COUNTRY CLUB DRIVE CONCORD 28025	GYN 013 A AC 704 786-7158	JONES, O. HUNTER 232 PERRIN PLACE CHARLOTTE 28207	OBG 060 A L/RT 704 333-0455	JOYNER, RAYMOND EDWARD 923 BROAD STREET DURHAM 27705	U 032 A AC 919 286-1297
JONES, COLIN DOUGLAS ACADEMY STREET AHOSKIE 27910	FP 008 A * AC 919 332-6138	JONES, ROBERT BOYD 2311 DELANEY ROAD WILMINGTON 28403	OTO 065 A AC 919 762-8754	JOYNER, RONNIE STEPHEN 801 MCCARTHY BLVD. NEW BERN 28560	OBG 025 A AC 919 633-3942
JONES, CONSTANCE CARPENTER 415 PRINCE CROSSING 0-5 WEST CHICAGO, IL 60185	032 A R 919 968-0023	JONES, ROBERT S., JR.-BOBBY 421 W. MARION ST. SHELBY 28150	FP 023 A AC 704 484-8001	JOYNER, SAMUEL BALFOUR 200 E. NORTHWOOD STREET GREENSBORO 27401	IM 041 A AC 919 274-7609
JONES, CRAIG S. 4051 GULFSHORE BLVD. N'PH-205 NAPLES, FL 33940	GS 023 A L 813 261-5609	JONES, ROBERT SPURGEON 113 GROVER STREET SHELBY 28150	FP 023 A P AC 704 487-5228	JOYNER, WILLIAM STAFFORD 1001 S. HAMILTON ROAD CHAPEL HILL 27514	FP 032 A * AC 919 968-4551
JONES, DAVID CRAVEN 202 S. FIFTH STREET MEBANE 27302	FP 001 A AC 919 563-9341	JONES, SARA THOMPSON 321 BANBURY ROAD WINSTON-SALEM 27104	AN 034 A P AC 919 768-8987	JREISAT, KHALED F. PO BOX 2588 NEW BERN 28561	N /CHN 025 A AC 919 633-3744
JONES, DAVID HERMAN 3900 BROWNING PLACE RALEIGH 27609	OPH 092 AC 919 787-2758	JONES, STEPHEN WATSON BRANCH'S ESTATES, BOX 76 GREENVILLE 27858	FP 023 A P R 919 756-6398	JUENGEL, PAUL H., III 1206 VAUGHN RD. BURLINGTON 27215	OTO /PSF 001 A P AC
JONES, DAVID RAY 425 W. LONG MEADOW RD. GREENVILLE 27858	074 A S 919 758-1841	JONES, THADDEUS LEROY 3333 SILAS CREEK PARKWAY WINSTON-SALEM 27103	PTH /HEM 034 A P * AC 919 773-3840	JUER, ROBERT CRAIG RT. #2, BOX 172-D CREEDMOOR 27522	FP 039 A AC 919 528-1535
JONES, DENNIS EBLEN DARNELL ECU SCHOOL OF MEDICINE GREENVILLE 27858	OBG 074 AC 919 551-4610	JONES, THOMAS THWEATT 1202 ARNETT DURHAM 27707	GP 032 A L/RT 919 489-2115	JULIAN, JESSE S., JR. 614 BELLVIEW ST. WINSTON-SALEM 27103	GS 034 A R 919 748-2011
JONES, DONNIE HUE, JR. P. O. BOX 158 PRINCETON 27569	GP 051 A AC 919 936-5171	JONES, WILLIAM ROBERT 600 SUNSET AVENUE ROCKY MOUNT 27804	GP 064 A AC 919 446-4921	JURIVICH, DONALD ALBERT 508 FULTON ST. DURHAM 27710	IM /GER 032 A R 919 286-0411
JONES, FRANK COLLINS, JR. KILIMANJARO MED. CTR THE GOOD SAMARITAN FOUNDATION MOSHI, TANZANIA, E.AFRICA	GS 050 H 704 586-6665	JONNALAGADDA, M. RAO CHERRY HOSPITAL CALLER BOX 8000 GOLDSBORO 27530	P /PH 096 A P * AC 919 731-3206	JUST, PETER WITHAM 3610 SUTTON DR. WILMINGTON 28403	AN 065 AC 919 929-9630
JONES, FRANKLIN D. 125 MOYE BLVD. GREENVILLE 27834	NS 074 A AC 919 752-5156	JORDAN, BARBARA MOORE 207 W. 29TH STREET LUMBERTON 28358	P 078 AC 919 738-5261	JUSTIS, HOMER RODEHEAVER 1012 KINGS DRIVE CHARLOTTE 28283	U 060 A AC 704 334-6449
JONES, FRIELDEN BERTIE, III LAUREL MEDICAL CENTER MARSHALL 28753	FP 057 AC 704 656-2611	JORDAN, H. MENDALL 2800 BLUE RIDGE BLVD. #302 RALEIGH 27607	D 092 P AC 919 781-1001	KAASA, LAURIN JUUL 3000 NEW BERN AVENUE RALEIGH 27610	PTH 092 A L 919 755-8260
JONES, GREGORY LEE 2104 HERMITAGE RD. WILSON 27893	FP 098 A AC 919 238-2407	JORDAN, HENRY DAVIDSON P. O. BOX 9000 WILMINGTON 28402	PTH 065 A P AC 919 343-7074	KADYK, JAN MARC 30 DOCTOR'S PARK BOONE 28607	ORS 095 A * AC 704 264-1100
JONES, HARVEY MICHAEL ROUTE #3, BOX 25W HENDERSON 27536	PTH /CLP 091 AC 919 492-4477	JORDAN, LYNDON KIRKMAN P. O. BOX 760 SMITHFIELD 27577	FP 051 A P * AC 919 934-7687	KAHL, FREDERIC ROSS 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	CD /IM 034 A AC 919 748-4261
JONES, J. WESLEY 1309 MEDICAL DR., STE. 102 FAYETTEVILLE 28304	GE /IM 026 A AC 919 323-2477	JORDAN, RICHARD DORN 7 PINETREE ROAD SALISBURY 28144	R 080 A * AC 704 633-1022	KAHN, JOSEPH WILLIAM P. O. BOX 147 FRANKLIN 28734	FP 056 L/RT 704 524-4427
JONES, JAMES BUCKNER 3535 RANDOLPH ROAD CHARLOTTE 28211	IM /PUD 060 A AC 704 365-0760	JORDAN, RICHARD M. 2151 JEFFERSON AVE. GASTONIA 28054	R 036 A AC 704 864-4378	KAHN, ROBERT CHARLES 416 CIRCLE DRIVE AHOSKIE 27910	GS 008 A AC 919 332-2244
JONES, JAMES DAVID BOX 3115, DUMC DURHAM 27710	CHP /PD 032 AC 919 684-2372	JORDAN, RILEY MOORE 303 PATTERSON ST. PO BOX 669 RAEFORD 28376	FP 047 AC 919 875-5151	KAHN, ROBERT HOWARD 1072 X-RAY DR. PO BOX 3598 GASTONIA 28053	D 036 AC 704 864-8386
JONES, JAMES GRADY P. O. BOX 1816 GREENVILLE 27835	FP 074 A P AC 919 551-2600	JORDAN, ROBERT CALHOUN, JR. P. O. BOX 1007 SANFORD 27330	R 053 A P AC 919 776-1210	KALAYJIAN, ROBERT WAYNE DUMC, DEPT. OF AN, BOX AA3061 DURHAM 27710	AN 032 A AC 919 684-5265
JONES, JAMES MARSHALL, JR. 1225 E. FIFTH STREET WINSTON-SALEM 27101	IM 034 AC 919 725-7362	JORDAN, THOMAS E. 39 GEORGETOWN COURT DURHAM 27705	OTO 032 A R 919 684-6968	KALDY, PATRICIA MARIE P. O. BOX 1058 MOUNT PLEASANT 28124	FP 013 A AC 704 436-6521
JONES, JANE C. 202 RODNEY RD. GREENVILLE 27834	074 A S 919 758-1065	JORDAN, WELDON HUSKE 114 BROADFOOT AVENUE FAYETTEVILLE 28305	IM 026 A AC 919 484-3261	KALINA, KENT MICHAEL 2915 PROVIDENCE RD., STE. 400 CHARLOTTE 28211	P 060 A P AC 704 366-5436
JONES, JEFFREY DAVID 1205 GREENBRIAR COURT WILSON 27893	GE /IM 098 A AC 919 291-7001	JORDAN, WILLIAM RAND 2008 LITHO PLACE FAYETTEVILLE 28304	U 026 AC 919 485-8871	KALLMAN, HAROLD ECU DEPT. OF FAMILY MEDICINE GREENVILLE 27834	FP /GER 074 A AC 919 551-2597
JONES, JERRY ANTHONY 2021 E. 7TH ST. CHARLOTTE 28204	IM /GE 060 AC 704 372-9884	JORIZZO, JOHANNA 250 CHARLOIS BLVD. WINSTON-SALEM 27103	DR 034 A AC 919 768-4730	KAMERER, DONALD B., JR. 1350 S. KINGS DR. CHARLOTTE 28207	OTO /HNS 060 A AC 704 372-8750

KAMM, RICK RANDE 3805 COMPUTER DR. RALEIGH 27609	OBG 092 A AC 919 781-6200	KAYE, PAUL THOMAS 325 N. SALISBURY ST. RALEIGH 27611	P /CHP 092 AC 919 733-7011	KELLY, JOHNSON HALL 1001 N. WASHINGTON ST. SHELBY 28150	U 023 A AC 704 482-2011
KAMMIRE, GORDON C. RT. #12, BOX 934 LEXINGTON 27292	ORS /SM 034 A R 704 731-2393	KEAGY, BLAIR ALLEN UNC, CB 7065 108 BURNETT-WOMACK BLDG. CHAPEL HILL 27599	TS /CDS 032 A AC 919 966-3381	KELLY, LUTHER W., JR. 1350 S. KINGS DR. CHARLOTTE 28207	END /NM 060 A AC 704 372-8750
KAMP, MAURICE ARTHUR 1400 DREXEL PLACE CHARLOTTE 28209	PH /GPM 060 A L/RT 704 525-3468	KEARNS, PAUL RUTHERFORD 750-H HARTNESS ROAD STATESVILLE 28677	OBG 049 A AC 704 872-6389	KELLY, RICHARD BRUCE N-1 DOCTOR'S DR. ASHEVILLE 28801	FP 011 AC 704 258-0670
KANDL, LOUIS CHARLES 331 N. FIRST ST. ALBEMARLE 28001	IM /ID 084 AC 704 982-2189	KEATHLEY, FRANKLIN BURR 224 NEW HOPE ROAD GASTONIA 28052	D /A 036 A AC 704 867-0773	KELLY, ROBERT GEORGE 2805 LYNDBURST AVENUE WINSTON-SALEM 27103	FP 034 AC 919 768-8890
KANE, RICHARD DOUGLAS 3901 COMPUTER DR. WAKE UROLOGICAL RALEIGH 27609	U 092 A AC 919 781-5104	KEEL, JAMES FRANKLIN, III 68 LAKE CONCORD ROAD, N.E. CONCORD 28025	IM 013 A AC 704 782-3135	KELLY, WILLIAM SHERWOOD 116 S. MAIN ST. KERNERSVILLE 27284	FP 034 A AC 919 993-2224
KANG, JOON P. O. BOX 218, MAIN STREET BAILEY 27807	FP 098 AC 919 235-4181	KEELING, J. WAYNE 307 W. MOREHEAD STREET REIDSVILLE 27320	ORS 079 A AC 919 342-6116	KELSH, JAMES MICHAEL 101 CLINIC DRIVE TARBORO 27886	GS 033 A AC 919 823-2105
KANICH, ROBERT EMIL 4420 LAKE BOONE TRAIL RALEIGH 27607	PTH 092 A AC 919 783-3057	KEENER, JOSEPH KEITH 101 DURYER COURT CARY 27511	NEP /IM 092 A AC 919 782-3378	KEMPNER, WALTER BOX 3099, DUMC DURHAM 27710	IM 032 A L/RT 919 684-2675
KANOF, ELIZABETH PASCHER 3400 EXECUTIVE DRIVE RALEIGH, N. C. 27609	D 092 A P * AC 919 878-0310	KEENEY, GLENWARD THOMAS 1219 WALTER REED ROAD FAYETTEVILLE 28304	OBG 026 A AC 919 323-2103	KEMPTON, LEO V. N1466 RED OAKS DR. LA CROSSE, WI 54601	P 016 AC 608 788-6123
KAPLAN, ANDREW JON 14 WESTRIDGE DR. DURHAM 27713	032 A R 919 490-1158	KEENEY, RONALD ERIC 5 MOORE DR., GLAXO, INC. RESEARCH TRIANGLE PK 27709	PD /ID 092 A AC 919 248-2568	KENAN, LEROY FULTON 3801 COMPUTER DRIVE RALEIGH 27609	FP 092 AC 919 787-0302
KAPLAN, JEFFREY MARK ONSLow MEMORIAL HOSPITAL P. O. BOX 1358 JACKSONVILLE 28541	R 067 P AC 919 577-2345	KEEVER, RICHARD ALAN 624 QUAKER LN., STE. 301-D HIGH POINT 27262	OTO 040 A AC 919 883-1366	KENAN, PATRICK DAN DUKE, DIV. OF OTOL. DURHAM 27710	OTO 032 A * AC 919 684-5238
KAPLAN, RICHARD DAVID 408 PARKWAY DR. GREENSBORO 27401	OBG 041 A P AC 919 378-1110	KEIPPER, VINCENT LEE MCCALLA 56 ARDSLEY AVENUE, N. E. CONCORD 28025	IM 013 A P * AC 704 782-1101	KENDALL, JOHN HAROLD 715 STEWART AVENUE CLINTON 28328	GP 082 A L 919 592-2161
KAPLAN, TODD M. 1702 WOODBURN RD. DURHAM 27705	032 A S 919 493-5007	KEITH, JULIAN FAISON, JR. 192 VILLAGE DR. JACKSONVILLE 28540	ALD /FP 067 AC	KENDRICK, PAUL WAYNE 6 DOCTORS PARK STANTONSBURG ROAD GREENVILLE 27834	NEP /IM 074 A P * AC 919 752-8880
KAPLOWITZ, GARY L. RUIN CREEK ROAD MEDICAL SERVICE BLDG. HENDERSON 27536	ORS 091 A P AC 919 438-3186	KEITH, THEODORE ALLEN 2810 MAPLEWOOD AVE. WINSTON-SALEM 27103	CD 034 A AC 919 768-0437	KENNEDY, CHARLIE LEE 501 N. CLEVELAND AVE. WINSTON-SALEM 27101	PD 034 A AC 919 725-0514
KARB, KENNETH SAMUEL 1007 PROFESSIONAL VILLAGE GREENSBORO 27401	ON /IM 041 AC 919 272-2141	KEITHAHN, STEPHEN TIMOTHY BOX 2760, DUMC DURHAM 27710	032 A S 919 493-1678	KENNEDY, REBECCA S. 315-A BLUERIDGE RD. CARRBORO 27510	032 A R 919 929-9861
KARIS, JOANNES HUBERTUS BOX 3094, DUMC DURHAM 27710	AN 032 A AC 919 681-6944	KELEHER, MICHAEL FRANCIS 18 MAYWOOD ROAD ASHEVILLE 28804	GS 011 A L/RT 704 254-1835	KENNEDY, THOMAS FRANCIS P. O. BOX 2959 ASHEVILLE 28802	R 011 A P AC 704 254-4617
KASH, STEPHEN LEE 1120 MEDICAL CENTER DRIVE WILMINGTON 28401	OPH 065 A P AC 919 763-7316	KELEMEN, WILLIAM ARTHUR 1928 RANDOLPH ROAD CHARLOTTE 28207	IM 060 A AC 704 334-1086	KENNEDY, WILLARD LEE 3400 EXECUTIVE DR., STE. 201 RALEIGH 27609	CD /IM 092 A AC 919 872-8920
KASIK, LEE 215 MANCHESTER PL. GREENSBORO 27410	AN 041 AC 919 299-6343	KELLAM, DONALD SWIFT, JR. 120 PROVIDENCE ROAD CHARLOTTE 28207	ORS 060 A AC 704 377-0351	KENNEY, RICHARD DREW 1000 BLYTHE BLVD. PO BOX 32861 CHARLOTTE 28234	PD /ADL 060 AC 704 338-3156
KASPAR, JOHN V. 810 GALES AVE. WINSTON-SALEM 27103	034 A S 919 725-7787	KELLAR, LISA COLLIER 3700 SUTHERLAND #N-1 KNOXVILLE, TN 37919	034 S	KENNY, JEAN BRYCE FELTY ECU DEPT. OF PEDIATRICS GREENVILLE 27858	PD /ID 074 AC 919 551-2511
KASTNER, ROBERT JEFFREY RT. #1, BOX 229 NAGS HEAD 27959	FP /EM 070 A AC 919 441-7111	KELLER, CHARLES AUGUSTUS, JR. 257 MCDOWELL STREET ASHEVILLE 28803	CDS 011 A AC 704 258-1121	KEPLEY, MICHAEL AVERY 750-H HARTNESS RD. STATESVILLE 28677	OBG 049 A AC 704 872-6389
KATARIA, SUDESH ECU DEPT. OF PEDIATRICS GREENVILLE 27834	PD 074 AC 919 551-2535	KELLER, GUY OTIS 3535 RANDOLPH RD., STE. 200-A CHARLOTTE 28211	GS 060 AC 704 364-2500	KEPPLER, C. BURTON 334 BROOKSIDE CAMP RD. HENDERSONVILLE 28739	AN 045 A AC 704 692-8688
KATARIA, YASH PAL ECU DEPT. OF MEDICINE GREENVILLE 27858	PUD /IM 074 A AC 919 551-4653	KELLEY, JOHN SIMPSON 3100 BLUE RIDGE RD. RALEIGH 27610	IM /CD 092 A P AC 919 781-7500	KERANEN, VICTOR JOSEPH 3314 MELROSE ROAD, SUITE 104 FAYETTEVILLE 28304	NS 026 A P AC 919 484-9802
KATH, PHILIP DOUGLAS 335 E. PARKER ROAD MORGANTON 28655	OPH 012 P AC 704 433-6220	KELLEY, MICHAEL J. 3535 RANDOLPH RD., STE. 102 CHARLOTTE 28211	DR 060 A AC 704 365-0343	KERLEY, ROGER KENNY 917 WORTH ST. PO BOX 985 MOUNT AIRY 27030	IM 086 A P AC 919 789-7833
KATZ, EDWARD KENNETH ECU SCHOOL OF MEDICINE GREENVILLE 27858	P /PYM 074 A AC 919 551-2663	KELLEY, THOMAS FRANCIS 320 YADKIN STREET ALBEMARLE 28001	FP 084 A L 704 982-9144	KERMON, LOUIS TODD 2708 PEACHTREE ST. RALEIGH 27608	IM /CD 092 L/RT 919 782-0563
KATZ, JEFFREY DAVID 721 GREEN VALLEY RD. GREENSBORO 27408	CD /IM 041 A P AC 919 378-0774	KELLEY, TIMOTHY FRANCIS 448 S. HAWTHORNE RD. WINSTON-SALEM 27103	034 A S 919 722-5371	KERNODLE, CHARLES EDWARD, JR. 603 ISLEY PLACE, APT. D BURLINGTON 27215	GS 001 A L/RT 919 226-4598
KATZ, SAMUEL LAWRENCE BOX 2925, DUMC DURHAM 27710	PD /ID 032 AC 919 684-3734	KELLING, DOUGLAS GEORGE, JR. 68 LAKE CONCORD ROAD, N. E. CONCORD 28025	IM /PUD 013 A P AC 704 782-3135	KERNODLE, DONALD REED KERNODLE CLINIC BURLINGTON 27215	OPH /OTO 001 A AC 919 227-3621
KAUFMAN, JEFFREY 311 S. LASALLE ST. APT. 50B DURHAM 27705	032 A S 919 286-3719	KELLY, DAVID L., JR. BOWMAN GRAY-NEUROSURGERY WINSTON-SALEM 27103	NS 034 A AC 919 748-4049	KERNODLE, DWIGHT TALMADGE KERNODLE CLINIC BURLINGTON 27215	IM 001 A P AC 919 227-3621
KAUFMAN, MICHAEL DAVID 126 COTTAGE PLACE CHARLOTTE 28207	N /GPM 060 A AC 704 334-7311	KELLY, JAMES REGINALD 306 S. GREGSON STREET DURHAM 27701	IM 032 A AC 919 682-5561	KERNODLE, GEO. WALLACE, SR. MEDICAL CTR PHARMACY BLDG BURLINGTON 27215	PD 001 * AC 919 226-7608
KAYE, DOUGLAS EVAN 1900 QUEEN ST. APT. A3 WINSTON-SALEM 27103	034 A S 919 724-6289	KELLY, JEFFREY 406 CLIFFDALE DR. WINSTON-SALEM 27104	AN /EM 034 A R 919 768-8280	KERNODLE, GEORGE W., JR. 316 N. GRAHAM-HOPEDALE RD. BURLINGTON 27215	RHU /IM 001 A AC 919 227-3621

KERNODLE, HAROLD BARKER, JR. 316 N. GRAHAM-HOPEDALE RD. BURLINGTON 27215	ORS 001 AC 919 227-3621	KILGORE, WM. R., III 502 THE OAKS CHAPEL HILL 27514	IM /GE 032 A R 919 684-3527	KING, WALTER LEE PO BOX 2186 HICKORY 28603	OPH 018 A P AC 704 322-5120
KERNODLE, JOHN ROBERT 2465 EDGEWOOD AVE. BURLINGTON 27215	GYN 001 A P * L/RT 919 584-7075	KILLAM, ALLEN PAGE 4044 NOTTAWAY DURHAM 27707	OBG /NPM 032 A AC 919 684-2876	KINGERY, DAVID REDDING 1350 S. KINGS DR. CHARLOTTE 28207	ORS 060 A AC 704 372-8750
KERNS, THOMAS C., JR. 1110 W. MAIN ST. DURHAM 27701	032 A * AC	KILLIAN, JOHN HUME 276 E. CHESTNUT STREET ASHEVILLE 28801	OPH 011 A P AC 704 255-8978	KINLAW, WM. K., JR. 370 WINN WAY DECATUR, GA 30030	NS 000 A AC 404 292-4612
KERR, COLIN PAUL DEPT. OF FAMILY MEDICINE ECU FAMILY PRACTICE CTR. GREENVILLE 27858	FP /LM 074 A AC 919 551-4611	KILPATRICK, GEORGE R., JR. 1106 MCDOWELL DRIVE GREENSBORO 27408	PUD /IM 041 AC 919 275-7658	KINNAIRD, PAUL MCKEE, JR. 101 NASH MEDICAL ARTS MALL ROCKY MOUNT 27804	PD 064 * AC 919 443-8820
KERR, ROBERT MORTON BOWMAN GRAY, DEPT. OF MED. WINSTON-SALEM 27103	GE /IM 034 AC 919 748-4602	KILPATRICK, WILBUR KIRBY, JR. P. O. BOX 2000 PINEHURST 28374	OBG 063 A AC 919 295-1391	KINNEY, ROBERT BRUCE 1419 DENNBRIAR DR. CONCORD 28025	PTH 032 A R 919 684-3300
KESLER, ARCHIE DEAN, JR. 109-A S. VANCE STREET SANFORD 27330	OBG 053 A AC 919 775-2304	KIM, JEROME HAHN 202-11 PINEGATE CIRCLE CHAPEL HILL 27514	IM /ID 032 A R 919 684-8111	KINNEY, STEPHEN LEIGH 130 LIONHEAD CT. BALTIMORE, MD 21237	130 A R 301 574-1523
KESLER, JAMES L. 1120 MEDICAL CENTER DRIVE WILMINGTON 28401	OPH 065 A * AC 919 763-7316	KIM, KYUNG-HWAE P. O. BOX 190 PLYMOUTH 27962	OBG 007 A AC 919 793-1194	KIRBY, SAMUEL CRAIG 624 QUAKER LN., STE. 302, BLDG. B HIGH POINT 27262	D 040 A AC 919 887-3195
KESSEL, STEVEN R. 1350 S. KINGS DR. CHARLOTTE 28207	IM 060 A AC	KIM, SARAH 1317 MEDICAL DR. STE. #3 FAYETTEVILLE 28304	AI 026 A P * AC 919 323-3890	KIRK, CHARLES DAYTON RALEIGH ANESTHESIA ASSOC. P. O. BOX 18139 RALEIGH 27619	AN 092 A AC 919 872-4800
KESSLER, J. PATRICK 912 SECOND ST. NE HICKORY 28601	ORS 018 A P AC 704 324-2800	KIM, TONG SU 612 THIRD AVENUE, NE HICKORY 28601	P 018 A P AC 704 324-9900	KIRKLAND, JOHN ALVIN 1700 S. TARBORO ST. WILSON 27893	OBG 098 A P AC 919 291-9010
KEY, STEVEN PAUL 300 S. HAWTHORNE RD., BOX 374 WINSTON-SALEM 27103	034 A * S 919 777-0769	KIM, WILLIAM NO CHUN 1317 MEDICAL DR. STE. #3 FAYETTEVILLE 28304	OBG /OM 026 A AC 919 323-3890	KIRKLEY, MARGARET ANNE 518 SIXTH AVENUE, WEST HENDERSONVILLE 28739	FP 045 AC 704 697-7805
KEYES, KENNETH SHOCKLEY 1420 PLAZA DRIVE WINSTON-SALEM 27103	OTO /HNS 034 A AC 919 765-4922	KIM, YOUNG CUE 209 W. MILLBROOK ROAD RALEIGH 27609	IM 092 A AC 919 781-5933	KIRKLEY, SIDNEY EUGENE 518 SIXTH AVENUE, WEST HENDERSONVILLE 28739	IM 045 A AC 704 697-7805
KEYSERLING, THOMAS CHARLES 5034 OLD CLINIC BLDG. 226H UNC, CLINICAL SCHOLARS PROGRAM CHAPEL HILL 27514	IM 032 A R 919 966-1274	KIMBERLY, GEORGE DOUGLAS PO BOX 1047 MOCKSVILLE 27028	FP 034 A AC 704 634-1124	KIRKMAN, PAUL MADISON 740 BRYANT ST. STATESVILLE 28677	CD /IM 049 A AC 704 872-8147
KHAN, MUSHTAQ HUSSAIN ROUTE #3, BOX 23 SUPPLY 28462	GS /GP 010 A P AC 919 754-8115	KIMBRELL, ODELL C., JR. 240 BRYAN BUILDING RALEIGH 27605	IM /END 092 A AC 919 828-6393	KIRKPATRICK, JOHN STEWART 704 W. CORNWALLIS RD. DURHAM 27707	032 A R 919 493-6525
KHATRI, DAVE 549 MERRIMON AVENUE ASHEVILLE 28801	IM /GER 011 AC 704 253-5685	KIMBROUGH, HOUSTON MAGILL, JR. 1025 PROFESSIONAL VILLAGE GREENSBORO 27401	U /GS 041 A P AC 919 272-3962	KIRKSEY, WILLIAM ALBERT 302 S. KING STREET MORGANTON 28655	GP 012 L/RT 704 437-1850
KHAWLY, JOSEPH A. 311 S. LASALLE ST. APT. 44L DURHAM 27705	032 A S 919 286-4491	KINARD, JAMES DONALD 33 WEST HILLS TOWNHOMES GREENVILLE 27834	074 A S 919 852-6384	KIRSKY, MARK 3041 VALENCIA TERRACE CHARLOTTE 28211	TR 060 A AC 704 371-4189
KHOSHNEVIS, PARVIZ PO BOX 1715 ROCKINGHAM 28379	OBG 077 A AC 919 997-3151	KINDSCHUH, PETER MICHAEL BALDWIN WOODS WHITEVILLE 28472	OBG 024 AC 919 642-6848	KISER, JEFFERSON B., JR. 1910 N. CHURCH ST. GREENSBORO 27405	N 041 A AC 919 273-2511
KHURI, RAJA N. ECU SCH. OF MED. DEPT. OF MEDICINE GREENVILLE 27858	NEP 074 A AC 919 551-2545	KING, ANNE BRYSON 342 N. ELM STREET GREENSBORO 27401	PD 041 AC 919 272-9447	KITCHEN, THOMAS WARD, JR. 410 NEW BRIDGE ST. APT. 10-A JACKSONVILLE 28540	FP 067 A P AC 919 347-1788
KICHERER, HARRY JAY 885 ST. ANDREWS DR. PINEHURST 28374	R /NM 063 A * AC 919 295-1706	KING, DANA EDWIN PO BOX 297 GATESVILLE 27938	FP 008 A AC 919 357-1226	KITCHENS, THOMAS RUSSELL 1507 WESTOVER TERR., STE. A GREENSBORO 27408	PS 041 A AC 919 373-0566
KIEFFER, HENRI L.G. 103 DOCTORS BLDG. PO BOX 2959 ASHEVILLE 28802	DR 011 AC 704 254-4617	KING, FRANCIS PARKER 210 WILSON POINT NEW BERN 28562	IM 025 A RT 919 637-5411	KITCHIN, ALVIN PAUL, JR. 1420 E. FRANKLIN ST. MONROE 28110	FP 090 AC 704 289-8724
KIEFFER, HENRI L.G. 103 DOCTORS BLDG. PO BOX 2959 ASHEVILLE 28802	DR 011 AC 704 254-4617	KING, GLENDALL LEE 902 COX ROAD, SUITE A GASTONIA 28054	ORS 036 A AC 704 865-6487	KITCHIN, TINA CIESIEL DEVELOPMENTAL EVAL. CTR. 321 ASHE AVE. RALEIGH 27609	PD 092 AC 919 782-0341
KIFFNEY, GUSTIN THOMAS, JR. 1106 HILLANDALE ROAD DURHAM 27705	OPH 032 A AC 919 286-9663	KING, HARRY LEE PO BOX 2186 HICKORY 28603	OTO /HNS 018 A P AC 704 322-5120	KITTINGER, JOSEPH WILLIAM, III 1202 MEDICAL CENTER DR. WILMINGTON 28401	GE /IM 065 A AC 919 341-3345
KIHLSTROM, BRUCE LEE 1830 HILLANDALE ROAD DURHAM 27705	NS /GS 032 A P AC 919 383-5531	KING, JAMES LEROY 2700 KINGSLEY RD. RALEIGH 27612	AN 092 A AC 919 832-7988	KITTNER, PHILIP JOEL 80 VICTORIA ROAD ASHEVILLE 28801	OBG 011 A AC 704 255-8900
KILBRIDE, KEVIN ANTHONY BOX 114, BROUGHTON HOSPITAL MORGANTON 28655	P /GP 012 A AC 704 433-2476	KING, JOHN TALBERT 404 EDINBURGH DR. BURLINGTON 27215	PD /CD 001 A RT 919 226-5197	KIZEN, PAUL ANDREW 1142 N. ROAD STREET ELIZABETH CITY 27909	OBG 070 A AC 919 335-2061
KILBY-SIMPSON, MARTHA ANN 420 BRIARLEA RD. WINSTON-SALEM 27104	034 A S 919 768-2403	KING, JOSEPH JOHN, JR. 701 ROOSEVELT BLVD., BLDG. 600 MONROE 28110	ORS 090 A P AC 704 289-4595	KLEIN, ALAN 631 LICHFIELD ROAD WINSTON-SALEM 27104	DR 034 A AC 919 748-4316
KILBY, LARRY SHELTON 505 13TH ST. LOFLAND BLDG. NORTH WILKESBORO 28659	FP /GER 097 AC 919 667-3922	KING, LOWELL RESTELL BOX 3831, DUMC DURHAM 27710	U /PD 032 A AC 919 684-6994	KLEIN, DEYSY MARTINEZ 1901 RANDOLPH RD. CHARLOTTE 28207	AN 060 A P AC 704 375-5126
KILEFF, MOYRA ELEANOR 403 CLAYTON ROAD CHAPEL HILL 27514	AN 032 AC 919 470-4000	KING, MICHAEL BRIAN 313 AIRPORT ROAD KINSTON 28501	CD /IM 054 AC 919 522-2578	KLEIN, GEORGE 309 GRANVILLE DR. GREENVILLE 27858	FP /OM 074 A AC 919 551-4611
KILEY, JAMES WILLIAM 3320 EXECUTIVE DR. RALEIGH 27609	OPH 092 A P AC 919 876-2427	KING, MICHAEL EUSTERMAN 3111 MAPLEWOOD AVE. WINSTON-SALEM 27103	ORS 034 AC 919 768-4110	†KLEIN, ROBERT EDWARD 650 COLISEUM DRIVE DECEASED -- 3-20-88 WINSTON-SALEM 27106	BLB 034 A 919 725-4346
KILGORE, LARRY CHARLES 1220 WALTER REED RD. FAYETTEVILLE 28304	FP 026 AC 919 486-9163	KING, RICHARD GLEN 226 WILMOT DR. GASTONIA 28054	FP 036 AC 704 865-2386		

KLEIN, STEVEN RUSSELL 3310 BROOKVIEW HILLS BLVD. SUITE 102 WINSTON-SALEM 27103	IM 034 A AC 919 765-5250	KOMAN, L. ANDREW 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	ORS /HS 034 A AC 919 748-2878	KRAMER, STEPHEN IRWIN 250 CHARLOIS BLVD. WINSTON-SALEM 27103	P 034 A AC 919 768-4730
KLIMAS, JOHN THOMAS 2711 RANDOLPH RD. CHARLOTTE 28207	A /PD 060 AC 704 372-7900	KONEN, JOSEPH C. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	FP 034 A AC 919 748-4051	KRATZ, ROBERT KEVIN 3000 NEW BERN AVE. RALEIGH 27610	EM /IM 092 P AC 919 782-3969
KLOPFENSTEIN, HAROLD S. 300 S. HAWTHORNE RD. DIV. OF CARDIOLOGY WINSTON-SALEM 27103	CD 034 A AC 919 748-2718	KOOKEN, KEITH ROBERT 2915 LYNDHURST AVENUE WINSTON-SALEM 27103	GS 034 A AC 919 765-5221	KRAUS, ERIC MARSHALL 321 W. WENDOVER AVENUE GREENSBORO 27408	OTO /HNS 041 A * AC 919 379-9445
KLOSTERMYER, BROOKS VAN SLYKE 113 CEDAR CREEK DR. ASHEBORO 27203	DR 076 A AC 919 629-0774	KOONEN, JACOB, JR. 909 DOGWOOD LN.. RALEIGH 27607	PH 092 A L/RT 919 834-4355	KRAYBILL, ERNEST NISSLEY CB #7220, UNC, DEPT. OF PED. CHAPEL HILL 27599	PD /NPM 032 AC 919 966-5063
KNEEDLER, WILLIAM HARDING 2305 BYRD ST. RALEIGH 27608	IM 013 A L 704 782-3236	KOON, CRAWFORD B. 2609 N. DUKE ST. DURHAM 27704	DR 032 A P AC 919 471-8411	KREDEL, ERNST KARL WILHELM U.S. NAVAL HOSPITAL BOX 8, MCB CAMP LEJEUNE 28542	OM /PH 067 A AC 919 451-2181
KNIGHT, EDWARD BERT, III 27TH STREET LUMBERTON 28358	PUD /IM 078 A AC 919 738-7551	KOONTZ, JACK ALEXANDER E. I. DUPONT DENEMOURS CO. P. O. BOX 800 KINSTON 28501	OM 074 A AC 919 522-6100	KREGE, JOHN WILSON 1505 WESTOVER TERR. GREENSBORO 27408	ORS 041 A AC 919 275-0927
KNISH, EDWARD J., JR. PO BOX 189 MATTHEWS 28105	IM 060 A AC 704 365-0760	KOONTZ, THOMAS JEFFREY 4250 ALLSTAIR ROAD WINSTON-SALEM 27104	GS 034 A AC 919 765-5221	KREMER, WM. ALFRED 2675 MULBERRY LN. GREENVILLE 27858	A S 919 355-3130
KNOEFEL, ARTHUR EUGENE, JR. PO BOX 875 BLACK MOUNTAIN 28711	FP 011 A L/RT 704 669-7125	KOONTZ, WAYNE CARSON 720 GROVE STREET SALISBURY 28144	PD 080 AC 704 636-5576	KREMERS, SCOTT ALEX 1928 RANDOLPH RD., STE. 206 CHARLOTTE 28207	PUD /CD 060 A P AC 704 375-9932
KNOTT, LAWRENCE H., JR. P. O. BOX 1316 KINSTON 28501	GS /CDS 054 A AC 919 522-1626	KOOPERSMITH, TINA BETH BOX 2764, DUMC DURHAM 27710	032 A S	KRESHON, MARTIN JOHN 1600 E. THIRD STREET CHARLOTTE 28204	OPH 060 A * AC 704 372-3300
KNOTT, RUFUS HENRY, II PO BOX 5007 GREENVILLE 27835	OTO /A 074 A P AC 919 752-5227	KOPELMAN, ARTHUR ECU SCH. OF MED. GREENVILLE 27834	NPM 074 A AC 919 551-4787	KRINER, ARTHUR FREDERICK P. O. BOX 13005 GREENSBORO 27415	DR 041 A AC 919 379-4141
KNOWLES, ROBERT C.Y. 438 S. HAWTHORNE RD. APT. C WINSTON-SALEM 27103	034 A S	KOPP, ELLIOT JOSEPH 3831 MERTON DR. RALEIGH 27609	RHU /AI 092 A AC 919 781-9633	KRISHINGNER, GENE LAVERE ROUTE #8, BOX 81-A HENDERSONVILLE 28739	GS 045 AC 704 693-1729
KNOWLES, SUSAN E. 312 GROVE PARK AVE. #4 WINSTON-SALEM 27103	034 A S 919 721-0489	KORNBLATT, BRIAN JAY 1800 EASTWOOD RD. #267 WILMINGTON 28403	EM 065 AC 919 256-5814	KRISHNAN, C. SETHU 515 THOMPSON ST. STE. C EDEN 27288	U 079 A AC 919 623-8451
KNOX, ANGELINA VINLUAN E. 2304 DELANEY AVENUE WILMINGTON 28401	PD 065 A P AC 919 763-3349	KORNEGAY, ALONZO DIXON P. O. BOX 25007 WINSTON-SALEM 27114	ORS 034 AC 919 760-0436	KROEGER, RICHARD JAMES 1802 OXFORD ROAD KINSTON 28501	GE /IM 054 AC 919 522-0285
KNUDSON, MARK PAUL 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	FP 034 A AC 919 748-2246	KORNEGAY, HERVY BASIL, SR. 238 SMITH CHAPEL ROAD MOUNT OLIVE 28365	FP 096 A P * AC 919 658-4954	KROHN, JOHN RAMON 2305 CANTERWOOD DR. WILMINGTON 28401	PS 065 A AC 919 343-0119
KNUPP, CHARLES LEONARD ECU SCHOOL OF MEDICINE DEPT. OF MEDICINE GREENVILLE 27834	HEM /IM 074 A AC 919 551-2560	KORNEGAY, LEMUEL WEYHER, JR. 1041 NOELL LANE ROCKY MOUNT 27801	GS /GP 064 AC 919 443-0168	KROLL, LARRY LEROY 53 S. FRENCH BROAD ST. ASHEVILLE 28801	ORS 011 A AC 704 252-7180
KNUTSON, THOMAS MARVIN P. O. BOX 10867 GOLDSBORO 27530	EM /FP 096 AC 919 731-6060	KORNEGAY, RAYMOND D. BOX 10976 RALEIGH 27605	CDS /TS 092 A RT	KRONCKE, FREDERICK G., JR. 200 NASH MEDICAL ARTS MALL ROCKY MOUNT 27801	OBG 064 A AC 919 443-5941
KOCAL, THEODORE JOSEPH P. O. BOX 11438 CHARLOTTE 28220	FP 060 A P AC 704 553-9474	KORNEGAY, ROBERT DUMAIS 1041 NOELL LANE ROCKY MOUNT 27801	GS 064 A L 919 443-0168	KRONTZ, DANIEL PAUL 200 DOCTOR'S DR. BOONE 28607	OPH 095 A AC 704 264-0042
KOCONIS, CHRIST ALEXATOS 1350 KINGS DRIVE CHARLOTTE 28207	OTO /HNS 060 A AC 704 372-8750	KOSERUBA, GEORGE MICHAEL 1628 DOCTOR'S CIRCLE WILMINGTON 28401	PD 065 A P L 919 763-2476	KROOVAND, ROY LAWRENCE 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	U /PD 034 A AC 919 748-4131
KODACK, ALBERT 6 STONEY RIDGE ASHEVILLE 28804	FP /GYN 011 A L 704 252-1131	KOSFELD, SCOTT LEE 420 LOCKLAND AVE. WINSTON-SALEM 27103	034 A S 919 722-9025	KRUEGER, ALAN LEE CALEDONIA ROAD P. O. BOX 5534 ASHEVILLE 28813	P 011 A AC 704 253-3681
KODROFF, MICHAEL BARRY ECU DEPT. OF RADIOLOGY GREENVILLE 27834	PDR /NM 074 A AC 919 551-4972	KOSSOVE, ALBERT ANTHONY 1530 ELIZABETH AVENUE CHARLOTTE 28204	IM /NTR 060 A L 704 377-5984	KRUM, RONALD EUGENE P. O. BOX 5420 FLETCHER 28732	FP 045 A AC 704 687-1416
KOEHLER, LISA ANN 1521 E. FRANKLIN ST. B-211 FRANKLIN WOODS CHAPEL HILL 27514	032 A S 919 933-7515	KOSSOVE, IRENE LEVY 1530 ELIZABETH AVENUE CHARLOTTE 28204	IM /GYN 060 A L 704 377-5984	KRUSE, RICHARD STEVEN PO BOX 1795 SOUTHERN PINES 28387	DR /NM 063 A AC 919 692-9667
KOFINAS, ALEXANDER D. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	034 AC 919 748-4291	KOUFMAN, JAMES ALAN BOWMAN GRAY, DIV. MTO WINSTON-SALEM 27103	LAR /OTO 034 A AC 919 748-4161	KRYSTAL, ANDREW DARRELL DUKE UNIV. MEDICAL CENTER DURHAM 27710	032 A R 919 684-8111
KOGUT, DAVID GENE 1835 DAVIE AVE. STATESVILLE 28677	GE /IM 049 AC 704 872-2768	KOURI, DAVID LAWRENCE 1935 W. FIRST ST. WINSTON-SALEM 27104	034 A S 919 723-7169	KU, ANDREW 311 S. LASALLE ST. APT. 36-G DURHAM 27705	DR 032 A * R 919 681-2711
KOHLI, ASHA KIRAN 505 PARKWOOD LANE GOLDSBORO 27530	CHP /PD 096 A AC 919 731-3317	KOURI, EDWARD WILLIAMS 3535 RANDOLPH RD., STE. 102 CHARLOTTE 28211	R 060 A AC 704 365-0343	KUBITSCHKE, KENNETH R. 445 BILTMORE CTR., STE. 407 ASHEVILLE 28801	IM 011 A AC 704 258-0397
KOHUT, ROBERT IRWIN 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	OTO /HNS 034 A * AC 919 748-4161	KOURI, WILLIAM HERBERT 6900 FARMINGDALE DR. CHARLOTTE 28212	FP 060 A AC 704 536-1362	KUK, DENNIS STANLEY 1704 S. TARBORO STREET WILSON 27893	OBG /GYN 098 A AC 919 291-7001
KOHUT, WALTER DENNIS 1511 WESTOVER TERRACE GREENSBORO 27408	IM /END 041 A AC 919 373-1054	KOVACICH, JOHN JOSEPH 303 HOSPITAL RD SPARTA 28675	IM 005 AC 919 372-2481	KULP, KENNETH ROBERT 1900 S. HAWTHORNE RD. STE. 358A WINSTON-SALEM 27103	D 034 * AC 919 768-4382
KOKIKO, GEORGE VICTOR WAYNE COUNTY HOSPITAL CALLER BOX 8001 GOLDSBORO 27530	PTH /CLP 096 AC 919 735-1530	KRABILL, LAWRENCE DAVID 1700 S. TARBORO ST. WILSON 27893	IM /RHU 098 A AC 919 291-1300	KUMAR, KAMLESH 108 N. ENGLEWOOD DR. ROCKY MOUNT 27801	PUD /IM 064 AC 919 443-1126
		KRAMER, NORMAN JOHN 3535 RANDOLPH ROAD, STE. 300 CHARLOTTE 28211	IM /END 060 A AC 704 365-0760	KUMAR, SATISH KUMAR 108 N. ENGLEWOOD DR. ROCKY MOUNT 27801	PUD /IM 064 AC 919 443-1126

KUNKEL, COOPER DAVE, III 802 MCCARTHY BLVD. NEW BERN 28560	OPH 025 A AC 919 633-4183	LAMBERTSEN, CHRISTIAN J., JR. PO BOX 12833 22 PARK PLAZA	FP 032 AC	LAPRADE, BENNETT WATTERSON 123 DOGWOOD LANE KINSTON 28501	OBG 054 AC 919 527-7605
KUNSTLING, TED RICHARD 3320 WAKE FOREST RD. RALEIGH 27609	PUD /IM 092 A AC 919 872-4850	RESEARCH TRIANGLE PK 27709 LAMBETH, WILLIAM ARNOLD, III 1112 DRESSER COURT RALEIGH 27609	PS /GS 092 A AC 919 872-2616	LARGE, HIRAM LEE, JR. 8919 PARK RD. DC-4 SOUTHMINSTER CHARLOTTE 28210	PTH 060 A L/RT 704 542-9830
KURAD, JOSEPH WARD 1202 N. CENTER STREET HICKORY 28601	U 018 A AC 704 322-4340	LAMBETH, WILLIAM RICK 2609 N. DUKE STREET, STE. 204 DURHAM 27704	OBG 032 A AC 919 471-8402	LARKIN, ERNEST WADDILL, III ECU SCH. OF MED. BRODY 1F79 GREENVILLE 27834	PTH 074 A AC 919 551-4495
KURTS, YURY PO BOX 700 VALDESE GEN. HOSPITAL VALDESE 28690	AN 012 AC 704 874-2251	LAMM, KENNETH RAND 105 FIDELITY ST. A-4 CARRBORO 27510	032 A S	LARKIN, ERNEST WADDILL, JR. 211 N. MARKET ST. WASHINGTON 27889	OPH 007 A AC 919 946-2171
KURTZ, KEVIN JOHN PO BOX 396 JEFFERSON 28640	074 A S 919 551-1653	LAMM, LEROY BARDEN P. O. BOX 427 ROCKWELL 28138	P 080 A AC 704 279-7034	LARKIN, GLENN MICHAEL 4000-E PROVIDENCE RD. CHARLOTTE 28211	FOP 060 AC 704 364-4718
KURZMANN, RICHARD WALTER 2800 BLUE RIDGE BLVD. STE. 206 RALEIGH 27607	OBG 092 AC 919 781-7450	LAMPLEY, CHARLES GORDON, III 110 W. GROVER ST. SHELBY 28150	OBG 023 A AC 704 487-5258	LAROCHE, LAURENT P. 3303 HENDERSON ROAD GREENSBORO 27410	OM /GPM 041 A AC 919 852-3770
KUSHNICK, THEODORE ECU SCHOOL OF MEDICINE GREENVILLE 27834	PD 074 A AC 919 551-2529	LAND, MICHAEL ROY 150 PROVIDENCE ROAD CHARLOTTE 28207	OBG 060 A AC 704 377-0461	LARSEN, ERIC P. O. BOX 2000 PINEHURST 28374	GS /CDS 063 A AC 919 295-1762
KUSUMI, YOSHITARO 1004 DRESSER COURT, STE. 106 RALEIGH 27609	P /PYM 092 A AC 919 876-5530	LANDIS, EDWARD EVERETT, JR. 1350 KINGS DRIVE CHARLOTTE 28207	PUD /IM 060 A AC 704 372-8750	LARSEN, LARS CHRISTIAN 1601 MWEN DRIVE FAYETTEVILLE 28304	FP 026 A AC 919 323-1152
KUTCHER, MICHAEL A. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	CD /IM 034 A AC 919 748-2960	LANDON, HENRY CLAYTON, III 501 TENTH STREET NORTH WILKESBORO 28659	FP /IM 097 A AC 919 838-5761	LARSON, JOHN DAVID, JR. ONSLow MEM. HOSP. DEPT. EMERG. MED. JACKSONVILLE 28540	EM/OBG 067 A AC 919 755-8500
KUTNER, WILLIAM A., JR. 417 E. STATESVILLE AVE. MOORESVILLE 28115	ORS 049 A P AC 704 664-1060	LANE, CHARLES JENKINS 2905-H CEDAR CREEK RD. GREENVILLE 27834	074 A S 919 758-2884	LARSON, KIP LEROY 805 MERITA ST. MOUNT AIRY 27030	FP 086 A AC 919 789-0454
KUZMA, GARY ROBERT 409 E. PARKWAY DR. GREENSBORO 27401	HS /ORS 041 A AC 919 378-0811	LANE, JERALD PAUL 1900 RANDOLPH RD., STE. 918 CHARLOTTE 28207	P 060 A AC 704 333-7722	LARSON, RICHARD MARTIN 10 DOCTORS PARK STANTONSBURG ROAD GREENVILLE 27834	GS /CDS 074 A AC 919 758-1747
KWIATKOWSKI, PETER FRANK 408-B PARKWAY DR. GREENSBORO 27401	IM 041 A AC 919 275-9804	LANE, JOHN WESTON 120 CONNER DR., STE. 101 PO BOX 3317 CHAPEL HILL 27514	OBG 032 AC 919 942-8571	LASATER, JOHN DAVID 800 HOSPITAL DR., STE. 4 NEW BERN 28560	U 025 A P AC 919 633-2712
KYLSTRA, JOHANNES ARNOLD BOX 2958, DUMC DURHAM 27710	PUD /A 032 AC 919 684-3069	LANE, ROBERT EARL 118 W. MARKET ST. HERTFORD 27944	FP 021 A AC 919 426-5711	LASHLEY, CURTIS R. JEFFERSON-PILOT LIFE INS.CO. PO BOX 21008 GREENSBORO 27420	OM 041 A AC 919 378-2193
LACKEY, ROBERT STEVENSON 2118 PINWOOD CIRCLE CHARLOTTE 28211	R /FP 060 A * AC 704 365-0343	LANE, TIMOTHY WALTER 1200 N. ELM ST. GREENSBORO 27401	ID /IM 041 AC 919 379-4062	LASKOWITZ, DANIEL 2A CARSON CIRCLE DURHAM 27705	032 A S 919 383-8367
LACROIX, CAROL ANN 320 YADKIN STREET ALBEMARLE 28001	FP 084 A AC 704 982-9144	LANEY, ROBERT GAFFNEY, III 809 N. LAFAYETTE ST. SHELBY 28150	GS 023 A AC 704 487-8591	LASSITER, KENNETH ROBERT LEE 1900 RANDOLPH RD., SUITE 502 CHARLOTTE 28207	NS 060 A AC 704 372-8860
LADD, ROBERT JULIUS 3323 WINDBLUFF DR. MATTHEWS 28105	GS /EM 060 A AC 704 542-8271	LANG, DELANO ROOSEVELT, JR. ROANOKE CHOWAN HOSPITAL AHOSKIE 27910	FP 008 AC 919 332-3560	LASSITER, RICHARD EDWARD 120 CONNER DR., STE. 101 PO BOX 3317 CHAPEL HILL 27514	OBG 032 AC 919 942-8571
LADWIG, HAROLD ALLEN 1600 CANAL DRIVE WILSON 27893	N 098 A AC 919 237-5877	LANG, JOHN ALBERT, III 615 ST. MARY'S STREET RALEIGH 27605	IM /DIA 092 AC 919 828-7773	LASSITER, TALLY E., JR. 2100 N. PLEASANTBURG DR. GREENVILLE, SC 29609	ORS /EM 032 A R
LADWIG, STEPHEN HAROLD NASH GENERAL HOSPITAL ROCKY MOUNT 27801	DR /NM 064 * AC 919 443-8083	LANG, STEPHEN NORMAN BOX 2919, DUMC DURHAM 27710	ORS 032 A * AC 919 684-3949	LASSITER, WILL HARDEE, JR. ROUTE #3, BOX 90 FOUR OAKS 27524	GP 051 A L/RT 919 934-8783
LAFFERTY, JOHN MORRISON PO BOX 597 RUTHERFORD COLLEGE 28671	OBG 012 A AC 704 874-2251	LANGDELL, ROBERT DANA UNC SCH. OF MED., 228-H CHAPEL HILL 27514	PTH /BLB 032 A AC 919 966-4333	LASSITER, WILLIAM EDMUND UNC, DEPT. OF MED. CB #7005 CHAPEL HILL 27599	032 A AC 919 966-4275
LAHSE, CHARLES IRVING 902-C COX ROAD GASTONIA 28052	PD 036 A RT 704 867-5356	LANGLEY, CHARLES PITMAN, III 808 SCHENCK STREET SHELBY 28150	IM 023 A AC 919 482-1482	LASTER, ANDREW JAY 125 BALDWIN AVE CHARLOTTE 28204	NEP /IM 032 AC 919 966-4275
LAI, CHI-KWONG P. O. BOX 1460 STATESVILLE 28677	CD /IM 049 AC 704 873-0281	LANGLEY, JOHN R. 1317 MEDICAL DR. STE. #2 FAYETTEVILLE 28304	GS /VS 026 A AC	LASTER, DAN WAYNE 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	RHU /IM 060 A AC 704 338-6300
LAIRD, WILLIAM KENNETH 1900 RANDOLPH RD. STE. 300 CHARLOTTE 28207	PS 060 A P AC 704 332-4161	LANGLEY, JOHN THOMAS KINSTON CLINIC, NORTH, STE. F KINSTON 28501	ORS 054 A AC 919 522-2020	LATHAM-SADLER, BRENDA 119 N. FLORENCE ST. MAXTON 28364	034 A * S 919 844-5253
LAL, MADAN 925 SELMA RD. PO BOX 239 SMITHFIELD 27577	OPH 051 AC 919 934-3108	LANGSTON, BERNARD LEROY, III P. O. BOX 1934 SHALLOTTE 28459	GP 010 A P * AC 919 754-8731	LATOURETTE, KENNETH ABRAM P. O. BOX 177 FLAT ROCK 28731	PTH 045 A L/RT 704 692-1641
LALONDE, JOHN CHARLES 104 E. NORTHWOOD ST. GREENSBORO 27401	FP 041 P AC 919 275-6445	LANIER, VERNE CLIFTON, JR. 300 CRUTCHFIELD ST. DURHAM 27704	PS /GS 032 A P AC 919 471-3406	LATZ, JOHN E., JR. 1322 MADISON AVE. WINSTON-SALEM 27103	034 A * S 919 723-5305
LAM, DOUGLAS EDWARD 105 PERRY DRIVE SOUTHERN PINES 28387	FP 063 * AC 919 692-4802	LANINGHAM, JAMES E. T. P. O. BOX 3000 MOORE MEM. HOSP. PINEHURST 28374	PTH /BLB 063 AP AC 919 295-7978	LATZ, TRACY J. T. 1322 MADISON AVE. WINSTON-SALEM 27103	034 A * S 919 723-5305
LAMANNA, ROGER WEED 1700 TARBORO ST. WILSON 27893	NEP /IM 098 AC 919 291-1300	LANNIN, DONALD ROWE ECU, DEPT. OF SURG. GREENVILLE 27858	GS 074 A AC 919 551-5418	LAUER, THOMAS EUGENE 624 QUAKER LN., STE. A-111 HIGH POINT 27262	P /ALD 040 AC 919 889-4122
LAMAY, EDWARD NORMAN 448 HAWTHORNE RD. WINSTON-SALEM 27103	034 A S 919 722-5371	LANNING, CHARLES FREDRIC 14208 ALLISON DR. RALEIGH 27614	AN 092 A AC 919 832-7988	LAUPUS, WILLIAM EDWARD ECU SCH. OF MED. DEAN'S OFF. GREENVILLE 27834	IM /PD 092 A * AC 919 878-0900
LAMBERT, JAMES ROYALL 238 SMITH CHAPEL RD. MOUNT OLIVE 28365	FP 096 A AC 919 658-4954	LAPP, CHARLES WARREN 3400 EXECUTIVE DRIVE RALEIGH 27609	IM /PD 092 A * AC 919 878-0900		

LAURENS, JOHN 445 BILTMORE CENTER, STE. 303 ASHEVILLE 28801	CRS 011 A AC 704 258-8181	LEBLANG, STEVEN SETH 4131 N.W. 28TH ST., STE. 2 MIAMI, FL 32605	FP 033 AC	LEEPER, WILLIAM EDWARD, JR. 2525 PINWOOD RD. GASTONIA 28054	IM 036 A RT
LAUZAU, FRANK JUSTIN 518 S. VAN BUREN RD., SUITE 7 EDEN 27288	IM 079 AC 919 623-4304	LECROY, CHARLES M., JR. 4600 UNIVERSITY DR., APT. 602 DURHAM 27707	032 A S 919 490-5345	LEET, DOUGLAS CHARLES 3320 WAKE FOREST RD., STE. 100 RALEIGH 27609	U 092 AC 919 790-0036
LAVENDER, DICK REDMOND 201 E. WENDOVER AVENUE GREENSBORO 27401	ORS 041 A AC 919 275-6318	LEDBETTER, JOHN WINSLOW 7 MCDOWELL ST. ASHEVILLE 28801	N 011 A AC 704 255-7776	LEFKOWITZ, DAVID, III 2711 RANDOLPH RD. STE. 400 CHARLOTTE 28207	PDA /PD 060 AC 704 372-7900
LAVIGNE, MARK KINO DOCTOR'S PARK APTS. C-5 GREENVILLE 27834	074 A S 919 758-1822	LEE, ALLEN HENRY P. O. BOX 8 SELMA 27576	GP 051 A P AC 919 965-3251	LEFKOWITZ, JERRY B. 207-10 MELVILLE LOOP CHAPEL HILL 27514	032 A R 919 966-3311
LAWING, DANIEL PHILMON 212 E. WATER STREET LINCOLNTON 28092	GP 055 AC 704 735-5888	LEE, BENJAMIN HOWARD 2050 CRAIG ST. APT. #8 WINSTON-SALEM 27103	034 A S 919 454-3742	LEFLER, CHARLES WATER OAKES SUITES BREVARD 28782	IM 088 A AC 704 884-4134
LAWLER, FRANK H. 4N-51 BRODY, ECU SCH. OF MED GREENVILLE 27835	FP 074 A AC 919 551-2613	LEE, CHOO HYUNG BROUGHTON HOSP. MORGANTON 28655	IM /HEM 012 A AC 704 433-2501	LEFLER, RUFUS STAMEY, III 214 E. NORTH STREET ALBEMARLE 28001	IM /CD 084 A AC 704 982-1136
LAWLESS, MICHAEL RHODES DEPT. OF PEDIATRICS BOWMAN GRAY SCH. OF MED. WINSTON-SALEM 27103	PD 034 AC 919 727-8108	LEE, DAE HEE 2142 N. CHURCH STREET BURLINGTON 27215	FP 001 P AC 919 227-7456	LEFLER, WADE HAMPTON, JR. P. O. BOX 2588 HICKORY 28601	OPH 018 A AC 704 322-2050
LAWRENCE, BENJAMIN JONES, JR. 813 ROCKFORD ST. PO BOX 72 MOUNT AIRY 27030	GS /PS 086 A RT 919 786-7871	LEE, DAVID WAYNE 101 CLINIC DR TARBORO 27886	OBG 033 AC 919 823-2105	LEGRAND, GORDON BUCK 3000 NEW BERN AVENUE RALEIGH 27610	PTH 092 A AC 919 755-8260
LAWRENCE, DALE N. CENTERS FOR DISEASE CONTROL BLDG. 1, ROOM 1407 DO2 ATLANTA, GA 30333	IM /ID 000 A AC 404 329-3696	LEE, EDWARD I. 702 N. COLUMBIA ST. CHAPEL HILL 27514	032 A S 919 942-8828	LEHAN, LEIGH STEELE 2800 BLUE RIDGE RD., STE. 501 RALEIGH 27607	PD 092 A AC 919 781-7490
LAWRENCE, HAL CLIFFORD, III 93 VICTORIA ROAD ASHEVILLE 28801	OBG 011 A P AC 704 253-4821	LEE, ESTHER JOO 705-B W. MAIN ST. CARRBORO 27510	032 A S 919 967-7722	LEIBY, GEORGE MARTIN 5201 ROMA AVE., NE ALBUQUERQUE, NM 87108	GPM 084 A L/RT 505 898-1384
LAWRENCE, JOHN CHARLES P. O. BOX 1068 LUMBERTON 28358	GS 078 AC 919 738-8571	LEE, FRANCIS BROWN 501 S. CHURCH ST. PO BOX 457 MONROE 28110	GS 090 A L/RT 704 283-4324	LEIDY, LUANN 4322 BEECHNUT LANE DURHAM 27707	P /CHP 032 A R 919 489-1491
LAWRENCE, JOHN ELMORE, JR. 554 CHUNNS COVE ROAD ASHEVILLE 28805	CD /IM 011 A AC 704 254-8054	LEE, HENRY NEILL, JR. 395 WEST 27TH STREET LUMBERTON 28358	IM 078 A AC 919 739-7551	LEIGHT, GEORGE STAPLES, JR. 2 SURREY LANE DURHAM 27707	GS 032 A AC 919 684-6849
LAWRENCE, PATRICIA ANN 1012 S. KINGS DR. STE. 624 CHARLOTTE 28283	GYN 060 A AC 704 372-6201	LEE, IL SUNG P.O. BOX 370 ENKA 28728	IM 011 AC 704 667-5298	LEINBACH, LAURENCE B. BOWMAN GRAY SCH. OF MED. WINSTON-SALEM 27103	DR 034 A AC 919 748-3416
LAWRENCE, ROBERT L. 321 W. WENDOVER AVENUE GREENSBORO 27408	OTO /HNS 041 A P AC 919 379-9445	LEE, J. GARY 321 W. WENDOVER AVE. GREENSBORO 27408	OTO/HNS 041 A AC 919 379-9445	LELIEVER, WM. CHARLES 1911 K. M. WICKER DR. SANFORD 27330	OTO /OT 053 A AC 919 774-6829
LAWRENCE, ROBERT S. 313 PINE STREET RUTHERFORDTON 28139	FP 081 AC 704 286-2302	LEE, JAMES MOBLEY 1317 N. ELM ST., STE. 1 GREENSBORO 27401	TS 041 A AC 919 373-8245	LEMASTER, PIERRE CLIFFORD 1291 OLIVER STREET FAYETTEVILLE 28304	PD 026 AC 919 483-2646
LAWSON, JAMES DOUGLAS 1317 N. ELM ST., STE. 1 GREENSBORO 27401	VS /GS 041 A AC 919 373-8245	LEE, JOSEPH DAVID P. O. BOX 954 LINCOLNTON 28092	R 055 AC 704 735-6654	LEMAY, MUNDY, REGINA GAIL 825 FAIRFAX AVE. NORFOLK, VA 23507	IM 000 A AC 804 446-8910
LAYTON, DENNIS SHELTON 7110 LAWYERS ROAD CHARLOTTE 28212	IM 060 A AC 704 568-6500	LEE, JOSEPH, III 711 W. MOUNTAIN STREET KINGS MOUNTAIN 28086	FP 023 AC 704 739-5456	LENAHAN, C. RODNEY PO BOX 2000 PINEHURST 28374	U 063 A AC 919 295-0250
LE, TIN TRONG 514 MILL RD. GOLDSBORO 27530	GP 096 AC 919 731-3550	LEE, K. STUART 2109 N. STRAFORD DR. CHANDLER, AZ 85224	NS 034 A R 919 944-2351	LENAHAN, DEBORAH SMITHERMAN 2 HOSPITAL DR. LEXINGTON 27292	OPH 029 A P AC 704 243-2436
LEACH, WILLIAM B. 306 WIDGEON DR. HAMPSTEAD 28443	PTH 065 A RT 919 270-4772	LEE, KYU YONG MCCAIN HOSPITAL MCCAIN 28361	GP 063 AC 919 944-2351	LENDLE, DONALD LAWRENCE 147 COLUMBINE DR. WINSTON-SALEM 27106	FP 034 AC 919 722-9535
LEAK, FRANK WALTER CLINTON MEDICAL CLINIC CLINTON 28328	FP 082 P AC 919 592-6011	LEE, KYUNG KUN P. O. BOX 2203 MORGANTON 28655	GS 012 AC 704 433-2463	LENNON, BARBARA M. 44 COLINDALE COURT GREENVILLE 27858	074 A S 919 756-2646
LEAKE, ARTHUR ELDRIDGE, JR. 54 WESTALL AVENUE ASHEVILLE 28804	AN 011 A AC 704 255-3743	LEE, MARTHA HOPE 2636 MULBERRY LN. GREENVILLE 27858	074 S 919 578-3190	LENNON, DAVID STANCIL 2221 HOGAN CT. MATTHEWS 28105	AN 060 A P AC 704 371-4049
LEATHERMAN, HUGH K., JR. 3901 COMPUTER DR. RALEIGH 27609	U 092 AC 919 781-5104	LEE, SAE SOON 350 E. PARKER RD. MORGANTON 28655	GS /PDS 012 A P AC 704 437-7395	LENNON, HERSEL C. 911 SUNSET DR. GREENSBORO 27408	PTH 041 L/RT 919 272-5038
LEB, STEPHEN MARC 3801 COMPUTER DR. #207 RALEIGH 27609	GS 092 A AC 919 787-8393	LEE, SOONG HYUN 106 NASH MEDICAL ARTS MALL ROCKY MOUNT 27804	P 064 AC 919 443-8002	LENNON, YATES ALTON 44 COLINDALE COURT GREENVILLE 27834	074 A S 919 648-4158
LEBAUER, EDMUND JOSEPH 721 GREEN VALLEY RD. GREENSBORO 27408	CD /IM 041 A AC 919 378-0774	LEE, TERENCE JOHN 445 BILTMORE CENTER, STE. 404 ASHEVILLE 28801	ID /IM 011 A P AC 704 258-9635	LEONARD, BAXTER COLUMBUS J. 510-A TURNER ST. THOMASVILLE 27360	FP 026 A R 919 475-9171
LEBAUER, EUGENE SHANER 721 GREEN VALLEY RD. GREENSBORO 27408	IM/A 041	LEE, THOMAS CHEN-YAO 703 TILGHMAN DRIVE P. O. BOX 1501 DUNN 28334	GS 043 AC 919 892-1631	LEONARD, DONALD DEAN 1200 N. ELM STREET GREENSBORO 27401	PTH 041 A AC 919 379-4074
LEBAUER, MAURICE LEON 2023 ST. ANDREWS RD. GREENSBORO 27408	GS 041 A L/RT 919 273-3258	LEE, WILLIAM DAVID 3100 BLUE RIDGE RD., STE. 302 RALEIGH 27612	FP 092 AC 919 782-0146	LEONARD, JACOB CALVIN, JR. 119 W. SECOND AVE. LEXINGTON 27292	OTO /OPH 029 A L/RT 704 246-5295
LEBAUER, SAMUEL M. 721 GREEN VALLEY RD. GREENSBORO 27408	GE /IM 041 AC 919 378-0774	LEE, YEN CHICH PO BOX 33549 CHARLOTTE 28233	AN 060 A P AC 704 371-4049	LEONARD, JOHN RICHARD, III 125 MOYE BOULEVARD GREENVILLE 27834	NS 074 A AC 919 752-5156
LEBAUER, SIDNEY FERRING 721 GREEN VALLEY RD. GREENSBORO 27408	IM 041 A L 919 378-0774	LEE, YI-SHENG 2920 ERWIN RD. DURHAM 27705	032 R 919 684-8111	LEONARD, MARILYN JEAN #18 GLENWOOD APTS. GREENVILLE 27858	074 A S 919 758-0713
				LEONARD, RALPH BEAUMONT 300 S. HAWTHORNE ROAD WINSTON-SALEM 27103	EM 034 A AC 919 748-4626

LEONARD, WALTER EVAN 130 27TH STREET, S.W. HICKORY 28601	FP 018 AC 704 322-1153	LEWIS, CLIFFORD WHITFIELD 322 WOODROW AVENUE HIGH POINT 27262	OBG /OBS 040 A L 919 882-2830	LINDERMAN, JAMES ALAN 167-L S. TRADE ST. PO BOX 2564	PD 060 AC 704 847-0572
LEONE, CHERYL LEVINE 1740 MONTCLAIR AVENUE GASTONIA 28054	PTH 036 AC 704 866-2851	LEWIS, DANIEL MICHAEL 3535 RANDOLPH RD. STE. 101-W CHARLOTTE 28211	D 060 A AC 704 364-6110	MATTHEWS 28106 LINDLEY, JOSEPH J. RT. #1, BOX 230-C	GS 001 L/RT 919 227-3621
LEONE, MICHAEL RALPH 1317 N. ELM ST., STE. 5 PO BOX 10037	GS 041 A P * AC 919 274-8444	LEWIS, DOCKERY DURHAM, JR. P. O. BOX 1460 STATESVILLE 28677	PD 049 P AC 704 878-2011	GRAHAM 27253 LINDOW, LARRY GENE 6301 MORRISON BLVD.	IM /GP 060 A AC 704 365-3900
GREENSBORO 27401 LEONE, PHILIP GEORGE 1740 MONTCLAIR AVENUE GASTONIA 28054	PTH 036 A AC 704 866-2851	LEWIS, DONALD R., JR. 150-7 LONDON CT. FAYETTEVILLE 28311	GP 026 AC 919 394-2471	CHARLOTTE 28211 LINDQUIST, RICHARD KURT 2203 S. STERLING ST., STE. 132	OBG 012 AC 704 437-6122
LEONHARDT, GARY GENE RT. #13, BOX 434 GREENVILLE 27858	074 A S 919 756-0150	LEWIS, JEFFERY DUN BOX 514, BOWMAN GRAY WINSTON-SALEM 27103	034 A S 919 551-4629	MORGANTON 28655 LINEBERGER, THOMAS H. 1901-C N. SANDHILL BLVD.	IM 063 A P AC 919 692-4011
LEPORE, RALPH 4801 FOREST OAKS DR. GREENSBORO 27406	GP 041 A AC 919 674-7117	LEWIS, LARRY STEWART DEPT. OF SURGERY ECU SCHOOL OF MEDICINE GREENVILLE 27834	VS 074 A AC 919 551-4629	ABERDEEN 28315 LINFORS, EUGENE WILLIAM 306 S. GREGSON ST.	IM 032 A AC 919 682-5561
LERNER, PAUL 1 DOCTOR'S PARK ASHEVILLE 28801	U 011 AC 704 253-5314	LEWIS, MICHAEL R. PO BOX 629 HUDSON 28638	FP 018 AC 704 728-4875	DURHAM 27701 LINK, ARTHUR STANLEY, JR. 3310 BROOKVIEW HILLS, #204	ID /IM 034 A AC 919 765-8420
LESENE, HENRY ROBY N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514	GE /IM 032 AC 919 966-2511	LEWIS, NEWMAN MAXVILLE P. O. BOX 1460 STATESVILLE 28677	IM 049 AC 704 878-2011	WINSTON-SALEM 27103 LINK, KERRY MICHAEL 300 S. HAWTHORNE RD., BOX 265	R 034 A AC 919 748-4525
LESHER, DONALD TICE 909 N. WASHINGTON STREET RUTHERFORDTON 28139	DR 081 A AC 704 286-5233	LEWKOW, LAWRENCE M. ECU SCHOOL OF MEDICINE BRODY HALL 3E-102 GREENVILLE 27834	HEM 074 A AC 919 551-2560	WINSTON-SALEM 27104 LINK, MELVIN ROBERT 3323 STANWYCK COURT	OTO 060 A L/RT 704 364-2111
LESHIN, BARRY 300 S. HAWTHORNE RD. DEPT. OF DERMATOLOGY WINSTON-SALEM 27103	D 034 A AC 919 748-2768	LHOTSKY-BRODIE, DORA 721 GREEN VALLEY RD. GREENSBORO 27408	GE /IM 041 AC 919 378-0774	CHARLOTTE 28211 LINS, MARK DAVID 1641-F NORTHWEST BLVD.	034 A S 919 725-8423
LESLIE, JOHN BRUCE BOX 3094, DUMC DURHAM 27710	AN 032 A AC 919 684-6931	LIAO, FU CHE RT. #6, CYPRESS DR. LAURINBURG 28352	OTO 083 A AC 919 276-8391	WINSTON-SALEM 27104 LINTON, EUGENE BELL 112 BENT ST., BOX 742	OBG 034 A AC 919 765-9350
LESSER, PHILIP STEVEN 2608 E. SEVENTH ST. CHARLOTTE 28204	CHN /N 060 AC 704 377-9323	LICHSTEIN, PETER RIBACK ECU DEPT. OF MEDICINE GREENVILLE 27834	IM 074 A AC 919 551-4633	BERMUDA RUN 27006 LINZ, WALTER JOSEPH 1944 HINSHAW AVE. APT. 3A	034 A S 919 773-1566
LESTER, ROBERT HILTON 902 COX ROAD, SUITE F GASTONIA 28054	OBG 036 A AC 704 867-6386	LIDE, THOMAS NORWOOD 10 SOVEREIGN DRIVE HILTON HEAD ISLAND, SC 29928	PTH 034 A L/RT 803 681-6815	WINSTON-SALEM 27104 LIPHAM, HARRY GLENN 102 HOSPITAL DRIVE	PUD /IM 044 AC 704 452-0331
LETTIERI, SALVATORE CARMINE 2011 VIKING DR., N.W., APT. 17 ROCHESTER, MN 55901	034 A S 919 966-2511	LIES, STEPHEN CRAIG 2400 WAYNE MEM.DR., STE.K GOLDSBORO 27530	OBG 096 A P AC 919 734-3344	CLYDE 28721 LIPOVAN, MIRCEA BREITZ 3707-C RESTON CT.	R /DR 065 AC 919 395-8180
LEVI, GEORGE ALBERT 1629 OWEN DRIVE FAYETTEVILLE 28304	OPH 026 * L 919 484-6144	LIESEGANG, GLEN R. PO BOX 8 BLOWING ROCK 28605	FP 095 A AC 704 295-3116	WILMINGTON 28401 LIPSON, ERIC JAMES 7713 N. KENDALL DR., #A108	034 A S 919 395-8180
LEVIN, LAWRENCE SCOTT 4326 TALCOTT DR. DURHAM 27705	032 A R 919 684-8111	LIEU, CHONG HIEUN 146 E. MCLELLAND AVE. MOORESVILLE 28115	PD /GP 049 AC 704 663-1155	MIAMI, FL 33156 LIPTON, BARBARA STEINER 2004 N. LAKESHORE DRIVE	P 032 AC 919 942-2453
LEVIN, STEPHEN WARREN 116-A S. CHERRY STREET KERNERSVILLE 27284	PD 034 AC 919 996-3883	LIGON, HAROLD BELTON MEDICAL CENTER BUILDING 86 VICTORIA ROAD ASHEVILLE 28801	FP 011 AC 704 252-1585	CHAPEL HILL 27514 LIPTON, MORRIS ABRAHAM 2004 N. LAKESHORE DR.	P /IM 032 L 919 966-1456
LEVIN, STUART JEFFREY 441 CAHABA, FOREST COVE BIRMINGHAM, AL 35292	032 A S 919 966-2511	LILES, GEORGE WELCH 539 JACKSON PARK RD. KANNAPOLIS 28081	GS 013 AC 704 932-4169	CHAPEL HILL 27516 LITCHEFIELD, JAY ROBERT 212 MCCAULEY ST. APT. 1-B	032 A S 919 968-1909
LEVINE, MAX PHILLIP 180 N. PARKWOOD MED. CTR. ELKIN 28621	GS /CDS 086 AC 919 835-7600	LILES, RICHARD VERNON, JR. 320 YADKIN STREET ALBEMARLE 28001	FP 084 A P * AC 704 982-9144	CHAPEL HILL 27516 LITTLE, ALFRED BOYD 1016 N. ELM ST.	GER /GPM 032 A AC 919 684-2248
LEVINE, RONALD H. 2404 WHITE OAK ROAD RALEIGH 27609	PH /PD 092 A * AC 919 782-0838	LILLARD, PATRICK L. 333 SILAS CREEK PARKWAY WINSTON-SALEM 27103	PM 034 A P AC 919 760-5763	GREENSBORO 27401 LITTLE, DONALD FORREST 1350 KINGS DRIVE	032 A S 919 272-6153
LEVINSON, SIDNEY LEONARD 891 W. WILLOW DRIVE CHAPEL HILL 27514	GE /IM 032 AC 919 942-5123	LILLY, R. ERIC PO BOX 2761, DUMC DURHAM 27710	032 A S 919 286-2716	CHARLOTTE 28207 LITTLE, DOUGLAS JONATHAN 136-A CARBONTON ROAD	OBG 060 AC 919 776-0719
LEVITIN, PETER MARK 1904 N. CHURCH STREET GREENSBORO 27405	IM /RHU 041 A AC 919 274-3241	LIMBER, GERALD KECK 1867 BACKCREEK COURT ASHEBORO 27203	PTH 076 A AC 919 625-5151	SANFORD 27330 LITTLE, EDGAR WATSON 1307 W. WENDOVER AVE.	032 A S 919 275-8621
LEVITT, STEPHEN ROBERT 500 EASTOWNE DRIVE CHAPEL HILL 27514	P 032 AC 919 942-8761	LIMPET, GEORGE HENRY 57 PUTNAM ST. TUNKHANNOCK, PA 18657	FP 034 A R 919 288-6565	CHARLOTTE 28207 LITTLE, EDWIN PAUL P. O. BOX 415	IM /CD 053 AC 919 568-4111
LEVY, STANLEY BENJAMIN 891 WILLOW DRIVE CHAPEL HILL 27514	D 032 A * AC 919 942-3106	LINA, JOHN RAYMOND 203 RIDGEVIEW ROAD SOUTHERN PINES 28387	DR /R 063 A AC 919 295-7040	PINK HILL 28572 LITTLE, HARRY 158 HOSPITAL ST.	FP 054 AC 919 568-4111
LEWIS, ANDREW JACKSON, JR. 1900 RANDOLPH RD., STE. 602 CHARLOTTE 28207	OBG 060 AC 704 377-5675	LINCOLN, CLINTON ROBERT 1828 HILLDALE ROAD DURHAM 27705	ORS 032 A P * AC 919 286-1249	PO BOX 425 LITTLE, HENRY REECE, JR. 800 HOSPITAL DRIVE	034 A L/RT 919 637-6118
LEWIS, ARCH RITCHIE 3100 ROUND HILL RD. GREENSBORO 27408	OM /IM 041 A AC 919 668-3782	LINCOLN, DAVID OGDEN 69 MCDOWELL ST. ASHEVILLE 28801	ORS 011 A AC 704 255-7526	MOCKSVILLE 27028 LITTLE, KEVIN L. 603 DOLLEY MADISON RD.	034 A AC 919 294-6190
LEWIS, CHARLES PELL, JR. 1307 COACH RD. PO BOX 329	OPH /OTO 079 A * AC 919 342-0588	LINDEL, WM. M. 5668 BUCKHORN RD. LEWISVILLE 27023	034 A R 919 288-6565	NEW BERN 28560 LINDER, DONALD EARLE 5500 OLD BRANDT TRACE RD.	FP 025 A L/RT 919 294-6190
REIDSVILLE 27320 LEWIS, CLIFFORD T. 637 S. KERR AVENUE WILMINGTON 28403	IM 065 AC	LINDER, DONALD EARLE 5500 OLD BRANDT TRACE RD. GREENSBORO 27405	AN 041 AC	GREENSBORO 27410	

LITTLE, LONNIE MARCUS 206 ST. ANDREWS ROAD STATESVILLE 28677	GP 049 A L/RT 704 873-7442	LOGEL, ROBERT JOHN 3308 MELROSE ROAD FAYETTEVILLE 28305	ORS 026 A P AC 919 484-3114	LOOMIS, RALPH CHARLES 7 MCDOWELL STREET ASHEVILLE 28801	NS 011 A AC 704 255-7776
LITTLE, ROBERT WINFIELD 2505 S. MEBANE ST. BURLINGTON 27215	PD 001 AC 919 227-9750	LOGUE, STEPHEN STUART 1766 METROMEDICAL DR. FAYETTEVILLE 28304	IM 026 AC 919 483-8080	LOPES, C. DEJESUS P. O. BOX 1358 ELIZABETHTOWN 28337	GS/GP 009 AC 919 862-3112
LITTLE, SUZANNE BROWN 800 HOSPITAL DRIVE NEW BERN 28560	IM/CD 025 AC 919 637-6118	LOHAVICHAN, CHOOMSANG PO BOX 42736 FAYETTEVILLE 28304	NEP/IM 026 A AC 919 323-1315	LOPEZ, WM. CHRIS 1901 HAWTHORNE RD., STE. 310 WINSTON-SALEM 27103	GE 034 A AC 919 760-4340
LITTLE, WILLIAM C. 300 S. HAWTHORNE RD. DIV. OF CARDIOLOGY WINSTON-SALEM 27103	CD 034 AC 919 748-4342	LOHAVICHAN, VIRAT P. O. BOX 64277 FAYETTEVILLE 28306	CD/IM 026 AC 919 323-1315	LORD, RICHARD WILLIAM, JR. 2506 MILLER PARK CIRCLE WINSTON-SALEM 27103	034 A S 919 722-7649
LITTLEJOHN, JAMES TALMADGE 416 DOCTOR'S BUILDING ASHEVILLE 28801	IM/CD 011 A AC 704 253-0443	LOHR, DERMOT 20 VANCE CIRCLE LEXINGTON 27292	PH 029 A L/RT 704 246-2626	LORE, RALPH ELI 306 PENNTON AVENUE, S.W. LENOIR 28645	GS 014 A L/RT 704 754-7356
LITTLEJOHN, MARK HAYS CANNON MEMORIAL HOSPITAL BANNER ELK 28604	R/NM 006 A AC 704 898-5823	LOHR, LLOYD DERMOT 7 MEDICAL PARK DRIVE LEXINGTON 27292	OBG 029 A AC 704 243-2431	LOTHIAN, GEORGE GENE P. O. BOX 1857 REIDSVILLE 27320	FP 079 AC 919 349-5040
LITTLEJOHN, THOMAS WILLARD, III 2805 LYNHURST AVENUE WINSTON-SALEM 27103	FP 034 AC 919 768-8890	LOMAX, CHARLES WESTON 522 N. ELAM AVE. GREENSBORO 27403	OBG 041 AC 919 299-2999	LOUGHLIN, HOWARD HOPKINS 1213 WALTER REED ROAD FAYETTEVILLE 28304	PD 026 AC 919 484-6121
LITTLETON, ROBERT ELTON 3622 HAWORTH DR. RALEIGH 27609	OBG 092 A AC 919 782-1273	LOMAX, DONALD HENRY KETNER CENTER SALISBURY 28144	FP 080 A P AC 704 636-5626	LOVE, DAVID EUGENE 513 N. JUSTICE ST. HENDERSONVILLE 28739	OBG 045 AC 704 687-0122
LITZENBERGER, W. A. DREW 304-M DOCTOR'S BLDG. ASHEVILLE 28801	NPM/PD 011 AC 704 253-1998	LOMBARD, LISA L. 725-B GALES AVE. WINSTON-SALEM 27103	034 A S 919 777-8607	LOVE, JAMES MCLEAN 2007 LAFAYETTE DRIVE GREENSBORO 27408	N/IM 041 A AC 919 275-0779
LIU, AMY WEN 106 S. SUNSET DR. WINSTON-SALEM 27101	034 A S 805 964-6044	LOMBARD, R. ELIZABETH P. O. BOX 457 ROCKWELL 28138	FP 080 A AC 704 279-7227	LOVEJOY, STEVEN ARNET 120 PROVIDENCE RD. CHARLOTTE 28207	ORS 060 A AC 704 372-0743
LIU, DEBRA CHIH-FEN 250 EXECUTIVE PARK BLVD. WINSTON-SALEM 27103	D 034 AC 919 768-2180	LONDON, DEBORAH LOUISE RT. #2, BOX 561-D AYDEN 28513	074 A S 919 752-0109	LOVELACE, THOMAS CLAUDE P. O. BOX 295 HENRIETTA 28076	GP/OBS 081 A L/RT 704 657-5118
LIVERMAN, HENRY JOSEPH P. O. BOX 218, LAZY LANE ENGELHARD 27824	FP 007 AC 919 925-3271	LONDON, HOWARD B. 1511 WESTOVER TERR. GREENSBORO 27408	OPH 041 AC 919 378-1632	LOVELL, WILLIAM FIGGATT 2711 RANDOLPH RD. STE. 400 P. O. BOX 221189 CHARLOTTE 28207	A 060 * RT 704 372-7900
LIVERMAN, JOSEPH THOMAS 111 W. CHURCH STREET NASHVILLE 27856	FP 064 A P AC 919 459-4012	LONDON, WILLIAM LORD 306 S. GREGSON STREET DURHAM 27701	PD/PHO 032 A AC 919 688-6349	LOVETT, JOHN WILSON 1905 GLEN MEADE RD. WILMINGTON 28403	U 065 A AC 919 763-6251
LIVERMAN, JOSEPH THOMAS, JR. 706 WILKINS STREET SMITHFIELD 27577	FP 051 AC 919 934-5149	LONG, CLIFFORD JAMES P. O. BOX 2000 PINEHURST 28374	OBG 063 A * AC 919 295-0286	LOVETTE, KENNETH MAURICE 1612 DOCTORS CIRCLE WILMINGTON 28401	OBG 033 AC 919 343-0161
LJUNG, TOR MARTIN 2707 MULBERRY LANE GREENVILLE 27858	074 A S 919 355-6674	LONG, EUGENE MONROE, II KERNODLE CLINIC BURLINGTON 27215	OBG/OBS 001 A P AC 919 226-2423	LOVIN, VICKIE WEST RT. #2, BOX 195 CONOVER 28613	OBG 018 A AC 704 322-4920
LLEWELLYN, CHARLES E., JR. 3308 CHAPEL HILL BLVD. #110 DURHAM 27707	P 032 A P AC 919 493-7298	LONG, FRANK EDWARD 1054 BURRAGE ROAD, N. E. CONCORD 28025	OBG 013 A AC 704 788-4151	LOWE, BARBARA ANN 700 TILGHMAN DR. DUNN 28334	IM 043 A P AC 919 892-1056
LLOYD, CLARENCE 4503 BROOKHAVEN DR. GREENSBORO 27406	DR 041 AC 919 275-9741	LONG, FRED JOSEPH, JR. PO BOX 14445 RALEIGH 27620	GS 092 A AC 919 821-5771	LOWE, JAMES EDWARD BOX 3954, DUMC DURHAM 27710	CDS/GS 032 AC 919 684-3235
LLOYD, HARRY DAVIDSON NORRIS-BIGGS CLINIC RUTHERFORDTON 28139	U 081 A AC 704 286-9036	LONG, JOHN CLAYTON 1401-C OLD MILL CIRCLE WINSTON-SALEM 27103	D 034 A AC 919 765-8121	LOWE, STEPHEN BECHTLER SALEM ORTHOPAEDIC ASSOC. PA PO BOX 25007 WINSTON-SALEM 27114	ORS/HS 034 AC 919 768-1270
LLOYD, KERMIT ALVIN 2217 OLD GREENSBORO RD. CHAPEL HILL 27516	032 A S 919 929-1911	LONG, PAUL DEMARS 1505 WESTOVER TERR. GREENSBORO 27408	ORS 041 A AC 919 275-0927	LOWRY, RUSSELL C., III 224 MEMORIAL DR. STE. B JACKSONVILLE 28540	GS/VS 067 AC 919 577-1228
LOCKERT, CHARLES RAY 102 MOCKSVILLE AVENUE SALISBURY 28144	ORS 080 A P AC 704 637-0500	LONG, RONALD MORGAN 709 LIONEL ST. GOLDSBORO 27530	AN 096 A AC	LOWNES, MILTON MARKLEY, JR. 130 N. CENTER STREET MOUNT OLIVE 28365	GP 096 AC 919 658-2505
LOCKHART, DAVID ARMISTEAD 40 ARDSLEY AVENUE, N.E. CONCORD 28025	PD 013 AC 704 786-1144	LONG, STEPHEN N. PO BOX 797 ROXBORO 27573	IM 073 A AC 919 599-3212	LOWRY, OTIS MEGEL SPRING HOPE CLINIC PO BOX 1090 SPRING HOPE 27882	FP 064 AC 919 478-5344
LOCKLEAR, JIMMY 3320 OLD WAKE FOREST RD. PO BOX 18700 RALEIGH 27609	IM/CD 092 A AC 919 872-4850	LONG, THOMAS DRUMWRIGHT PO BOX 1058 ROXBORO 27573	IM 073 A AC 919 599-3212	LOWRY, ROY FRANK, JR. 4024 BARRETT DR., STE. 104 RALEIGH 27609	OPH 092 A P AC 919 787-3241
LOCKWOOD, MARILYN ANN UNC-G STUDENT HEALTH CTR. GREENSBORO 27412	ADL 041 A AC 919 379-5340	LONG, THOMAS THERON, III 920 N. CHURCH STREET CONCORD 28025	GE/IM 013 A P AC 704 788-4186	LUCAS, JACK A. 449 N. WENDOVER RD. CHARLOTTE 28211	OBG 060 A AC 704 364-3760
LODA, FRANK A. UNC, DEPT. OF PEDIATRICS CHAPEL HILL 27514	PD/ID 032 A AC 919 966-2504	LONG, WALTER NATHANIEL, JR. 505 THIRD AVENUE, SW TAYLORSVILLE 28681	FP 002 AC 704 632-9736	LUCAS, ROBERT THEODORE, JR. 1350 KINGS DRIVE CHARLOTTE 28207	PD 060 A AC 704 372-8750
LODEN, GARY B. 114-A HIGH ST. CARRBORO 27510	032 S 919 967-2638	LONG, WILLIAM EVERETT P. O. BOX 1239 CONOVER 28613	FP 018 A AC 704 464-3821	LUCEY, DONALD TRUESDELL 2800 BLUE RIDGE BLVD. STE. 403 RALEIGH 27607	U 092 A P AC 919 781-7113
LOEHR, WALTER JOSEPH 2609 N. DUKE ST., STE. 402 DURHAM 27704	GS 032 A AC 919 471-8439	LONG, WILLIAM JOSEPH 402 E. SUGAR CREEK RD. CHARLOTTE 28213	FP 060 AC 704 596-0822	LUCY, MARYANN 13 UPTON COURT GREENVILLE 27858	OBG 074 A S
LOFTUS, JAMES MORGAN, JR. PO BOX 1606 CONCORD 23026	ORS 013 A AC 704 788-3155	LONGINO, FRANK HENRY 1914 FOREST HILL DR. GREENVILLE 27834	GS/TS 074 A RT 919 758-1747	LUDWIG, GARY KEITH 104 BROOKDALE ROAD SHELBY 28150	PTH/FOP 023 AC 704 487-3147
LOGAN, WILLIAM SUMNER 1350 S. KINGS DRIVE CHARLOTTE 28207	D 060 AC 704 372-8750	LONON, ROBERT WARREN, JR. 5501 WESTFIELD DR. GREENSBORO 27410	AN 041 AC 919 373-8555	LUH, ALBERT HUNG-PEI 1481 ASHBORNE DR. LYNCHBURG, VA 24501	EM/GP 063 * RT 919 295-7777

LUMB, PHILIP DENNETT BOX 3094, DUMC DURHAM 27710	AN 032 A AC 919 681-3883	MABRY, EDWARD BLOXTON 1305 W. WENDOVER AVENUE GREENSBORO 27408	OBG 041 A AC 919 274-6355	MADRY, HERBERT RAYMOND, JR. 2105 WHITE OAK ROAD RALEIGH 27608	DR 092 A P AC 919 833-9838
LUND, HERBERT ZACHAREUS 1200 N. ELM ST. GREENSBORO 27401	PTH /D 041 A L 919 379-4074	MABRY, FREDERICK HARRISON, JR. 418 KING STREET LAURINBURG 28352	PD 083 AC 919 276-7570	MAGEE, MICHAEL R. 11726 GRANT DR. OVERLAND PARK, KANSAS 66210	OBG 034 R
LUND, JOHN JEFFERSON 1700 S. TARBORO ST. WILSON 27893	CD /IM 098 A AC 919 291-1300	MAC, HARJIT BALA P. O. BOX 1230 ALBEMARLE 28002	PM 084 A AC 704 983-3314	MAGOLAN, JEROME JOSEPH, JR. 3320 EXECUTIVE DR., STE. 210 RALEIGH 27609	OPH 092 A AC 919 872-0572
LUPTON, CARROLL CRESCENT 3300 STARMOUNT DRIVE GREENSBORO 27403	CRS 041 A L/RT 919 299-9255	MAC, SURENDRAPAL SINGH P. O. BOX 1230 ALBEMARLE 28001	ORS /HS 084 A AC 704 983-3314	MAHAN, DENNIS MICHAEL 1012 COLLEGE ST. OXFORD 27565	FP 039 A AC 919 693-7108
LUPTON, EMMETT STEVENSON P. O. BOX 177 ALAMANCE 27201	D 041 A * L/RT 919 228-1288	MACALPINE, ORVILLE DUNCAN 98 HOLLY HILL DR. CANDLER 28715	PD 011 A L/RT 704 667-5553	MAHANEY, JOHN PHILIP, JR. 810 KENNEDY AVE. NEW BERN 28560	FP 025 A * AC 919 633-1678
LURIA, ALAN STUART 220 FOUST ST. ASHEBORO 27204	OPH 076 AC 919 629-1451	MACAULAY, HUGH HOLLEMAN, III 3738 ABINGDON ROAD CHARLOTTE 28211	EM /FP 060 * AC 704 371-4160	MAHMUD, REHAN ECU SCHOOL OF MEDICINE SECT. OF CARDIOLOGY GREENVILLE 27858	074 AC 919 551-5395
LURIE, SCOTT NORD 1711 SHAWNEE ST. DURHAM 27701	032 A R 919 682-0582	MACAULAY, ROBERT JOSEPH, JR. 3136 SUNSET AVENUE ROCKY MOUNT 27804	U 064 A AC 919 443-3136	MAIER, RUDOLPH JOSEPH 721 PROFESSIONAL DR. NEW BERN 28560	N 025 A AC 919 633-3744
LUSK, JOHN ALEXANDER, III 1007 PROFESSIONAL VILLAGE GREENSBORO 27401	ON /IM 041 A P AC 919 272-2141	MACCORMACK, JOHN NEWTON P. O. BOX 2091 RALEIGH 27602	PH 092 * AC 919 733-3421	MAITLAND, ALEXANDER, III 1 DOCTOR'S PARK ASHEVILLE 28801	U 011 A AC 704 253-5314
LUTMAN, GEORGE BENTON P. O. BOX 2000 FAYETTEVILLE 28302	PTH 026 A AC 919 323-6149	MACDONALD, DONALD EWAN 1310 MCCRAY STREET MONROE 28110	P 090 AC 704 289-5431	MAJORS, ROBERT POWELL, JR. 3010 ANDERSON DR. PO BOX 18946 RALEIGH 27619	OTO 092 A AC 919 787-7171
LUTTERLOH, ISAAC HAYDEN, JR. P. O. BOX 1269 SANFORD 27330	IM 053 AC 919 775-3911	MACDONALD, HENRY JOHN, JR. PO BOX 2406 709 PROFESSIONAL DR. NEW BERN 28560	OTO 025 A AC	MAJSTORAVICH, JOSEPH, JR. P. O. BOX 1317 MOREHEAD CITY 28557	OPH 016 AC 919 726-0411
LUTZ, CHARLES LARRY P. O. BOX 1020 LENOIR 28645	IM /GE 014 A AC 704 758-5544	MACDONALD, JOEL DOUGLAS 308 CAROL ST. CARRBORO 27510	032 A S 919 967-6776	MALEK, NABIL S. BOX 3094, DUMC DURHAM 27710	AN 032 AC 919 684-3026
LUTZ, JAMES DWIGHT 401 SIXTH AVENUE, WEST HENDERSONVILLE 28739	AN 045 AC 704 693-9669	MACDONALD, MARK EDWARD 107 DUPONT CIRCLE GREENVILLE 27858	074 A S 919 756-6502	MALEKPOUR, BAHMAN 2805 MCLAMB PL. PO BOX 1342 GOLDSBORO 27530	P 096 A AC 919 734-2222
LUVIS, L.D.A. CLAUDIUS 1018 HEATHERLOCH DR. GASTONIA 28054	IM 036 AC 704 867-1306	MACDONALD, WILLIAM WEBSTER 1023 EDGEHILL DRIVE CHARLOTTE 28207	OBG 060 A AC 704 373-1541	MALLETT, JULIUS Q. ECU DEPT. OF OB-GYN GREENVILLE 27835	OBG 074 A AC 919 551-4983
LYDAY, RUSSELL OSBORNE 1915 BOULEVARD ST. C/O MEADOWBROOK TERR. GREENSBORO 27407	GS 041 A L/RT 919 854-2115	MACFARLAND, JOSEPH ALFRED UNC STUDENT HEALTH SERVICE CAMPUS BOX 7470 CHAPEL HILL 27599	GP 032 AC 919 966-2281	MALLIS, GARY CRAIG 555 CARTHAGE ST. SANFORD 27330	PD 053 AC 919 776-7534
LYDAY, WILLIAM DAVIE 225 HAWTHORNE LN., STE. 301 CHARLOTTE 28204	TS /GS 060 A AC 704 377-5978	MACHEMER, CHRISTINE ANNA BOX 3125, DUMC DURHAM 27710	P 032 AC 919 684-5772	MALLONEE, MICHAEL STEVEN 101 W.T. HARRIS BLVD.EAST SUITE C-206 CHARLOTTE 28213	OTO /HNS 060 A AC 704 547-1609
LYERLY, MARK ANDREW 645 BALFOUR RD. WINSTON-SALEM 27104	032 A S 919 760-0865	MACHEMER, ROBERT BOX 3802, DUMC DURHAM 27710	OPH 032 A AC 919 684-5846	MALLOY, H. REMBERT 2020 NEW WALKERTOWN ROAD WINSTON-SALEM 27101	GS 034 A L/RT 919 723-3729
LYLE, CARL BLACKBURN, JR. 145-A MACNIDER BLDG. 202-H UNC SCHOOL OF MEDICINE CHAPEL HILL 27514	IM 032 AC 919 966-5945	MACINTOSH, VICTOR HENRY 207 E. MAIN ST. SANFORD 27330	FP 053 AC 919 774-6282	MALONE, JOHN HUGH, JR. 56 ARDSLEY AVENUE, N.E. CONCORD 28025	IM 013 A P AC 704 782-1101
LYLES, EVELYN MCMASTER 93 VICTORIA ROAD ASHEVILLE 28801	OBG 011 A P AC 704 253-4821	MACK, RONALD BRIAN 2516 WOODBERRY DRIVE WINSTON-SALEM 27106	PD 034 AC 919 727-8108	MALONEY, SEAN ROBERT 445 BILTMORE AVE. STE. 106 ASHEVILLE 28801	PM 011 A AC 704 254-9796
LYLES, MARY FENNELL 300 S. HAWTHORNE ROAD WINSTON-SALEM 27103	IM /GER 034 AC 919 748-2051	MACKAY, JAMES CALVIN 302 W. RENOVAH CR. WILMINGTON 28403	034 A S 919 722-1325	MALONEY, THOMAS RICHARD NC SPECIAL CARE CTR WARD BOULEVARD WILSON 27893	GER /IM 098 A AC 919 237-1121
LYMBERIS, MARVIN NICHOLAS 2514 RED FOX TRAIL CHARLOTTE 28211	OPH 060 A L/RT 704 366-6227	MACKEL, DAVID FREDERICK 1027 FLEMING STREET HENDERSONVILLE 28739	IM /PUD 065 A RT 919 762-1529	MALOUF, NADIA UNC, BRINKHOUS-BULLITT BLDG. #228, ROOM 801 CHAPEL HILL 27514	032 AC 919 966-4511
LYNCH, JOHN FRANKLIN, JR. 905 ARBORDALE DR. HIGH POINT 27260	PD 040 A * L/RT 919 886-4049	MACKENNA, JARLATH 2157 MAIN ST. SISTERS OF CHARITY HOSP. BUFFALO, NY 14214	ORS 045 A AC 704 692-5781	MALOY, THOMAS HOWARD 2310 DELANEY AVENUE WILMINGTON 28401	OPH 065 A AC 919 763-3664
LYNCH, SUE ANN 129 WINDSOR CIR. CHAPEL HILL 27514	N 032 A R 919 942-8097	MACLAUCHLIN, WILLIAM THOMPSON P. O. DRAWER 1239 CONOVER 28613	OBG /NPM 007 AC	MALTBIE, ALLAN ARMSTRONG BOX 3837, DUMC DURHAM 27710	P /PYA 032 A AC 919 684-5217
LYNN, ARTHUR SIMONTON, JR. ROUTE #2, BOX 199 CONOVER 28613	IM /CD 018 A AC 704 322-1128	MACQUEEN, DONALD MILES 2321 DELANEY AVENUE WILMINGTON 28403	A /PD 065 A P AC 919 763-1661	MALTON, MARK L. 1900 RANDOLPH RD. STE. 1016 CHARLOTTE 28207	OPH 060 A AC 704 334-2020
LYON-SMITH, MARY E. 616 DOCTOR'S STREET SPARTA 28675	FP 003 AC 919 372-5606	MACRAE, JOHN DONALD 700 MEASE PLAZA, APT. 850 DUNEDIN, FL 34698	R 026 A L/RT 813 733-1161	MANCUSI-UNGARO, PETER C. 2131 S. SEVENTEENTH STREET WILMINGTON 28401	HEM /ON 065 AC 919 343-0161
LYSKO, JANE E. ST. JOSEPH'S HOSPITAL DEPT. OF PATHOLOGY ASHEVILLE 28801	PTH 011 * AC 704 255-3949	MACRI, ANTHONY JOHN 311 DOGWOOD DRIVE EDEN 27288	PTH 079 A AC 919 623-9711	MANDEL, DALE MASON 105 PINEYWOOD RD. BOX 1187 THOMASVILLE 27360	GS /TRS 029 A AC 919 475-7148
LYTH, WM. MICHAEL 200 WESTMINSTER DR. APT. 132K CHAPEL HILL 27514	032 AN R 919 684-8111	MADDOX, CHARLES DEATON 4-B DOCTOR'S PARK ASHEVILLE 28801	IM 011 A AC 704 253-2865	MANDEL, STANLEY ROBERT UNC, DEPT. OF SURGERY 229H CHAPEL HILL 27514	GS /TS 032 A AC 919 966-3391
MABE, PAUL ALEXANDER, JR. 1123 S. MAIN STREET REIDSVILLE 27320	FP 079 AC 919 342-4286	MADDOX, THOMAS WILBUR 3814 BROWNING PLACE RALEIGH 27609	GS /VS 092 AC 919 781-0710	MANDELL, GORDON LEE 1321 ABINGDON WAY WINSTON-SALEM 27106	AN 034 A AC 919 773-3259

MANESS, ARCHIBALD KELLY, JR. 1305 W. WENDOVER AVENUE GREENSBORO 27408	OBG 041 A AC 919 273-3624	MARCOTTE, DAVID BACON 1262 OLIVER ST. FAYETTEVILLE 28304	P 026 A AC 919 484-5151	MARSICANO, THOMAS H. 721 GREEN VALLEY RD. STE. 400 GREENSBORO 27408	CDS /VS 041 AC 919 271-8455
MANESS, PAUL FRANKLIN 328 W. DAVIS STREET BURLINGTON 27215	PD 001 A * L 919 228-8341	MARCUARD, STEFANO P. ECU, DEPT. OF MEDICINE GREENVILLE 27834	GE /IM 074 A AC 919 551-4652	MARSIGLI, ADOLFO HECTOR 110 NASH MEDICAL ARTS MALL ROCKY MOUNT 27801	ORS /HS 064 A AC 919 443-8830
MANESS, RUBIN FRANKLIN 2706 MEDICAL OFFICE PLACE GOLDSBORO 27530	PD /A 096 AC 919 734-4736	MARCUS, RICHARD WM. 600 FIRST PLAZA 1985 TATE BLDG. SE HICKORY 28601	N 018 A AC 704 328-5500	MARSIGLI, EDUARDO OSCAR 110 NASH MEDICAL ARTS MALL ROCKY MOUNT 27801	ORS 064 A AC 919 443-8830
MANGANO, CHARLES A., JR. 3020 NEW BERN AVE. STE. 420 RALEIGH 27610	CD /IM 092 A P AC 919 833-5111	MARGOLIS, JEFFREY ALAN 413 LAFAYETTE ST. CLINTON 28328	IM 082 A AC 919 592-6114	MARSTON, CHARLES THOMAS, JR. 117 TRYON ROAD RUTHERFORDTON 28139	PD 081 P AC 704 286-9049
MANGE, STEPHEN KENNEDY PO BOX 1570 DAVIDSON 28036	PD 060 AC 704 892-7905	MARGOLIS, PETER ADAM UNC, CLI. SCHOLARS PROGRAM 5034 OLD CLINIC BLDG. CHAPEL HILL 27514	032 A R 919 966-1274	MARTIN, CHARLES R. 120 MEMORIAL DRIVE JACKSONVILLE 28540	PD 067 A AC 919 353-0581
MANGEL, ALLEN WAYNE 534 FINLEY ST. DURHAM 27705	032 A R 919 383-9730	MARION, JEREMIAH RICHARD, III 631 COLISEUM DR. WINSTON-SALEM 27106	OPH 034 AC 919 723-1041	MARTIN, DENNIS KEITH 903 PINETREE DRIVE NEW BERN 28560	OBG 025 AC 919 633-4005
MANGUM, ADDISON GOODLOE P. O. BOX 1258 ALBEMARLE 28002	R 084 AC 704 982-5319	MARKELLO, JAMES ROSS ECU SCHOOL OF MEDICINE GREENVILLE NC 27834	PD 074 AC 919 551-2539	MARTIN, DENNIS LEE 7 MCDOWELL ST. ASHEVILLE 28801	N 011 A AC 704 255-7776
MANGUM, CARLYLE THOMAS, JR. P. O. BOX 429 HIGHLANDS 28741	GP 056 AC 704 526-2125	MARKHAM, ROBERT WADE 624 QUAKER LANE, SUITE 302-B HIGH POINT 27262	D 040 A AC 919 887-3195	MARTIN, EDWARD STEPHENS 2711 RANDOLPH ROAD, SUITE 501 CHARLOTTE 28207	PD 060 AC 704 374-1736
MANGUM, GARY LIONELL 202 E. GROVER ST. SHELBY 28150	ORS 023 A AC 704 482-7311	MARKS, EDGAR SEYMOUR 1511 WESTOVER TERR., STE. 108 GREENSBORO 27408	IM 041 A AC 919 378-9906	MARTIN, HAROLD LUTHER, JR. 1200 N. GREENSBORO ST. CARRBORO 27510	032 A S 919 929-8334
MANGUM, JOHN ROWLAND 555 CARTHAGE ST. SANFORD 27330	FP 053 A AC 919 774-6518	MARKS, HOWARD F., JR., 1501 MEDICAL CTR. DR. WILMINGTON 28401	GS 065 AC 919 763-6289	MARTIN, J. PAUL 491 BILTMORE AVE. ASHEVILLE 28801	FP 011 AC 704 258-0670
MANGUM, RICHARD ARNOLD PO BOX 706 CREEDMOOR 27522	FP 039 A AC 919 528-0707	MARKS, JOHN JACOB 5512 HAWTHORNE PARK RALEIGH 27612	GYN 092 AC 919 848-1990	MARTIN, JAMES CICERO, JR. 1420 PLAZA DR. WINSTON-SALEM 27103	OTO 034 A AC 919 765-4922
MANGUM, SARAH ROSE 319-N ST. ANDREWS DR. GREENVILLE 27834	074 A S 919 756-8709	MARKWORTH, JAMES WARREN 1222 MEDICAL CENTER DRIVE WILMINGTON 28401	ORS 065 A AC 919 763-2977	MARTIN, JAMES FRANKLIN 2680-3 GROSVENOR PLACE WINSTON-SALEM 27106	R /DR 034 A L 919 723-5199
MANLAPAS, HECTOR CHAN PO DRAWER 158 ROANOKE RAPIDS 27870	IM 042 A AC 919 537-0135	MARLOWE, DONNA M. 1208-A W. 4TH ST. WINSTON-SALEM 27101	034 A S 919 727-1866	MARTIN, MATTHEW BRUNSON 311 W. WENDOVER AVE. GREENSBORO 27408	GS 041 A * AC 919 275-8415
MANLEY, JAMES JOSEPH P. O. BOX 2585 705 PROFESSIONAL DR. NEW BERN 28561	FP /EM 025 AC 919 637-6194	MARLOWE, JAMES MANNING 624 QUAKER LANE, SUITE D-200 HIGH POINT 27262	040 AC 919 841-6262	MARTIN, PHILIP L. 3320 EXECUTIVE DR., STE. 210 RALEIGH 27609	OPH 092 A AC 919 872-0572
MANLY, DAVID TUPPER 115 ROSEMOND DR. GREENVILLE 27834	074 A R 919 758-4062	MARROOF, MOHAMMAD BOX 3094, DUMC DURHAM 27710	AN 032 AC 919 684-3591	MARTIN, RICHARD W. 327 MOCKSVILLE AVE. PO BOX 1665 SALISBURY 28144	063 A AC 704 637-2750
MANLY, ISAAC VAUGHN 2800 BLUE RIDGE BOULEVARD RALEIGH 27607	GS /TS 092 A AC 919 781-7410	MARQUARDT, JOHN D. 1134 N. ROAD ST. ELIZABETH CITY 27909	ORS 070 A AC 919 338-3993	MARTIN, ROBERT GALE 2170 MIDLAND ROAD SOUTHERN PINES 28387	OM /FP 092 A P AC 919 295-2100
MANLY, JAMES HOLLOWELL, JR. 2800 BLUE RIDGE BLVD. #303 RALEIGH 27607	GS 092 AC 919 781-7425	MARQUEZ, PATERNO RIEGO 107 NASH MEDICAL ARTS MALL ROCKY MOUNT 27804	FP 064 AC 919 443-8810	MARTIN, SIDNEY ARNOLD 3141 ESSEX CIRCLE RALEIGH 27608	092 A P AC 919 782-0911
MANN, CARROLL LAMB, III 3009 NEW BERN AVE. PO BOX 14027 RALEIGH 27620	NS 092 A AC 919 832-4448	MARROUM, MARIE-CLAIRE PO BOX 32861 CHARLOTTE MEM. HOSP. CHARLOTTE 28232	PTH 060 A AC 704 338-2251	MARTIN, TERRI REGINA 331 W. ROSEMARY ST. #21 CHAPEL HILL 27514	032 A S 919 884-6037
MANN, CHARLES HAYES 1110 S. MAIN STREET DURHAM 27701	OTO 032 A AC 919 682-9341	MARROW, HENRY GREGORY ECU SCH. OF MEDICINE CLINICAL PATH. BRODY 1508 GREENVILLE 27834	PTH 074 A AC 919 551-4495	MARTIN, WILLIS ELWOOD 112 NASH MEDICAL ARTS MALL ROCKY MOUNT 27804	D /IM 064 A AC 919 443-8937
MANN, JAMES TIFT, III WAKE HEART ASSOCIATES PO BOX 14427 RALEIGH 27620	CD 092 AC 919 832-9253	MARROW, JANE GREGORY 1003 MAIN STREET TARBORO 27886	GYN 033 AC 919 823-8491	MARTINEZ, LUCAS J. P. O. BOX 7514 ROCKY MOUNT 27801	NS 064 A AC 919 443-4563
MANN, JOHN DOUGLAS 751 CLINICAL SCI. BLDG. 229-H UNC SCHOOL OF MEDICINE CHAPEL HILL 27514	N /IM 032 A AC 919 966-2526	MARSDEN, MARGARET E. FERRITER 200 WOODCROFT PARKWAY, #40-B DURHAM 27713	032 A S 919 489-8433	MARTINEZ, SALUTARIO DUMC, DEPT. OF RADIOLOGY DURHAM 27710	R 032 A AC 919 684-2711
MANN, PHILIP ROGERS 803 HERMITAGE ROAD BURLINGTON 27215	FP /IM 001 A AC 919 227-3643	MARSH, FRANK BAKER 725 LAKE DRIVE SALISBURY 28144	IM 080 A L/RT 704 633-2344	MARTONE, ARLENE RAE 28 RIVERVIEW ST., STE. 110 FRANKLIN 28734	OBG 056 AC 704 335-0064
MANNING, ISAAC HALL, JR. 3901 HOPE VALLEY RD. DURHAM 27707	IM 032 A L/RT 919 286-7635	MARSHALL, BERNARD ANTHONY P. O. BOX 21922 GREENSBORO 27406	OBG 041 AC 919 724-1815	MARUCHECK, JOHN THOMAS 6217 DRESDEN LANE RALEIGH 27612	IM 092 AC 919 878-0900
MANNING, STUART HALL 2609 N. DUKE ST., STE. 604 CENTRAL MEDICAL PARK DURHAM 27704	IM 032 A AC 919 477-1054	MARSHALL, CHARLES FOSTER, JR. 1012 S. KINGS DRIVE CHARLOTTE 28283	OPH 060 A * AC 704 376-6511	MARX, HERMAN BENNO APDO 227-T ZONA TONCONTIN HONDURAS C.A.	FP 000 A R 919 765-8420
MARBURG, KENNETH CHARLES 343 BRADLEY DR. WILMINGTON 28403	EM /FP 065 AC 919 791-0075	MARSHALL, HARVEY E., III 228 OAKWOOD CT. WINSTON-SALEM 27103	034 A S 919 748-2626	MARX, MARILYN UTMB STATION 1, BOX 45 GALVESTON, TX 77550	GS 032 R 409 761-1875
MARCHESE, JOHN RICHARD 40 DOCTORS DR. BOONE 28607	OBG 095 AC 704 264-9067	MARSHALL, RICHARD BLAIR 236 STANAFORD ROAD WINSTON-SALEM 27104	PTH 034 A AC 919 762-9621	MARX, RICHARD SAMUEL 3310 BROOKVIEW HILLS BLVD #204 WINSTON-SALEM 27103	ID /IM 034 A AC 919 934-3015
MARCHETTI, LOUIS JOSEPH MIDSOUTH UROLOGY CTR., PA BOX 3, TWO MEMORIAL DR. PINEHURST 28374	U 063 * AC 919 295-6782	MARSHBURN, ELISHA THOMAS, JR. 1906 MEETING COURT WILMINGTON 28401	IM 065 A P * AC 919 762-9621		

MASIUS, WILLIAM GLENN 1801 GREENVILLE BLVD. APT. 19 GREENVILLE 27858	A S 919 752-5867	074	MATTHEWS, MARJORIE E.F. P. O. BOX 667 PILOT MOUNTAIN 27041	A AC 919 368-4198	FP 086	MAYER, EUGENE STEPHEN UNC, CB 7165, WING C, BOX 3 CHAPEL HILL 27599	A * AC 919 966-2461	GPM 032
MASON, DAVID PENDLETON 1809 GLEN MEADE ROAD WILMINGTON 28403	OBG 919 762-9807	065	MATTHEWS, ROLAND D. 1610 VAUGHN ROAD BURLINGTON 27215	FP 919 228-8333	001	MAYER, MARK EDWARD 307 W. MAIN ST. BENSON 27504	IM 919 894-2011	051
MASON, ERIC W. PO BOX 18139 RALEIGH 27619	AN 919 783-3034	092	MATTHEWS, WILLIAM CAMP RT. 4, BOX 470, THE FARM CHESTER, SC 29706	IM/OM 803 385-6975	060	MAYER, NORMAN MICHAEL P. O. BOX 29066 GREENSBORO 27408	P AC 919 379-4040	041
MASON, GARY MERLIN MEDICAL PARK 902 COX RD., STE. F GASTONIA 28054	OBG 704 867-6386	036	MATTOX, HUITT EVERETT 1700 S. TARBORO ST. WILSON 27893	OBG 919 291-9010	098	MAYER, WALTER BREM 2420--407 ROSWELL AVENUE CHARLOTTE 28209	A L/RT 704 333-4322	060
MASON, LOCKERT BEMISS 1224 COUNTRY CLUB RD. WILMINGTON 28403	GS 919 762-1520	065	MATTOX, HUITT EVERETT, III 1764 ROBINHOOD RD. WINSTON-SALEM 27104	IM 919 725-3227	034	MAYNARD, CHARLES DOUGLAS BOWMAN GRAY, DEPT. OF RAD. WINSTON-SALEM 27103	A AC 919 748-4575	034
MASON, THOMAS LEE 20-H UNIVERSITY LAKE APTS. CARRBORO 27510	A * S 919 942-0819	032	MATTOX, JAMES DWIGHT, JR. 1546 OVERBROOK AVENUE WINSTON-SALEM 27104	P 919 768-6930	034	MAYNARD, DAVID RUSSELL 213 MISTLETOE DR. GREENSBORO 27403	A AC 919 855-0767	041
MASON, WILLIAM TERRY 400 MOCKSVILLE AVENUE SALISBURY 28144	ORS 704 633-6044	080	MATTSON, MARK WARREN PO BOX 1808 LAURINBURG 28352	GS 919 276-3541	083	MAYNOR, CAROLYN CHANG BEECHWOOD APTS. 24-A 4800 UNIVERSITY DR. EX. DURHAM 27707	A S 919 286-1409	032
MASOUD, JAVED 723 EDITH STREET BURLINGTON 27215	CD/IM 919 229-6486	001	MAUERHAN, DAVID ROBERT 1822 BRUNSWICK AVENUE CHARLOTTE 28207	ORS 704 373-0544	060	MAYO, JOSEPH DIXON, JR. MEDICAL SERVICES BLDG. RUIN CREEK RD. HENDERSON 27536	FP 919 438-3155	091
MASSAGEE, JAMES TERRILL 1600 INDEPENDENCE RD. GREENSBORO 27401	AN 919 299-6343	041	MAULL, JOHN M. PO BOX 1020 LENOIR 28645	IM 704 758-5544	014	MAYO, KATHY DIANE T-5 DOCTORS PARK APTS. GREENVILLE 27834	A S 919 752-2656	074
MASSAQUOI, ALFRED DADEE L. 1030 COLLEGE ST. P. O. BOX 1513 OXFORD 27565	OBG 919 693-4212	039	MAULTSBY, JAMES ALEXANDER 200 E. NORTHWOOD ST., STE. 410A GREENSBORO 27401	ORS/PM 919 373-0312	041	MAYRAND, ELIZABETH 701 BARKER ST. SALISBURY 28144	PTH 919 998-8433	080
MASSENGILL, G.K. 3308 TIMBER LAKE ROAD RALEIGH 27604	GS 919 872-6924	092	MAUNEY, FRANK MAXTON, JR. 257 MCDOWELL STREET ASHEVILLE 28803	CDS/TS 704 258-1121	011	MAYS, OLIVER AIKEN 408 TAYLOR PLACE GOLDSBORO 27530	A P AC 919 731-1000	096
MASSENGILL, SUSAN FOSTER 200 KING ARTHUR DR. GREENVILLE 27858	PD 919 551-4963	074	MAURO, MATTHEW ANTHONY 101 CATAWBA COURT CHAPEL HILL 27514	A P * AC 919 966-1461	032	MAYSE, RAY SCOTT 707 W. KING STREET KINGS MOUNTAIN 28086	IM 704 739-9776	023
MASSEY, CHARLES CASWELL, JR. 2015 RANDOLPH ROAD, STE. 201 CHARLOTTE 28207	CRS 704 333-1259	060	MAURO, PATRICIA MARCHASE 2609 N. DUKE ST. STE. 505 DURHAM 27704	D 919 477-2121	032	MCADAMS, CHARLES R., JR. 225 HAWTHORNE LN. STE. 401 CHARLOTTE 28204	GS/GYN 704 372-7741	060
MASSEY, THOMAS NEELY, JR. 217 TRAVIS AVENUE CHARLOTTE 28204	CD/IM 704 372-3350	060	MAVROS, SHARON 411-I DOWNING ST. DURHAM 27705	A S 919 286-4617	032	MCALEXANDER, DONALD LEE 56 ARDSLEY AVENUE CONCORD 28025	IM 704 782-1101	013
MASTERS, KIM JAMES APPALACHIAN HALL PO BOX 5534 ASHEVILLE 28813	P/CHP 704 253-3681	011	MAXFIELD, STEVEN RONALD 2908 ERWIN RD. DURHAM 27705	A S 919 968-4868	032	MCALISTER, JAMES ALLEN, JR 1901 RANDOLPH RD. CHARLOTTE 28207	PTH/CLP 704 375-1758	060
MASTERS, MICHAEL JASON 102 HOSPITAL DR. SUITE #6 CLYDE 28721	D 704 456-7343	044	MAXWELL, GEORGE L. 601 BROOKSTONE APTS. 101 HOMESTEAD RD. CHAPEL HILL 27514	A S 919 854-6546	041	MCALISTER, LINDA THERESA PO BOX 53514 FAYETTEVILLE 28305	OBG 919 485-1191	060
MASTRANGELO, MICHAEL ROCCO 1515 DOCTOR'S CIRCLE WILMINGTON 28401	GE 919 763-5182	065	MAXWELL, JAMES HEATH 2313 PRINCESS ANN ST. GREENSBORO 27408	DR 919 343-0161	041	MCALLISTER, DAVID WHITNEY 2711 RANDOLPH RD., STE. 512 CHARLOTTE 28213	OBG 704 333-4104	060
MATHES, GORDON LAWRENCE, JR. 3136 SUNSET AVE. ROCKY MOUNT 27801	U 919 443-3136	064	MAXWELL, JOHN GARY 2131 S. 17TH ST. WILMINGTON 28402	GS 919 323-5491	065	MCALLISTER, JAMES GRAY, III 1004 DRESSER CT., STE. 108 RALEIGH 27609	P 919 876-0287	092
MATHEWS, HERSCHELL F. ROUTE #1, BOX 564 SYLVA 28779	FP/EM 704 586-8352	044	MAXWELL, KEITH MELVIN 445 BILTMORE AVE., STE. 401 ASHEVILLE 28801	ORS 704 251-1357	011	MCALLISTER, RUSSELL G., JR. 3712 DOVER RD. DURHAM 27707	CD/PA 919 248-2598	032
MATHIESEN, KENNETH MARLIN 960 PLATEAU ST. BRYSON CITY 28713	FP/A 704 488-6844	087	MAXWELL, MICHAEL C. 418 LOCKLAND AVENUE WINSTON-SALEM 27103	A S 919 723-8294	034	MCARN, HUGH MUNROE, JR. 422 KING STREET LAURINBURG 28352	A AC 919 276-2100	083
MATHIS, JAMES LARRY ECU, DEPT. OF PSYCHIATRY GREENVILLE 27858	P 919 551-2660	074	MAY, ALFRED T., III 25-G COURTNEY SQUARE GREENVILLE 27858	A * S 919 355-5287	074	MCAULIFFE, JOHN EDWARD 3709 WESTRIDGE CIRCLE DR. ROCKY MOUNT 27801	AN 919 443-2125	064
MATTERN, WILLIAM DOUGLAS N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514	NEP/IM 919 966-2561	032	MAY, CHARLES RAYSOR, III 2345 ROLLING HILL RD. FAYETTEVILLE 28304	AN 919 323-5491	026	MCBRIDE, ALLEN JOSEPH BLUE CROSS/BLUE SHIELD OF NC PO BOX 2291 DURHAM 27702	FP/ADM 919 490-2585	032
MATTHEWS, BRIAN LEWIS DEPT. OF OTOLARYNGOLOGY N. C. BAPTIST HOSPITAL WINSTON-SALEM 27103	OTO 919 748-4161	034	MAY, DAVID ALAN 100-D BERNARD ST. CHAPEL HILL 27514	A S 919 929-3078	032	MCBRIDE, JACK M., JR. 1109 DRESSER COURT RALEIGH 27609	FP 919 872-4900	092
MATTHEWS, COY RANDOLPH 120 EDEN TERRACE #1 WINSTON-SALEM 27103	PS 919 723-9781	060	MAY, HARVEY CRAIG 2711 RANDOLPH ROAD, STE. 305 CHARLOTTE 28207	GYN 704 372-8020	034	MCBRIDE, ROBERT BENNIS, JR. 101 W. T. HARRIS BLVD. #220A CHARLOTTE 28213	ORS 704 547-1552	060
MATTHEWS, DAVID CARY 2215 RANDOLPH ROAD CHARLOTTE 28207	A * AC 704 372-6846	060	MAY, RONALD BRUCE CRAVEN COUNTY HOSPITAL P. O. BOX 1390 NEW BERN 28560	PD/HEM 919 633-4121	025	MCBRYDE, ANGUS MURDOCH, JR. 120 PROVIDENCE RD. CHARLOTTE 28207	A P * AC 704 372-0743	060
MATTHEWS, GEORGE POWERS P. O. BOX 609 ROSE HILL 28458	GP 919 289-2330	031	MAY, WILLIAM JOSEPH 300 S. HAWTHORNE ROAD WINSTON-SALEM 27103	GYN/OBG 919 748-4595	034	MCCABE, JAMES MICHAEL 102 MOCKSVILLE AVE. SALISBURY 28144	P/N 919 722-2235	080
MATTHEWS, JOHN DAIL 3312 BATTLEGROUND AVE. GREENSBORO 27410	OPH A * AC	041	MAYBIN, RICHARD MADDEN ROUTE #2 LAWDALE 28090	GP/HYP 704 538-8532	023	MCCAIN, JOHN LEWIS WILSON CLINIC WILSON 27893	RHU/IM 919 291-7001	098
			MAYER, CAREY CHARLES 1703 COUNTRY CLUB RD., #104 JACKSONVILLE 28540	P 919 347-1920	067	MCCAIN, KENNETH FRANKLIN 223 HARPER STREET WINSTON-SALEM 27104	A AC 919 765-3756	034

MCCALL, CHARLES EMORY 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	IM /ID 034 AC 919 748-4584	MCCOY, MARSHALL C. CAPE FEAR MEM. HOSP. EMERGENCY DEPT. WILMINGTON 28403	EM 065 AC 919 395-8115	MCDELVEEN, JOHN T., JR. BOX 3805, DUMC DURHAM 27710	OT /OTO 032 A * AC 919 684-2475
MCCALL, MARVIN MATHER, III P. O. BOX 32861 CHARLOTTE 28232	CD /IM 060 A AC 704 338-3165	MCCOY, RALPH CARLISLE 1952 HILLSBORO ROAD WILMINGTON 28401	PTH 065 A P * AC 919 343-7074	MCDELVEE, THOMAS BRENTON 3535 RANDOLPH RD. 201-W CHARLOTTE 28211	GS 060 A AC 919 757-4629
MCCALL, MICHAEL ALVIN P. O. BOX 1229 MARION 28752	FP 059 A AC 704 433-2492	MCCOY, THOMAS HATTON 2600 E. 7TH ST. PO BOX 35228 CHARLOTTE 28235	ORS 060 A AC 704 372-9820	MCENTIRE, JERRILL LEE DRAWER 789 OLD FORT 28762	FP 059 AC 704 668-7694
MCCALL, WILLIAM HERBERT 601 CITY BUILDING ASHEVILLE 28801	OPH 011 A L 704 253-0421	MCCRACKEN, JOSEPH STUART 2609 N. DUKE ST. #203 DURHAM 27704	OPH 032 A * AC 919 471-8495	MCFADDEN, JAMES STUART 210 LINVILLE GARDENS PO BOX 2256 PINEHURST 28374	AN 063 AC 919 295-7184
MCCALL, WILLIAM, JR. 1405 PLAZA DRIVE WINSTON-SALEM 27103	A /IM 034 AC 919 765-4131	MCCRORY, MICHAEL ELLIOTT 2609 N. DUKE ST. STE. 303 DURHAM 27704	DR 032 A P AC 919 471-8411	MCFADYEN, OSCAR LEE, JR. 524 VALLEY ROAD FAYETTEVILLE 28305	IM 026 A L/RT 919 484-0221
MCCALLUM, REX MONROE 445 BILTMORE AVE. STE. 306 ASHEVILLE 28801	RHU 011 AC 704 258-9533	MCCUEN, BROOKS WALTON, II BOX 3802, DUMC DURHAM 27710	OPH 032 A AC 919 684-6749	MCFALLS, VERNON WENDELL 624 QUAKER LANE, SUITE 100-A HIGH POINT 27262	PD 040 A AC 919 882-4187
MCCANN, RICHARD LUCAS BOX 2990, DUMC DURHAM 27710	GS /CDS 032 A AC 919 684-2620	MCCULLEN, BOBBY K., JR. 207 CONNER DR. APT. 17 CHAPEL HILL 27514	OPH /OALR 032 A S 919 942-4623	MCCEE, JOHN ASBURY, JR. 3535 RANDOLPH ROAD, SUITE 105 A CHARLOTTE 28211	GYN 060 A AC 704 365-0470
MCCARTHY, JAMES J. 118 ESTES DR. EXT. CARRBORO 27510	032 A S 919 942-5517	MCCULLOUGH, CHARLES T., JR. 129 MCDOWELL ST. ASHEVILLE 28801	ORS 011 A * AC 704 258-8800	MCCEE, JULIAN MURRILL 1101 N ELM ST., APT. 508 GREENSBORO 27401	GP 041 A L/RT 919 272-0787
MCCARTNEY, CHERYL FAINTUCH UNC, WING D, 208-H CB #7160 CHAPEL HILL 27599	P 032 A AC 919 966-4551	MCCULLOUGH, DAVID LEGARDE BOWMAN GRAY, DEPT. OF URO. WINSTON-SALEM 27103	U 034 A AC 919 748-4131	MCGHEE, TERENCE BARCLAY 7 MCDOWELL STREET ASHEVILLE 28801	N /IM 011 A AC 704 255-7776
MCCARTNEY, WILLIAM HUGH NCMH, DEPT. OF RADIOLOGY CHAPEL HILL 27514	DR /NM 032 AC 919 966-4384	MCCUNE, BRUCE ROBERT 2808 MAPLEWOOD AVENUE WINSTON-SALEM 27103	GE /IM 034 AC 919 768-6211	MCGILL, JOHN CHARLES PO BOX 1309 KINGS MOUNTAIN 28086	FP 023 A AC 704 739-3681
MCCARTY, GREGORY S. 2683 MULBERRY LANE ARLINGTON SQUARE APTS. GREENVILLE 27858	074 A S 919 355-5145	MCCUNNIFF, ANN JONES 1025 WESSYNGTON RD. WINSTON-SALEM 27104	ON /TR 034 A AC 919 748-4981	MCGILLICUDDY, DENIS MICHAEL 117 MEDICAL DRIVE GREENVILLE 27834	ORS 074 A AC 919 758-1777
MCCARTY, RALPH LEEVES 843 HEMPSTEAD PL. CHARLOTTE 28207	CRS 060 A L/RT 704 333-1259	MCCUNNIFF, DENNIS EDWARD 1025 WESSYNGTON ROAD WINSTON-SALEM 27104	OBG 034 A AC 919 768-6221	MCGIMSEY, JAMES FRANKS, JR. WESTERN CAROLINA CENTER ENOLA ROAD MORGANTON 28655	IM /P 012 AC 704 433-2744
MCCASKILL, LLOYD CURTIS P. O. BOX 788 MAXTON 28364	EM /FP 083 A AC 919 844-3236	MCCURDY, DONALD PITTARD 2200 E. 7TH ST. CHARLOTTE 28204	OPH 060 A AC 919 966-2281	MCGINNIS, LEE ANN M. PO BOX 32861 CHARLOTTE 28232	AN 060 A AC 704 338-2372
MCCASKILL, SAMUEL GAULT, JR. RUIN CREEK ROAD HENDERSON 27536	OBG 091 A AC 919 492-8576	MCCUTCHAN, JAMES HUTTON UNC STUDENT HEALTH-BOX 7074 CHAPEL HILL 27599	IM /ID 032 AC 919 966-2281	MCGIRT, MURPHY FRANK, JR. KINSTON CLI., NORTH KINSTON 28501	ORS 054 AC 919 522-4155
MCCASLIN, ROBERT IAN 530 W. WEBB AVE. BURLINGTON 27215	PD 001 AC 919 228-8316	MCCUTCHEON, THOMAS M., JR. 1213 WALTER REED ROAD FAYETTEVILLE 28304	PD 026 AC 919 484-6121	MCGOUGH, WILLIAM MARION 527 MAPLE AVE. REIDSVILLE 27320	FP 079 AC 919 349-8461
MCCAULEY, ROGER LEE 190 CHARLOIS BOULEVARD WINSTON-SALEM 27103	P 034 A AC 919 768-6930	MCCUTCHEON, WILLIAM B., JR. 1830 HILLDALE ROAD DURHAM 27705	TS /CDS 032 A P AC 919 383-5531	MCGRATH, JAMES STUART EAST BEND FAMILY PRACTICE P. O. BOX 126 EAST BEND 27018	FP 086 A AC 704 699-3936
MCCLOSKEY, SCOTT MICHAEL 420 N. CENTER STREET HICKORY 28601	NS 018 A P AC 704 327-9740	MCDANIEL, EUGENE MARVIN, JR. 1142 N. ROAD STREET ELIZABETH CITY 27909	OBG 070 AC 919 338-0101	MCGRATH, EDWARD JOSEPH, JR. 3900 OLD WAKE FOREST ROAD RALEIGH 27609	OPH 092 A AC 919 872-3242
MCCOLLUM, DONALD EUGENE BOX 2919, DUMC DURHAM 27710	ORS 032 A AC 919 684-4055	MCDANIEL, JACK PASCHAL 1320 MEDICAL DRIVE FAYETTEVILLE 28304	OBG 026 A AC 919 323-3301	MCGUIRE, JOHN O'BRIEN 16 MCDOWELL STREET ASHEVILLE 28801	GS /VS 011 A AC 704 252-3366
MCCOMB, JOHN SANFORD 522 N. ELAM AVE. GREENSBORO 27403	OBG 041 AC 919 273-0936	MCDANIEL, WILLIAM JASON, JR. P. O. BOX 10707 RALEIGH 27605	ORS 092 A * AC 919 781-5600	MCGUIRT, WILLIAM FREDERICK 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	OTO /ON 034 A * AC 919 748-4161
MCCONNACHIE, CHARLES CHRIS. 1027 FLEMING STREET HENDERSONVILLE 28739	ORS 045 H 704 692-5781	MCDANIEL, JOSHUA DENT 711-C HIBBARD DR. CHAPEL HILL 27514	032 A S 919 933-6482	MCILWAIN, THOMAS P. 1262 OLIVER ST. FAYETTEVILLE 28304	P 026 A AC 919 484-5151
MCCONNELL, MARY HELEN 675 BILTMORE AVENUE ASHEVILLE 28803	PD 011 A AC 704 253-1641	MCDERMOTT, T. PAUL, JR. 104 #8 MELVILLE LOOP CHAPEL HILL 27514	032 A S 919 942-2334	MCINNIS, ANGUS GUY 1123 S. MAIN STREET REIDSVILLE 27320	FP 079 AC 919 342-4286
MCCONNELL, ROBERT WILLIAM 1711 W. SIXTH STREET GREENVILLE 27834	R /NM 074 A AC 919 752-5000	MCDEVITT, NOEL BRUCE 1 MEMORIAL DR. PINEHURST 28374	PS /PSF 063 A P * AC 919 295-5131	MCINTOSH, ARCHIBALD NOCK 219 S. MAIN STREET MARION 28752	GP 059 AC 704 652-4211
MCCONVILLE, JOSEPH FRANCIS 2257 BRECKNOCK DR. WINSTON-SALEM 27103	AN 034 A AC 919 765-2259	MCDONNELL, CHARLES H., III 2G RIVER BIRCH RD. DURHAM 27705	032 A R 919 383-6076	MCINTOSH, OVETA B. 411 DUPREE ST. DURHAM 27707	PD 032 AC 919 683-1316
MCCONVILLE, ROBERT HOWARD, JR. 611 WICKER ST. PO BOX 387 SANFORD 27330	FP 053 A AC 919 774-6023	MCDONNELL, KENNETH PAUL 1411 ANDERSON ST. DURHAM 27707	032 A S 919 383-6076	MCINTYRE, ROSS WILLIAM BOX 3094, DUMC - ANES. DURHAM 27710	AN 032 AC 919 681-4774
MCCOOL, JAMES ALVIS 3333 SILAS CREEK PARKWAY WINSTON-SALEM 27103	PTH 034 A P AC 919 760-5840	MCDUGAL, EMORY GARY RT. #2, BOX 190 CONOVER 28613	VS 018 AC 704 322-9105	MCJILTON, ROY ALAN 4303 LUDGATE ST. LUMBERTON 28358	OTO 078 A AC 919 738-4226
MCCORMICK, CAROLYN BRUMM 2606 N. ELM ST. LUMBERTON 28358	FP 078 A AC 919 738-3718	MCDOWELL, ROBERT WARREN 734 ROCK QUARRY ROAD RALEIGH 27610	GP 092 A AC 919 832-5389	MCKAY, CLINTON HULL 5135 HARDISON RD. CHARLOTTE 28226	IM 060 A L/RT 704 373-0700
MCCORMICK, JOHN THOMAS 401 MULBERRY ST. SW. STE. 103 LENOIR 28645	ORS 014 A P AC 704 758-7091	MCDOWELL, ROY HENDRIX 100 DOGWOOD LANE BELMONT 28012	FP 036 A L/RT 704 825-8546	MCKAY, HAMILTON W., JR. 2711 RANDOLPH RD. STE. 400 P. O. BOX 221189 CHARLOTTE 28207	A /IG 060 A AC 704 372-7900
MCCOY, JOSEPH BENNETT, JR. 150 PROVIDENCE ROAD CHARLOTTE 28207	GYN 060 A AC 704 377-0461	MCDUFFIE, ROBERT STANLEY 325 VANDERBILT RD. ASHEVILLE 28803	OBG 011 L/RT 704 274-2795		

MCKAY, MICHAEL DIXON 1212 CEDARHURST DR. RALEIGH 27609	GE 092 A AC 919 872-4850	MCLENDON, SUSAN D. 2000-J FALCON WOOD CT. WINSTON-SALEM 27107	034 A * S 919 760-4458	MCNAMARA, MICHAEL JAMES 4F POST OAK RD. DURHAM 27705	032 A R 919 684-8211
MCKEE, LEWIS MIDDLETON 17 SURREY LN., HOPE VALLEY DURHAM 27707	IM 032 A L/RT 919 489-3262	MCLENDON, WILLIAM W. NCMH, DEPT. OF LABORATORIES CHAPEL HILL 27514	CLP /PTH 032 A * AC 919 966-2317	MCNEIL, QUINCY ALBERT, JR. 2909 MAPLEWOOD AVENUE WINSTON-SALEM 27103	OBG 034 AC 919 765-2802
MCKEEL, MILLARD FILMORE 445 BILTMORE AVE. ASHEVILLE 28801	NS 011 A AC 704 258-8500	MCLEOD, JONNIE HORN 1504 BILTMORE DR. CHARLOTTE 28207	PD 060 * AC 704 547-2171	MCNEILL, CLAUDE ACKLE, JR. 248 DUTCHMAN CREEK RD. ELKIN 28621	FP 086 A L/RT 919 835-3136
MCKEITHEN, MURDOCH RITCHIE P. O. BOX 1808 LAURINBURG 28352	OBG 083 A AC 919 276-4432	MCLEOD, MARY MARGARET P. O. DRAWER 1047 SANFORD 27330	PD /A 053 A L/RT 919 775-7642	MCNEILL, DONALD DRAKE, JR. P. O. DRAWER 680 LENOIR 28645	PTH /CLP 014 A * AC 704 754-7063
MCKENNA, WILLIAM R. 445 BILTMORE CENTER, STE. 404 ASHEVILLE 28801	ID 011 AC 704 258-9635	MCLEOD, MICHAEL EUGENE BOX 3073, DUMC DURHAM 27710	GE /IM 032 AC 919 684-4046	MCNEILL, MARY DAVIS P. O. BOX 719 HAVELOCK 28532	FP /PD 025 A AC 919 447-3613
MCKENZIE, EDWARD BURT 709 BARKER STREET SALISBURY 28144	GS 080 A AC 704 633-3441	MCLEOD, VIDA CANADAY WEYMOUTH APTS., BOX 2001 SOUTHERN PINES 28387	GP 063 A L/RT 919 692-0333	MCNIEL, JESSE NEAL 1602 MEMORIAL DRIVE BURLINGTON 27215	P 001 A P * AC 919 227-1123
MCKENZIE, SHEPPARD ALLEN, III 3805 COMPUTER DRIVE RALEIGH 27609	OBG /IM 092 A AC 919 781-6200	MCLEOD, WILLIAM LESLIE 2711 RANDOLPH ROAD, STE. 305 CHARLOTTE 28207	GYN 060 A * AC 704 372-8020	MCPHAIL, SCHUBERT DEAN 1517 N. CHURCH ST. GREENSBORO 27408	OBG 041 A AC 919 379-8460
MCKENZIE, WAYLAND NASH P. O. BOX 248 ALBEMARLE 28002	GP 084 A * L 704 982-3312	MCLEOD, WILLIAM LOUIS P. O. BOX 100 OAKBORO 28129	GP 084 A L 704 485-3319	MCPHERSON, HARRY THURMAN DUKE UNIV. MED. CTR. DURHAM 27710	END /IM 032 AC 919 684-2186
MCKEOWN, WILLIAM DAVID 1511 WESTOVER TERR., STE. 108 GREENSBORO 27408	IM /GER 041 A AC 919 378-9906	MCLESTER, WILLIAM DUMAS 597 OLIVER STREET FAYETTEVILLE 28304	OPH /PTH 026 A P * AC 919 323-2002	MCPHERSON, SAMUEL DACE, JR. 1110 W. MAIN STREET DURHAM 27701	OPH 032 A AC 919 682-9341
MCKINLEY, PHILIP HOWARD 3111 MAPLEWOOD AVENUE WINSTON-SALEM 27103	OPH 034 AC 919 768-3240	MCLOUGHLIN, JILL HICKEY 217 TRAVIS AVE. CHARLOTTE 28207	IM 060 A AC 704 372-3350	MCQUADE, JOHN FRANCIS, III 4511 GLOUCESTER DRIVE NEW BERN 28560	CD 025 A AC 919 633-1010
MCKINNEY, ALEXANDER STUART 102 HOSPITAL DR. CLYDE 28721	N 044 A P AC 704 452-0331	MCMAHAN, THOMAS KEITH PO BOX 976 1710 PARKWOOD DR. NORTH WILKESBORO 28697	IM /FP 097 A P AC 919 667-2634	MCQUEEN, CHAPMAN T. APT. BB5 OLD WELL APTS. CARRBORO 27510	032 A S 919 226-9650
MCKINNEY, WILLIAM MARKLEY BOWMAN GRAY-NEUROLOGY WINSTON-SALEM 27103	N /NM 034 A AC 919 748-4494	MCMAHON, KEVIN D. 3100 BLUE RIDGE RD. STE. 200 RALEIGH 27612	OPH 092 AC 919 787-2211	MCQUEEN, JAMES AUBREY 418 KING STREET LAURINBURG 28352	FP 077 AC 919 895-3138
MCKINNON, WILLIAM JAMES 407 S. GREENE ST. PO BOX 309 WADESBOO 28170	GS 004 A L/RT 704 434-9671	MCMANUS, HUGH FORREST, JR. 3331 WHITE OAK RD. RALEIGH 27609	IM 092 A L 919 832-6510	MCQUEEN, ROBERT BRUCE, JR. 780 WOODY DRIVE GRAHAM 27253	FP 001 AC 919 228-1354
MCKNIGHT, RODNEY LEONARD P. O. BOX 957 SHELBY 28150	AN 023 A AC 704 434-9671	MCMANUS, KEITH ERIC 401 N. IVY AVE. SILER CITY 27344	FP 019 A AC 919 663-2761	MCRAE, MARVIN EVERETT 1009 COUNTRY CLUB DR. GREENSBORO 27408	D 041 A L/RT
MCLAIN, BILL REID ROUTE #2, BOX 542 MOORESVILLE 28115	FP 049 A RT 704 663-3584	MCMILLAN, CAMPBELL WHITE UNC, DEPT. OF PED. CB #7220 CHAPEL HILL 27599	PHO /PD 032 A AC 919 966-3133	MCRAE, WILLIAM KENNETH UNC-G STUDENT HEALTH CENTER GREENSBORO 27412	GP 041 AC 919 334-5340
MCLAIN, LEE WILLIAM, JR. PO BOX 40999 RALEIGH 27629	N 092 A AC 919 782-3456	MCMILLAN, JAMES FULFORD 1301 LIVE OAK PARKWAY WILMINGTON 28403	P 065 A RT 919 762-8178	MCREE, CHRISTINE ELLIS DOROTHEA DIX HOSP.-PSY RALEIGH 27611	CHP 092 AC 919 733-5344
MCLAMB, JOSEPH TIMOTHY 2701 MEDICAL OFFICE PLACE GOLDSBORO 27530	ORS 096 A * AC 919 736-2157	MCMILLAN, JAMES H. 206 ASHELAND AVE. ASHEVILLE 28801	FP 011 AC 704 258-8681	MCWHORTER, JOE MAURICE 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	NS 034 A * AC 919 748-4020
MCLAMB, SAMUEL BAGGETT, JR. 201 COX BOULEVARD GOLDSBORO 27530	IM 096 AC 919 734-9455	MCMILLAN, MARSHALL P. 6900 FARMINGDALE DR. CHARLOTTE 28207	FP 060 A AC 704 536-3286	MCWHORTER, ROBERT LIGON 68 LAKE CONCORD ROAD, N.E. CONCORD 28025	IM 013 A AC 704 782-3135
MCLANAHAN, CHARLES SCOTT 1010 EDGEHILL ROAD, N. CHARLOTTE 28207	NS 060 A P AC 704 376-1605	MCMILLAN, ROBERT MONROE PO BOX 786, CCNC PINEHURST 28374	IM 063 A L/RT 919 692-6885	MEADOR, PHILIP D., JR. MEDICAL SERVICE BLDG. RUIN CREEK ROAD HENDERSON 27536	D 091 AC 919 492-2123
MCLAUGHLIN, JAMES CHARLES 250 CHARLOIS BOULEVARD WINSTON-SALEM 27103	OBG 034 A AC 919 768-4730	MCMURCHY, CHARLES RANDOLPH 2808 MAPLEWOOD AVE. WINSTON-SALEM 27103	GE /IM 034 AC 919 768-6211	MEADORS, WALTER V., JR. RT. 9, BOX 183-M OLD MOCKSVILLE PROF. CTR. STATESVILLE 28677	OBG 049 A AC 704 873-7250
MCLEAN, AUGUSTUS ALEXANDER, JR P. O. BOX 98 MURFREESBORO 27855	GP 008 A L/RT 919 398-3789	MCMURRAY, CLARENCE MCCAIN 808 SCHENCK STREET SHELBY 28150	IM 023 A AC 704 482-1482	MEADS, MANSON 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	IM 034 A L/RT 919 748-4301
MCLEAN, HARRY H., III ECU STUDENT HEALTH SERVICE GREENVILLE 27834	FP /EM 074 A AC 919 551-6841	MCMURRY, AVERY WILLIS 207 LEE STREET SHELBY 28150	GS 023 A P * AC 919 482-6359	MEANS, ROBERT LEE PO BOX 5082, ARDMORE STATION WINSTON-SALEM 27103	GS 034 P AC 919 725-1602
MCLEAN, JONATHAN OWENS 2330 RANDOLPH RD-LAUREL AVE. CHARLOTTE 28207	CD /IM 060 A P AC 704 377-0575	MCMURRY, DAVID WILLIS 130 LAKE CONCORD ROAD CONCORD 28025	IM 013 A AC 704 782-3114	MEASE, WILLIS EUGENE 209 S. CHURCH ST. RICHLANDS 28574	FP 067 A P * AC 919 324-3105
MCLEAN, MALCOLM 2711 RANDOLPH RD. STE. 307 CHARLOTTE 28207	PD 060 AC 704 332-6625	MCMURRY, JOHN EUGENE, JR. 2311 DELANEY AVE. WILMINGTON 28401	OTO 065 AC 919 762-3866	MEBANE, GILES YANCEY 202 S. FIFTH STREET MEBANE 27302	FP 001 A AC 919 563-9341
MCLEAN, WALTER COPLEY, JR. 276 E. CHESTNUT ST. ASHEVILLE 28801	OPH 011 A AC 704 255-8978	MCMURRY, WARREN W. 1414 MEDICAL CENTER DR. WILMINGTON 28401	GS /VS 065 A AC 919 763-7363	MEBANE, JOHN GILMER P. O. BOX 1405 RUTHERFORDTON 28139	IM 081 A L/RT 704 287-3515
MCLEAN, WILLIAM THADDEUS, JR. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	N /PD 034 A AC 919 748-2316	MCNABB, JAMES WILLIAM RT. #7, BOX 720 MOORESVILLE 28115	FP 049 A AC 704 663-7328	MEDDERS, JAMES DOYLE 113 JOLLY STREET LOUISBURG 27549	GP /CD 035 A P AC 919 496-4250
MCLEAR, RONALD KENT 3200 CROASDAILE DR. STE. 201 DURHAM 27705	EM 032 A P AC 919 383-0709	MCNAMARA, JAMES O'CONNELL 400 LAKE SHORE LANE CHAPEL HILL 27514	N 032 AC 919 286-0411	MEDDERS, RUSSELL GLEN 221 BRANDON ROAD BALTIMORE, MD 21212	032 A R 919 967-8927
MCLELLAND, ROBERT 3716 ST. MARKS ROAD DURHAM 27707	DR 032 AC 919 489-0407	MCNAMARA, JOHN FRANCIS, II 2711 RANDOLPH ROAD, STE 512 CHARLOTTE 28207	OBG 060 AC 704 333-4104		

MEDLIN, CHARLES THOMAS 2000 HIGHWAY 70 WEST GARNER 27529	FP 092 AC 919 772-3266	MESROBIAN, HRAIR-GEORGE 428 BURNETT-WOMACK 229-H UNC SCHOOL OF MEDICINE CHAPEL HILL 27514	U 032 AC 919 966-2572	MILLER, ALMA ELIZABETH PO BOX 18 BROUGHTON HOSPITAL MORGANTON 28655	P /IM 012 A P AC 704 637-2729
MEDOFF, JEFFREY ROY 721 GREEN VALLEY RD. GREENSBORO 27408	GE 041 AC 919 378-0774	MESSENHEIMER, JOHN ANDREW UNC, DEPT. OF NEUROLOGY CHAPEL HILL 27514	N /IM 032 AC 919 966-3707	MILLER, ANDREW CLEVELAND, III 311 W. THIRD AVENUE GASTONIA 28052	FP 036 AC 704 865-4231
MEECE, JEANNINE MARIE 1800 W. FIFTH ST., STE. #8 GREENVILLE 27834	PD 074 AC 919 758-1750	MESSNER, DANIEL K. 2170 MIDLAND RD. SOUTHERN PINES 28387	OPH 063 AC 919 295-2100	MILLER, DAVID CHARLES 123 HOSPITAL DR. TARBORO 27886	ORS 033 A P AC 919 823-7212
MEEK, JOE BERNARD 1300 MEDICAL DRIVE FAYETTEVILLE 28304	ORS 026 AC 919 484-2171	METZEROTT, KIRK OLIVER 1600 E. THIRD ST. CHARLOTTE 28204	AN 060 AC 704 843-3109	MILLER, DAVID EDMOND CENTRAL MEDICAL PARK 2609 N. DUKE ST., STE. 403 DURHAM 27704	CD /IM 032 A AC 919 471-8441
MEGA, LESLY TAMARIN ECU, DEPT. OF PSYCHIATRY GREENVILLE 27858	CHP /P 074 AC 919 551-2673	METZGER, GEORGE ANDREW 322 MULBERRY ST., SW PO BOX 1020 LENOIR 28645	IM /NEP 014 AC 704 758-5544	MILLER, DAVID T. PITT CO. MEMORIAL HOSPITAL DEPT. OF CLINICAL PATHOLOGY GREENVILLE 27834	CLP 074 AC 919 551-9020
MEHTA, HASUMATI VIJAYKUMAR 518 SANDHURST DR. FAYETTEVILLE 28304	FP /OBG 026 * AC 919 323-4091	METZGER, W. JAMES ECU, DEPT. OF MEDICINE GREENVILLE 27834	IM /AI 074 AC 919 551-2562	MILLER, DONALD STUART 1405-B N. LAFAYETTE STREET SHELBY 28150	ND /ON 023 AC 704 482-8936
MEHTA, NALIN CHIMANLAL 815 N. THIRD ST. ALBEMARLE 28001	IM /ON 084 AC 704 983-3508	MEYER, ANDREW FREDERIC BOX 3083, DUKE MED. CENTER DURHAM 27710	AN 032 AC 919 681-6526	MILLER, DUDLEY 150 ROBESON STREET FAYETTEVILLE 28301	ADM /OBG 026 A AC 919 483-3156
MEHTA, VIJAYKUMAR B. 518 SANDHURST DR. FAYETTEVILLE 28304	HEM /ON 026 * AC 919 323-4091	MEYER, CLINTON LOUIS 1202 MEDICAL CENTER DR. WILMINGTON 28401	GE /IM 065 A P AC 919 341-3345	MILLER, EDITH HAMILTON 1350 S. KINGS DRIVE CHARLOTTE 28207	IM /END 060 A AC
MEIS, PAUL JEAN BOWMAN GRAY, DEPT. OF OBG WINSTON-SALEM 27103	OBG /NPM 034 AC 919 748-4039	MEYER, DAVID DAVIS 1800 S. HAWTHORNE ROAD WINSTON-SALEM 27103	034 AC 919 768-1860	MILLER, EDMUND EUGENE 200 DOCTORS DRIVE BOONE 28607	OPH 095 A AC 704 264-0042
MELARAGNO, HELEN P. 2001 E. FIFTH STREET CHARLOTTE 28204	FP 060 A AC 704 373-1663	MEYER, GEORGE WRIGHT 1106 HILLDALE ROAD DURHAM 27705	OPH 032 A AC 919 286-9663	MILLER, EMERY CLYDE, JR. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	END /IM 034 A * AC 919 748-3630
MELCHIOR, JOSEPHINE T. 1124 NIBLICK DRIVE ROCKY MOUNT 27801	PD 098 * L/RT 919 442-8290	MEYER, JOHN A. 202 DOCTORS BLDG. ASHEVILLE 28801	AN 011 A AC 919 254-1969	MILLER, GEORGE JOHN, JR. 1207 HIGHLAND DRIVE WASHINGTON 27889	ORS 007 A P AC 919 946-6513
MELERO, ANDRES TARCISIO P. O. BOX 28 ROXBORO 27573	GS /TS 073 A AC 919 599-2953	MEYER, ROBERT SWENSON 208 N. HERMAN ST. GOLDSBORO 27530	FP 096 A P AC 919 734-5600	MILLER, GEORGE ROLFE 902 COX ROAD, SUITE A GASTONIA 28052	ORS 036 A L/RT 704 865-6487
MELGES, FREDERICK T. BOX 2995, DUMC DURHAM 27710	P 032 A P AC 919 684-3655	MEYERS, JAMES HOWARD 2540 EMPIRE DR. WINSTON-SALEM 27103	PTH 034 AC 919 722-9410	MILLER, HAROLD MELTON 4367 WEDDINGTON RD. CONCORD 28025	EM /FP 013 AC 704 786-2111
MELTON, BARRY CLINE 1095-K CHEYENNE COURT GREENVILLE 27834	074 A S 919 756-2917	MEYERS, WILLIAM CLARK BOX 3041, DUMC DURHAM 27710	GS /CRS 032 A * AC 919 684-6437	MILLER, HENRY SHELTON, JR. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	CD /IM 034 A AC 919 748-4467
MELTON, JAMES DURANT ROUTE #3, BOX 50 MORGANTON 28655	FP 012 A AC 704 437-9401	MEYERSON, MARTIN BENJAMIN NEW HANOVER MEM. HOSP. WILMINGTON 28403	TR 065 A P AC 919 343-7017	MILLER, HERSEY EUGENE 702 HARTNESS ROAD STATESVILLE 28677	OTO /HNS 049 A AC 704 873-5224
MELTON, KATHERINE ROSE 1900 RANDOLPH RD. #718 CHARLOTTE 28207	GS /NTR 060 A 704 332-6756	MEYMANDI, ASSAD 1212 WALTER REED ROAD FAYETTEVILLE 28304	P /N 026 A * AC 919 485-6166	MILLER, HORACE WILLIAM, IV 405 DEVANE ST. FAYETTEVILLE 28305	PS 000 A * R
MELTZER, MORTON ROUTE 1, BOX 231-A CAMERON 28326	FP /P 092 A AC 919 245-4819	MEZER, HOWARD CABITT 1305 W. WENDOVER AVENUE GREENSBORO 27408	OBG /END 041 A AC 919 273-2835	MILLER, HORACE WILLIAM, JR. 1766 METROMEDICAL DR. FAYETTEVILLE 28304	IM /CD 026 AC 919 483-7090
MELVIN, WINSLOW BRITT 1109 BUCKLEY RD. APT. #3 LIVERPOOL, NY 13088	AN 074 A R 315 451-2637	MICHAEL, DOUGLAS WORTH PO BOX 1239 CONOVER 28613	FP 018 A AC 704 464-3821	MILLER, HOWARD EDWARD 723 EDITH STREET BURLINGTON 27215	ORS 001 AC 919 227-4256
MENDELSON, STEVEN LOUIS 445 BILTMORE CTR., STE. 306 ASHEVILLE 28801	RHU /IM 011 AC 704 258-9533	MICHAEL, JAY BENJAMIN TAR HEEL MANOR APTS. E-7 HIGHWAY 54 BYPASS CARRBORO 27510	032 A S 919 929-4809	MILLER, IRA BEN 110 CHURCH STREET HIGH POINT 27260	IM 040 A AC 919 884-5888
MENNILLO, ROGER NILES 1610 GLENDALE DURHAM 27701	032 A S 919 688-0527	MICHAEL, OTIS BENTLEY DOCTOR'S BLDG, SUITE 301 ASHEVILLE 28801	IM /CD 011 AC 704 255-8947	MILLER, JOEL BYRON P. O. DRAWER 38 HICKORY 28601	OBG 018 A AC 704 322-4140
MENSCER, DARLYNE DEPT. OF FAMILY PRACTICE CHARLOTTE MEM. HOSP., BOX 32861 CHARLOTTE 28232	FP 060 A P * AC 704 338-3172	MICHAL, RICHARD GLENN 1041 NOELL LANE, STE. 101 ROCKY MOUNT 27804	FP 064 AC 919 443-3133	MILLER, LISA DAWN 1715 ELIZABETH AVE. WINSTON-SALEM 27103	034 A * S 919 761-0895
MEREDITH, JAY WAYNE 363 SPRINGDALE AVENUE WINSTON-SALEM 27104	TRS /TS 034 A AC 919 748-2011	MICHAL, WILLIAM NORWOOD, JR. 624 QUAKER LANE, SUITE 200-A HIGH POINT 27262	PD 040 A AC	MILLER, MARK F. 2752 MIDDLETON #31-J DURHAM 27705	032 A S 919 383-0025
MEREDITH, JESSE HEDGEPEETH BOWMAN GRAY-SURGERY WINSTON-SALEM 27103	GS /TS 034 A * AC 919 748-4278	MICHALAK, DANIEL PETER 1700 S. TARBORO ST. WILSON 27893	OBG 098 A AC 919 291-9010	MILLER, MICHAEL JOHN BOX 31040, DUMC DURHAM 27710	032 A R 919 684-8111
MERLO, RICHARD BARTLETT 773 BROOKWOOD DRIVE ELKIN 28621	R /NM 086 A AC 919 835-3722	MICHEL, RONALD CHARLES 250 CHARLOIS BLVD. WINSTON-SALEM 27103	IM /END 034 A AC 919 768-4730	MILLER, MILTON LEONARD 17 LOGGIN TRAIL DURHAM 27707	PYA /P 032 A L 919 493-6059
MERRILL, RICHARD HOSMER ECU SCHOOL OF MEDICINE GREENVILLE 27834	NEP /IM 074 A AC 919 551-2545	MIKUS, KEVIN PETER PO BOX 1239 CONOVER 28613	FP 018 A * AC 704 464-3821	MILLER, NORMAN ERIC 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	END /IM 034 AC 919 748-2073
MERTESDORF, JAMES MICHAEL 1350 S. KINGS DR. CHARLOTTE 28207	GE 060 AC 704 372-8750	MILAM, WILLIAM FREER PO BOX 1268 SHELBY 28150	PTH 023 A * AC 704 487-3147	MILLER, PHILIP RAIFORD 3100 BLUE RIDGE RD. RALEIGH 27612	IM /CD 092 A P AC 919 781-7500
MERWARTH, CHARLES RICHARD 2800 BLUE RIDGE BLVD. #503 RALEIGH 27607	IM /A 092 A AC 919 782-7500	MILES, JOHN RALPH, JR. 211 S. CHESTNUT ST. GASTONIA 28054	GS /VS 036 A AC 704 867-8975	MILLER, ROBERT EVANS 1822 BRUNSWICK AVENUE CHARLOTTE 28207	ORS 060 A P * AC 704 373-0544
MERWIN, WILLIAM H., JR. 1350 S. KINGS DR. CHARLOTTE 28207	OTO /OT 060 A AC 704 372-8750			MILLER, ROBERT MICHAEL 1198 WYKE ROAD SHELBY 28150	FP 023 A AC 704 487-1148

MILLER, STEPHEN MAURICE 603 DOLLY MADISON GREENSBORO 27410	FP /EM 041 AC 919 852-7530	MISHKIND, STEVEN HART 2500-C MILLER PARK CIRCLE WINSTON-SALEM 27103	034 A S 919 722-0477	MONG, JAMES ARTHUR 100 S. BOYLAN AVENUE RALEIGH 27603	OBG 092 A AC 919 832-5529
MILLER, WALTON H., JR. 1008 E. ASH STREET GOLDSBORO 27530	GS /GYN 096 A L/RT 919 734-1141	MISULIA, ANDREW G. 115-A N. WILSON DUNN 28334	FP 051 A AC 919 892-4096	MONROE, CHARLES T. 1825 W. SIXTH ST. GREENVILLE 27834	PD /PH 074 AC 919 752-4141
MILLER, WILLIAM CAREY, JR. 1653 BANBURY DRIVE FAYETTEVILLE 28304	R 026 AC 919 484-6881	MITCHELL, BRIAN P. PO BOX 158 MURPHY 28906	IM 020 AC 704 837-2696	MONROE, CLEMENT ROSENBERG 1475 MIDLAND RD. #18 MIDDLETON PL. SOUTHERN PINES 28387	GS 063 A L/RT 919 692-4888
MILLER, WILLIAM STACEY 3803-A COMPUTER DR. RALEIGH 27609	D 092 A AC 919 782-2152	MITCHELL, CALVIN HARRISON BOX 3802, DUKE UNIV. EYE CTR. DURHAM 27710	OPH 032 A * AC 919 684-4381	MONROE, EDWIN WALL ECU SCHOOL OF MEDICINE GREENVILLE 27834	IM 074 A P * AC 919 551-2983
MILLING, JAMES REAVES 718 BRUNSWICK DRIVE WAYNESVILLE 28786	FP 044 AC 704 456-5566	MITCHELL, CHARLES K., JR. 1400 HOOKER RD., APT. E GREENVILLE 27834	074 A S 919 756-9098	MONROE, GEORGE CLARKE, III 470 LAKE CONCORD RD. CONCORD 28025	IM 013 AC 704 786-7122
MILLNS, DALE THOMAS 800 HOSPITAL DRIVE NEW BERN 28560	U 025 L/RT 919 633-2712	MITCHELL, JOHN SCOTT 1041 NOELL LANE, STE. 101 ROCKY MOUNT 27801	FP 064 AC 919 443-3133	MONROE, JOHN HOWARD 236 PLYMOUTH AVE. WINSTON-SALEM 27104	GYN 034 AC 919 765-2802
MILLS, JOHN FRANKLIN RUIN CREEK ROAD HENDERSON 27536	FP 091 A AC 919 492-3152	MITCHELL, JOYCE MARIE RT. #1, BOX 416E BETHEL 27812	EM /IM 074 A AC 919 551-4757	MONROE, JOHN LAUHLIN PINEHURST SURGICAL CLINIC PINEHURST 28374	OTO /HNS 063 A P * AC 919 295-2161
MILLS, MICHAEL KENNETH 3402 DONEGAL DR. CLEMMONS 27012	OBG 034 A AC 919 722-6891	MITCHELL, LANDIS PATTERSON 200 OHIO STREET SPINDALE 28160	FP 081 A L 704 286-2391	MONROE, JOHN THADDEUS, JR. 1839 E. FRANKLIN ST. CHAPEL HILL 27514	PYA /P 032 A AC 919 967-5289
MILLS, RANDOLPH DENNIS RUIN CREEK RD. MEDICAL ARTS CTR. HENDERSON 27536	FP 091 A AC 919 492-3152	MITCHELL, LEWIS DEAN 1016 PROFESSIONAL VILLAGE GREENSBORO 27401	FP 041 AC 919 379-1156	MONROE, LANCE TRUMAN 476 CAMROSE CIRCLE, NE CONCORD 28025	OBG /OBS 013 A L 704 782-3717
MILLS, STEPHEN ALAN 3320 PADDINGTON LANE WINSTON-SALEM 27106	CDS /TS 034 A AC 919 748-4488	MITCHELL, WILLIAM E. P. O. BOX 760 BRYSON CITY 28713	GS /GP 087 A AC 704 488-2283	MONROE, WILLIAM MURCHISON DOCTORS PK, STE. I STANTONSBURG ROAD GREENVILLE 27834	OPH 074 A AC 919 758-4166
MILLS, WARDELL HARDEE 1202 COUNTRY CLUB DRIVE GREENSBORO 27408	OPH 041 A L/RT 919 274-3391	MITCHENER, CALVIN CHAMBERS 1600 E. FIFTH STREET CHARLOTTE 28204	D 060 A P AC 704 376-1523	MONSON, DONALD MALVIN PO BOX 309 ROXBORO 27573	R 073 A P AC 919 597-9101
MILLSAPS, DAVID MCIVER 226-H MORGANTON BOULEVARD LENOIR 28645	PD 014 A AC 704 758-5111	MITCHENER, JAMES SAMUEL, JR. P. O. BOX 1808 LAURINBURG 28352	GS 083 A AC 919 276-3541	MONSON, ROBERT CHARLES, II 3535 RANDOLPH RD., STE. 201-W CHARLOTTE 28211	GS /VS 060 AC 704 364-8100
MILLWARD, DAVID KENT 1212 CEDARHURST DR. RALEIGH 27609	CD /IM 092 AC 919 872-4850	MOBLEY, THOMAS BARNETT, III 1905 GLEN MEADE ROAD WILMINGTON 28403	U 065 A AC 919 763-6251	MONTANA, GUSTAVO SANTOS DUMC-RADIATION ONC. DURHAM 27710	TR 032 A AC 919 684-6183
MILNER, THOMAS HAMILTON, III 3155 MAPLEWOOD AVENUE WINSTON-SALEM 27104	DR 034 A AC 919 773-3877	MOCK, DAVID CARLTON 208-C W. CENTER STREET LEXINGTON 27292	GP 029 L/RT 704 246-5826	MONTEITH, LINDA GAIL DOCTORS PARK APTS. N3 GREENVILLE 27834	074 A S 919 758-2124
MILTICH, MICHAEL FIEGEL 1600 E. THIRD STREET CHARLOTTE 28204	OTO /HNS 060 A * AC 704 372-3300	MODEST, VICKI ELLEN 3760 WILL SCARLET RD. WINSTON-SALEM 27104	A S 919 765-6399	MONTERO-PEARSON, PER M. PO BOX 407 MOCKSVILLE 27028	GS 034 AC 704 634-6121
MILTON, CECIL JEROME 225 HAWTHORNE LANE CHARLOTTE 28204	ORS 060 A * AC 704 334-0809	MODROW, PETER ALBERT 805 FAULKNER PLACE RALEIGH 27609	AN /P 092 A P AC 919 876-0581	MONTGOMERY, JAMES HUGH 445 BILTMORE CTR., STE. 301 ASHEVILLE 28801	R /IM 011 A AC 704 255-3565
MILTON, DAVID THOMAS 445 BILTMORE, STE. 301 ASHEVILLE 28801	DR 011 A AC 704 255-5161	MOELLER, ARLYN MCCLAY 118 POMPTON DRIVE FAYETTEVILLE 28304	FP 026 AC 919 424-6104	MONTGOMERY, STEPHEN PAUL P. O. BOX 10707 RALEIGH 27605	ORS 092 A * AC 919 781-5600
MIMS, GROVER RAY, III 2580 COUNTRY CLUB ROAD WINSTON-SALEM 27104	AN 034 A AC 919 748-4791	MOELLER, GARLAND RADFORD P. O. BOX 68 POLLOCKSVILLE 28573	RHU /IM 025 A AC 919 224-4591	MONTGOMERY, WAYNE SWOPE 129 MCDOWELL ST. ASHEVILLE 28801	ORS 011 A AC 704 258-8800
MINARD, RAYMOND BRUCE 322 DUPONT CIRCLE GREENVILLE 27834	AN 074 A AC 919 756-9168	MOELLER, MARK BOLTON P. O. BOX 68 POLLOCKSVILLE 28573	ID /IM 025 A AC 919 633-1010	MONTGOMERY, WILLIAM GARDNER 2932 LYNDDURST AVE. WINSTON-SALEM 27103	U 034 A P AC 919 765-4021
MINCEY, GREGORY JULIAN 2170 MIDLAND ROAD SOUTHERN PINES 28387	OPH 063 A AC 919 295-2100	MOELLER, WENDY PAULSON P. O. BOX 68 POLLOCKSVILLE 28573	GE /IM 025 A AC 919 633-1010	MONTY, LOUIS HAROLD 610 DOUGLAS ST., #A-104 DURHAM 27705	P 032 A R 919 286-2188
MINICK, JAMES ELDER 5029 COUNTRY CLUB ROAD WINSTON-SALEM 27104	GP 034 AC 919 768-9515	MOFFATT, ROBERT CARR 445 BILTMORE CENTER ASHEVILLE 28801	ON /GS 011 A * AC 704 258-2464	MOODY, DIXON MCGUIRE BOWMAN GRAY-RADIOLOGY WINSTON-SALEM 27103	DR 034 A AC 919 748-4435
MINICK, RUSSELL CLARK 1504 WILLIAMS RD. LEWISVILLE 27023	FP 034 AC 919 768-9515	MOFFETT, ALEXANDER STUART 70 W. LUCERNE CIR., APT. 409 ORLANDO, FL 32801	GS 002 A L/RT 407 841-1310	MOON, JAMES PATRICK 1054 BURRAGE RD. NE CONCORD 28025	OBG 013 A AC 704 788-4151
MINKIN, BRUCE IRVING PO BOX 1980 ASHEVILLE HAND CTR. ASHEVILLE 28802	HS 011 A AC 704 258-0847	MOFRAD, ALI SABOORTINAT P. O. BOX 1160 LINCOLNTON 28093	PD /PHO 055 A AC 704 735-1441	MOORE, ARL VAN, JR. 5201 MORROWICK RD. CHARLOTTE 28226	DR 060 A AC 704 365-0343
MINTEER, WILLIAM JEFFREY #8 PALMETTO PLACE GREENVILLE 27858	CD /IM 074 P AC 919 752-6101	MOHAMED, ADEL WAGDI 415 N. SEVENTH STREET SMITHFIELD 27577	U 051 A AC 919 934-5955	MOORE, BARRY ALLEN 600 MEDICAL DRIVE GREENVILLE 27834	P 074 A AC 919 758-6080
MINTZ, RUDOLPH IVEY, JR. 1906 STANTON ROAD KINSTON 28501	OBG 054 A AC 919 522-3373	MOHR, JACK ELMER 706 WELLINGTON DRIVE CHAPEL HILL 27514	OBG 092 A AC 919 876-8225	MOORE, CAROL ANN 110 S. CONTENTNEA ST., APT. C FARMVILLE 27828	074 A S 919 753-2015
MINUS, JOSEPH SHEPPARD 101 GROVER STREET SHELBY 28150	PD 023 A AC 704 482-1435	MOHR, LINDA CHAPPELL 3220 WAKE FOREST RD. RALEIGH 27609	ORS 060 A P AC 704 373-0544	MOORE, DAVID HARRY UNC, DIV. OF GYN-ONC N.C. MEMORIAL HOSP. CHAPEL HILL 27514	GYN /ON 032 A R 919 966-1196
MIRAGLIA, CHARLES CARMEN 1057 S. HAWTHORNE RD. WINSTON-SALEM 27103	034 A * S 919 723-2299	MOKRIS, JEFFREY GEORGE 1822 BRUNSWICK AVE. CHARLOTTE 28207	OTO 032 A S 919 596-4936	MOORE, DAVID HUDDLER 7110 LAWYERS ROAD CHARLOTTE 28212	PD /ID 060 AC 704 568-6500
MIRAGLIA, COLLEEN P. 1057 S. HAWTHORNE RD. WINSTON-SALEM 27103	FP 034 A * R 919 723-2299	MOLTER, DAVID W. 2974 CAROLYN DRIVE DURHAM 27703	OBG 070 P AC 919 338-2151	MOORE, DONALD TORIAN 601 FAYETTEVILLE STREET DURHAM 27701	OBG 032 AC 919 682-9241

MOORE, DONALD WILSON 401 W. DECATUR ST. MADISON 27025	FP 079 AC 919 548-9618	MOORESS, RALPH LOUIS P. O. BOX 2068 FAYETTEVILLE 28302	P 026 A P AC 919 323-0601	MORRISON, FRANK CRAWFORD P. O. BOX 1549, MEDICAL BLDG. CANTON 28716	GP 044 A AC 704 648-5215
MOORE, EDWARD EUGENE 3 DOCTOR'S PARK ASHEVILLE 28801	OPH 011 L 704 252-6741	MORETZ, FRANK HANNON 202 DOCTOR'S BUILDING ASHEVILLE 28801	AN 011 A AC 704 254-1969	MORRISON, HUGH MAXWELL, JR. P. O. BOX 460 PINEHURST 28374	OPH 063 A P * AC 919 295-6809
MOORE, FREDERICK E. PO DRAWER K CASWELL FAMILY MED. CTR. YANCEYVILLE 27379	FP 001 AC 919 694-9331	MORETZ, JOSEPH ALFRED, III 250 18TH ST. CIRCLE, SE HICKORY 28602	ORS 018 A AC 704 322-5172	MORRISON, LEON MACMILLAN 9 MEDICAL PARK MOREHEAD CITY 28557	OBG 016 AC 919 247-4297
MOORE, GEORGE HORACE 833 DURHAM RD., STE. C WAKE FOREST 27587	FP 092 AC 919 556-6762	MOREWITZ, NANCY D. 420 N. CENTER ST. HICKORY 28601	N 018 A AC 704 327-0553	MORRISON, ROBERT HOLCOMBE 331 FAIRFIELD RD. FAYETTEVILLE 28303	OBG 026 L/RT 919 867-1044
MOORE, HORACE GREELEY, JR. 1414 MEDICAL CENTER DRIVE WILMINGTON 28401	GS /TS 065 A AC 919 763-7363	MORGAN, BENJAMIN EDWARD 200 NASH MEDICAL ARTS MALL ROCKY MOUNT 27801	OBG 064 A AC 919 443-5941	MORRISON, ROGER WILLIAM 4 LUCKY LANE ASHEVILLE 28804	PTH /CLP 011 A L/RT 704 252-4868
MOORE, JEFFREY ALAN RT. #6, BOX 94 BLUE'S FARM RD. LAURINBURG 28352	PUD 083 A P AC 919 275-7727	MORGAN, HERMAN GRADY, JR. 1920 S. 16TH ST. WILMINGTON 28401	PD 065 AC 919 762-3942	MORROW, SARAH TAYLOR 3304 WADE AVE. RALEIGH 27607	PH /PD 092 A AC 919 851-9305
MOORE, JOHN ANDREW 1511 WESTOVER TERRACE GREENSBORO 27408	IM /RHU 041 A AC 919 373-0951	MORGAN, JOEL CLARENCE 2827 LYNTHURST AVE., STE. 205 WINSTON-SALEM 27103	CDS /TS 034 A AC 919 768-9510	MORTENSON, RODNEY ALLEN 2017 ST. ANDREWS ROAD GREENSBORO 27408	ORS /HS 041 A AC 919 275-6318
MOORE, JOHN HERBERT, III 2115 EAST 7TH ST., STE. 104 CHARLOTTE 28204	GE /IM 060 A AC 704 377-4009	MORGAN, JOHN GARLAND 101 CLINIC DR. TARBORO 27886	GS /VS 033 A AC 919 823-2105	MORTON, DUNCAN, JR. 2104 RANDOLPH ROAD CHARLOTTE 28207	PDS /GS 060 A AC 704 377-3900
MOORE, LAWRENCE WHITE, JR. 1110 W. MAIN STREET DURHAM 27701	OPH 032 A * AC 919 682-9341	MORGAN, MELVIN KENNETH 5029 COUNTRY CLUB RD. WINSTON-SALEM 27104	FP 034 A AC 919 773-0074	MOSELEY, JAMES RENNIE 340 N. MAIN STREET WAKE FOREST 27587	FP 092 AC 919 556-4826
MOORE, MELISA DARA 8935 STEELBERRY DR. CHARLOTTE 28208	032 A R 919 737-2563	MORGAN, NANCY ELAINE 401 MULBERRY ST., SW, STE. 200 LENOIR 28645	FP 014 AC 704 754-0707	MOSELEY, ROBERT GALLOWAY BOX 7304, NCSU-S.H.S. RALEIGH 27695	PD 092 AC 919 737-2563
MOORE, PAUL MILTON, JR. 619 E. 12TH STREET WASHINGTON 27889	FP 007 AC 919 946-1146	MORGAN, RALPH SILER P. O. BOX 668 SYLVA 28779	CD /IM 050 A L/RT 704 586-2134	MOSELEY, WALTON STROZIER 311 S. LASALLE ST. APT. 37-B DURHAM 27705	032 A S 919 286-3311
MOORE, PIERCE JONES, JR #1 P.J.'S PLACE HENDERSONVILLE 28739	GS 045 A AC 704 687-0355	MORGAN, RICHARD EARL 5211 TRENTWOODS DR. NEW BERN 28560	GS 025 AC 919 633-2081	MOSER, ARTUS MONROE, JR. 10 MCDOWELL STREET ASHEVILLE 28801	NEP /IM 011 A AC 704 258-8545
MOORE, RALPH BRYAN, JR. CHILDREN'S CLINIC 1920 16TH STREET WILMINGTON 28403	PD 065 AC 919 763-2072	MORICIE, CHARLES HUNTER 1223 CRESCENT DR. REIDSVILLE 27320	GS /ABS 079 A L/RT 919 349-8590	MOSER, WADE HAUSER, JR. CAPITAL RADIOLOGY ASSOC. P. O. BOX 17947 RALEIGH 27619	DR 092 A AC 919 847-8564
MOORE, ROBERT ALEX, JR. 1404 MEDICAL CENTER DRIVE WILMINGTON 28401	NS 065 A AC 919 763-6578	MORRELL, ROBERT X., JR. MOSES CONE HOSPITAL 1200 N. ELM ST. GREENSBORO 27401	PM 041 A AC 919 379-3667	MOSES, JOHN W., JR. 1210 MANGUM ST. DURHAM 27701	PD 032 AC 919 688-5463
MOORE, ROBERT ALEXANDER, III 1243 WEDGEWOOD DR. WINSTON-SALEM 27103	NEP /IM 034 A R 919 765-5862	MORRIS, ARTHUR SHERMAN, JR. 80 VICTORIA ROAD ASHEVILLE 28801	OBG 011 A P AC 704 255-8900	MOSKOWITZ, MARK SANDERS 2555 PEMBROKE ROAD GASTONIA 28054	GS /VS 036 A AC 704 864-8377
MOORE, ROBERT MORGAN 2001 S. 17TH STREET WILMINGTON 28401	ORS 065 A AC 919 763-7344	MORRIS, DAVID PERRY 6958 FOLGER DR. CHARLOTTE 28226	AM 060 A AC 704 364-4798	MOSS, GEORGE OREN ROUTE #1, BOX 397JJ BOSTIC 28018	GP /PH 081 A L/RT 704 245-2853
MOORE, RONALD ALVIN 702 NEWMAN ROAD MCCARTHY SQUARE NEW BERN 28560	IM /ON 025 A * AC 919 633-5333	MORRIS, EDWIN LEE 8 RIVERVIEW ST., STE. 201 FRANKLIN 28734	FP 056 AC 704 369-9531	MOSS, PAUL N. 541 MAIN ST. HUDSON 28638	GP 014 A AC 704 728-3551
MOORE, THOMAS JOSEPH 1822 BRUNSWICK AVE. CHARLOTTE 28207	ORS 060 A AC 919 723-7177	MORRIS, GEORGE THOMAS A. 711 HERMITAGE ROAD BURLINGTON 27215	IM 001 A AC 919 226-9317	MOSSBURG, WM. LEE 2131 RIVERSHORE RD. ELIZABETH CITY 27909	GS /VS 070 A AC 919 338-1110
MOORE, THOMAS PHILLIP ONSLow MEMORIAL HOSPITAL JACKSONVILLE 28540	R 067 A AC 919 577-2274	MORRIS, JAMES FRANCIS P. O. BOX 1153 GOLDSBORO 27530	PD 096 A AC 919 734-4014	MOSTELLAR, HENRY CURTIS, III 2229 PARKWAY DR. WINSTON-SALEM 27103	GS 034 A R 919 723-7177
MOORE, WILLIAM DONALD PO BOX 819 COATS 27521	FP 043 A P * AC 919 897-6423	MORRIS, JAMES JOSEPH, JR. BOX 2993, DUMC DURHAM 27710	CD /IM 032 A AC 919 684-4329	MOTAPARTHY, VENKATASOMAIHAH C. 2419-C E. ASH ST. GOLDSBORO 27530	GE 096 A AC 919 731-2526
MOORE, WILLIAM LOCKE 616 PASTEUR DRIVE GREENSBORO 27403	PD 041 A AC 919 292-1353	MORRIS, JOHN STEVEN 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	PUD 034 R 919 748-4325	MOTUZ, DANIEL JOHN 4441-302 HEDLEY WAY CHARLOTTE 28210	AN 060 A AC 704 379-5943
MOORE, WILLIAM MORGAN, III 403 S. KING STREET MORGANTON 28655	OBG 012 A AC 704 433-4661	MORRIS, KENNY JORDAN 216 OYSTER BAY LN. WILMINGTON 28403	R 065 A AC 919 343-7069	MOUNTJOY, JOHN ROBERT 1420 PLAZA DRIVE WINSTON-SALEM 27103	OTO 034 A AC 919 765-4922
MOOREFIELD, WM. GUERRANT, JR. 120 PROVIDENCE ROAD CHARLOTTE 28207	ORS 060 A P AC 704 377-0351	MORRIS, LESLIE MORGAN 3636 BRENTWOOD DR. GASTONIA 28054	R 036 A L/RT 704 865-4430	MOVAHED, ASSAD SECTION OF CARDIOLOGY ECU SCHOOL OF MEDICINE GREENVILLE 27858	CD 074 AC 919 551-4651
MOORING, STEWART LEE RUTHERFORD HOSPITAL RUTHERFORDTON 28139	R /NM 081 A AC 704 287-7371	MORRIS, MARSHALL G., JR. 806 NOTTINGHAM DR. GREENSBORO 27408	GS /TS 041 L/RT 919 379-1478	MOYLAN, JOSEPH ANTHONY BOX 3947, DUMC DURHAM 27710	GS /VS 032 A AC 919 684-2237
MORCOS, VICTOR HANNA 522 N. ELAM AVE., STE. 203 GREENSBORO 27403	P 041 AC 919 854-2391	MORRIS, MARY LIDE 440 CEDARWOOD DRIVE BURLINGTON 27215	R /NM 001 A AC 919 584-9872	MOZINGO, GEORGE WM., III 101 W. 27TH ST. LUMBERTON 28358	U 078 A AC 919 738-7166
MOREHEAD, ROBERT PAGE 1051 ARBOR ROAD WINSTON-SALEM 27104	PTH 034 A L/RT 919 722-2879	MORRIS, PETER JOSEPH 2108 YORKGATE DR. RALEIGH 27613	PD /PH 092 AC 919 755-0761	MUENCH, LAURENCE WALTER 310 DOWNING DR. KINGS MOUNTAIN 28086	AN 023 A AC 704 739-4683
MORESCHI, RAFAEL MARIANO 105-A KILMAYNE DR. CARY 27511	IM /CD 092 A P AC 919 467-2253	MORRIS, RAE HENDERSON 111 LOUISE DRIVE, S.E. CONCORD 28025	GS 013 A L/RT 704 782-4918	MUGHARBIL, ZIYAD H. MURPHY MEDICAL CENTER PHYSICIANS BLDG. MURPHY 28906	U 020 A AC 704 837-7513
		MORRISSEY, LEMONT 723 EDITH STREET BURLINGTON 27215	FP 001 AC 919 229-4791	MUKAMAL, RONALD SASSON 333 JEFFERSON STREET WHITEVILLE 28472	GS /ORS 024 AC 919 642-2336

MULHOLLAND, JAMES VINCENT	PD /PD	010	MURRAY, NIAL PATRICK	AN	034	NANZETTA, LEONARD	AN	034
PO BOX 1208		AC	780 YORKSHIRE ROAD	A	AC	2756 WINDSOR ROAD	A	L/RT
SHALLOTTE 28459	919	754-8117	WINSTON-SALEM 27106	919	760-5259	WINSTON-SALEM 27104	919	768-7572
MULLEN, DONALD COLLINS	CDS /TS	000	MURRAY, WILLIAM GRAY	IM	041	NAPOLITANO, CHARLES A.		034
ST.LUKES HEALTH SCI.OFF.#310	A	AC	1808 CARLISLE ROAD	A	L/RT	1772 HAUSMAN DR.	A	S
2901 W. KINNICKINNICK RIVER PKY			GREENSBORO 27408	919	274-5155	WINSTON-SALEM 27103	919	722-7787
MILWAUKEE, WI 53215	414	649-3990	MURRAY, WILLIAM JAMES	AN	032	NAPPER, CLAY H., JR.		034
MULLIS, DONALD LEE	ORS	011	BOX 3094, DUMC	A	AC	2039 CRAIG ST.	A	S
111 VICTORIA ROAD	A	AC	DURHAM 27710	919	684-2569	WINSTON-SALEM 27103	919	777-8689
ASHEVILLE 28801	704	252-7331	MUSS, HYMAN BERNARD	ON /HEM	034	NAPPER, CLAY HUGHES	IM	034
MULLIS, WILLIAM FRANK	PS /GS	060	BOWMAN GRAY, DEPT. OF MED.	A	AC	301 MILLER ST., STE. 209	A	AC
2215 RANDOLPH ROAD	A	P	WINSTON-SALEM 27103	919	748-4397	WINSTON-SALEM 27103	919	723-0789
CHARLOTTE 28207	704	372-6846	MUSSELWHITE, NEILL HECTOR,III	FP	065	NARINS, JOSEPH PAUL	OBG	001
MULVANEY, GERALD GARFIELD	OBG	092	1602 DOCTOR'S CIRCLE	A	P	316 N. GRAHAM-HOPEDALE RD.	A	AC
11613 APPALOOSA RUN, WEST		AC	WILMINGTON 28405	919	251-9977	BURLINGTON 27215	919	227-3621
RALEIGH 27612	919	755-8535	MUTHER, ELLIS FRANK	N /P	025	NARRON, GREGORY		074
MUMFORD, LARRY	NPM /PD	032	721 PROFESSIONAL DR.	A	AC	RT. #8, BOX 201	A	S
3115 ACADEMY ROAD	A	AC	NEW BERN 28560	919	633-3744	GREENVILLE 27834	919	758-3672
DURHAM 27707	919	489-1976	MUTTON, THOMAS PAUL	GS /VS	034	NASH, CARL WILLIAM	R	079
MUNDAY, TONA LEIGH		032	2933 MAPLEWOOD AVENUE		AC	608 LINDEN DRIVE	A	AC
D-6 GRAHAM CONDOS.	A	S	WINSTON-SALEM 27103	919	768-9198	EDEN 27288	919	623-9711
MC CAULEY ST.			MYERS, CARY JOHN	FP	067	NASH, HOKE SMITH, JR.	OTO	060
CHAPEL HILL 27514	919	929-0577	PO BOX 5025	P	AC	1600 E. THIRD STREET	A	AC
MUNDORF, GEORGE	P	060	JACKSONVILLE 28540	919	353-2300	CHARLOTTE 28204	704	372-3300
6001 HEMBY ROAD		L/RT	MYERS, DAN ALLEN	U	054	NASH, S. RUSSELL	032	
MATTHEWS 28105	704	846-1276	KINSTON CLINIC, NORTH	A	AC	311 S. LASALLE ST. APT. 31Q	A	S
MUNDY, DONALD ASHFORD	AN	001	DOCTORS DRIVE			DURHAM 27705	919	286-4633
212 MEADOWOOD DRIVE	A	AC	KINSTON 28501	919	527-3043	NASH, WILL LIGHT	FP	050
BURLINGTON 27215	919	584-5352	MYERS, RICHARD STANTON	GS /TS	092	34 FISHER CREEK ROAD	A	AC
MUNROE, JOHN FRANCIS	IM /END	024	2800 BLUE RIDGE BOULEVARD	A	AC	SYLVA 28779	704	586-4012
BALDWIN WOODS, S.W.	A	AC	RALEIGH 27607	919	781-7414	NASHICK, GEORGE HENRY	GP	025
P. O. BOX 1249			MYERS, RICHARD THOMAS	GS /TS	034	PO BOX 729	A	AC
WHITEVILLE 28472	919	642-2230	613 GLEN ECHO TRAIL		L/RT	PAMLICO MEDICAL CTR., PA		
MUNT, ROBERT LAWRENCE, JR.	PD	092	WINSTON-SALEM 27106	919	748-4541	BAYBORO 28515	919	633-1616
4505 FAIR MEADOWS LN. #101		AC	MYRACLE, JOHN HOBART	PD /PDC	034	NASHOLD, JAMES REUBEN B.	074	
RALEIGH 27607	919	787-5495	250 CHARLOIS BOULEVARD	A	AC	704 WILLOW ST.	A	S
MURAD, JOSEPH LOUIS	OBG	074	WINSTON-SALEM 27103	919	768-4730	GREENVILLE 27858	919	758-1793
1730 W. FIFTH STREET, EXT.		AC	MYRICK, WILLIAM GLENN	IM	034	NASTALA, CHET LAWRENCE	032	
GREENVILLE 27834	919	758-4855	3115 TURKEY HILL RD.		AC	BOX 2779, DUMC	A	S
MURCHISON, JOHN F.	OPH	032	WINSTON-SALEM 27106	919	765-3806	DURHAM 27710		
BOX 3802, DUMC	A	R	NACHAMIE, DAVID A.	U	055	NATHAN, HENRY PAUL	IG /IM	044
DURHAM 27710	919	684-6611	117-B DOCTORS' PARK		AC	102 HOSPITAL DRIVE		AC
MURINSON, DONALD S.	ON /HEM	041	PO BOX 937			CLYDE 28721	704	452-0331
1511 WESTOVER TERRACE		AC	LINCOLNTON 28093	704	732-2661	NATHAN, LAUREN	032	
GREENSBORO 27408	919	373-0611	NADEL, SCOTT MARTIN	IM /PUD	041	548 FINLEY ST.	A	S
MURPHY, BARBARA ANNE	EM	074	721 GREEN VALLEY RD.	A	AC	DURHAM 27705	919	383-4227
ECU SCHOOL OF MEDICINE	A	AC	GREENSBORO 27408	919	378-0774	NATION, ROY GLEN	GP /IM	096
DEPT. OF EMERGENCY MED.			NADERI, MOHAMAD SIRUS	AN	060	407 N. HERMAN STREET		AC
GREENVILLE 27834	919	551-4757	2001 VAIL AVE.		AC	GOLDSBORO 27530	919	735-6261
MURPHY, DANIEL F.	SM /SM	041	MERCY HOSPITAL			NAUMOFF, PHILIP	FP	060
530 N. ELAM AVE.	A	P	CHARLOTTE 28207	704	375-4001	1012 KINGS DRIVE	A	* L
PO BOX 29523			NAGA, AHMED HADY	DR	031	CHARLOTTE 28283	704	334-4665
GREENSBORO 27403	919	292-8824	P. O. BOX 708	A	P	NAVE, LESTER DAVID, JR.	FP	033
MURPHY, DANIEL WM.	GE	034	KENANSVILLE 28349	919	296-0701	111 FAIRVIEW ROAD		AC
1901 S. HAWTHORNE RD.,STE. 310	A	AC	NAGEL, DONALD CHARLES	ALD /FP	011	ROCKY MOUNT 27801	919	446-3333
WINSTON-SALEM 27103	919	760-4340	REHAB. CENTER ALCOHOLIC	A	AC	NAYLOR, LEE ANN A.	DR	034
MURPHY, MICHAEL D.		034	PO BOX 1441			2803 LYNDBURST AVE.	A	AC
312 GRACE ST. #3	A	S	BLACK MOUNTAIN 28711	704	669-3424	WINSTON-SALEM 27103	919	768-1021
WINSTON-SALEM 27103	919	724-5686	NAGY, BRIAN R.	P	060	NEAL, CHARLES BODINE, III	PD	032
MURPHY, ROBERT JENNINGS, JR.	FP /PD	032	501 BILLINGSLEY RD.	A	AC	2919 COLONY ROAD	A	AC
ORANGE HIGH RD.	A	* L	CHARLOTTE 28211	704	375-3575	DURHAM 27705	919	489-9158
RT. #4, BOX 1971			NAHSE, PHILIP JOSEPH, JR.	032		NEAL, DEMAR AUSTIN, III	GS /CDS	049
HILLSBOROUGH 27278	919	732-9314	712 GOLDEN CREST CIR.	A	S	708 HARTNESS ROAD	A	* AC
MURPHY, TERRANCE P.	PD	092	HOMEWOOD, AL 35209			STATESVILLE 28677	704	873-1024
516 RIDGECREST RD.	A	AC	NAIK, SOMNATH	IM /PUD	078	NEAL, RUTHERFORD DOUGLAS	GS /GYN	060
CARY 27511	919	755-2236	4384 FAYETTEVILLE RD.	A	AC	2214 THETFORD CT.	A	L/RT
MURPHY, THOMAS LYNCH	GE /GE	080	PO BOX 947			CHARLOTTE 28211	704	365-6541
409 MOCKSVILLE AVE.		L/RT	LUMBERTON 28358	919	738-1141	NEAL, STACEY LYNN	032	
SALISBURY 28144	704	633-2732	NAILLING, RICHARD CABOT	GS /GYN	011	1302 THE OAKS		* S
MURPHY, THOMAS LYNCH, JR.	IM /PUD	036	5 DOCTOR'S PARK	A	P	CHAPEL HILL 27514	919	967-3939
1021 X-RAY DR.	A	P	ASHEVILLE 28801	704	254-6381	NEAL, WALTER ERNEST, JR.	OBG	078
GASTONIA 28054	704	867-2341	NAKAMOTO, RONA KEIKO	AN	063	4300 FAYETTEVILLE RD.	A	AC
MURPHY, WENDY ELAINE		034	722 HIGHLAND DR.	A	AC	LUMBERTON 28358	919	738-9601
1539 1/2 HAWTHORNE RD.	A	S	SANFORD 27330	919	774-2100	NEAL, WILLIAM RONALD	OBG	041
WINSTON-SALEM 27103	919	765-1935	NAMAN, CARL HAWKINS	GS /VS	023	1507 WESTOVER TERR.		AC
MURRAY, JANE H.	FP	032	1200 HARDIN DRIVE	A	P	GREENSBORO 27408	919	273-3661
3309 DIXON RD.		R	SHELBY 28150	704	482-6359	NEALE, RICHARD CARROLL, JR.	PTH /CLP	012
DURHAM 27707	919	471-2571	NANCE, CHARLES LEE, JR.	ORS	065	P. O. BOX 249	A	AC
MURRAY, JOHN CARROLL	D	032	2001 S. 17TH STREET	A	AC	RUTHERFORD COLLEGE 28671	704	879-8767
BOX 2907, DUMC		* AC	WILMINGTON 28401	919	763-7344	NEALE, WIRT THOMAS	PD	060
DURHAM 27710	919	684-3432	NANCE, FREDERICK LEE, JR.	GP	013	149 PROVIDENCE ROAD		AC
MURRAY, JOHN P.	OTO	084	314 PROFESSIONAL BUILDING	A	AC	CHARLOTTE 28207	704	377-5571
PO BOX 819	A	AC	KANNAPOLIS 28081	704	932-0211	NEAVE, VICTORIA C.D.	NS	040
ALBEMARLE 28001	704	983-6950	NANCE, JOHN WESLEY	FP	082	606 N. ELM ST.	A	AC
MURRAY, MICHAEL J.	TR	032	403 FAIRVIEW STREET	A	AC	HIGH POINT 27262	919	889-8877
910 CONSTITUTION DR. APT. 720		R	CLINTON 28328	919	592-6011			
DURHAM 27705	919	684-3742						

NEBEL, WILLIAM ARTHUR 120 CONNER DR. STE. 101 PO BOX 3317 CHAPEL HILL 27514	OBG 032 AC	NEWELL, LANNING RICHARD 3320 EXECUTIVE DR., STE. 119 RALEIGH 27609	GE /IM 092 A AC 919 878-9465	NICHOLSON, CHARLES H. PO BOX 18139 RALEIGH 27619	AN 092 A AC 919 781-7420
NEBLETT, DONALD THOMAS 16 ALL SOULS CRESCENT ASHEVILLE 28803	P 011 A AC 704 274-1415	NEWELL, MCARTHUR 1710 E. BESSEMER AVE. PO BOX 21503 GREENSBORO 27420	OBG 041 A AC 919 274-1558	NICHOLSON, DAVID R. 141 E. CORRIHER AVE. SALISBURY 28144	AN 080 A AC 704 638-1000
NEELAND, EUGENE CRAWFORD 1506 GROVE ST. WILSON 27893	FP 098 A L/RT 919 243-5530	NEWELL, ROBERT B., JR. 2000 NEUSE BLVD. NEW BERN 28560	PTH /CLP 025 A AC 919 633-8684	NICHOLSON, JAMES EVANS, III 304 MCCASKEY ROAD WILLIAMSTON 27892	FP 007 A P AC 919 792-8193
NEELEY, BRUCE CARLTON 1911 HILLANDALE RD. STE. 1040 DURHAM 27705	P /PYM 032 A AC 919 383-1516	NEWELL, ROBERT B. 508 NEPTUNE DR. CAPE CARTERET SWANSBORO 28584	GS /EM 040 A L/RT 919 393-6417	NICHOLSON, JOHN HARVEY, II 760-G HARTNESS ROAD STATESVILLE 28677	IM 049 A AC 704 873-8368
NEELON, FRANCIS ALBERT BOX 3021, DUMC DURHAM 27710	IM /END 032 A AC 919 684-4307	NEWLAND, CHARLES LOGAN 104 WOODSIDE DR. BREVARD 28712	FP 088 A L/RT 704 883-2156	NICHOLSON, THOMAS WESTRAY 615 E. 12TH STREET WASHINGTON 27889	CD /IM 007 AC 919 946-2101
NEIJSTROM, ERIC SHERWOOD 1007 PROFESSIONAL VILLAGE GREENSBORO 27401	ON /IM 041 AC 919 272-2141	NEWMAN, DAVID HAROLD 200 E. NORTHWOOD ST., STE. 304 GREENSBORO 27401	GS 041 A AC 919 378-9811	NICHOLSON, WANDA KAY 647 CRAIGE DORM, UNC CHAPEL HILL 27514	032 A S 919 933-3545
NEIMKIN, RONALD JAY 20 MCDOWELL ST. ASHEVILLE 28801	HS 011 A P AC 704 253-7521	NEWMAN, EDWIN 3535 RANDOLPH RD. CHARLOTTE 28211	R 060 A P AC 704 364-0568	NICKENS, LARRY COBB 2706 MEDICAL OFFICE PLACE GOLDSBORO 27530	PD 096 AC 919 734-4736
NEISH, DONALD DEWITT 2609 N. DUKE STREET DURHAM 27704	IM /GER 032 A * AC 919 471-8446	NEWMAN, HAROLD HASTINGS, JR. 516 MOCKSVILLE AVENUE SALISBURY 28144	GP /OM 080 A AC 704 633-7070	NICKS, DENNIS BART 2305 CANTERWOOD WILMINGTON 28401	PS /HS 065 A * AC 919 343-0119
NELIUS, SIGRID J. VONRENNER WEST DURHAM STATION BOX 2899 DURHAM 27705	IM /GPM 032 A AC 919 383-6289	NEWMAN, ROBERT HENRY PO BOX 659 LENOIR 28645	DR 014 A P AC 704 754-2283	NIELAND, ROBERT BRUCE 24 SECOND AVENUE, N. E. HICKORY 28601	FP 018 A AC 704 328-2231
NELSEN, KAY M. 2050 CRAIG ST. #24 WINSTON-SALEM 27103	034 A S 919 777-0975	NEWMAN, WALTER JOSEPH 6 DOCTOR'S PARK GREENVILLE 27834	NEP 074 A AC 919 752-8880	NIEMEYER, CHARLES JOHN 902 COX ROAD, SUITE A GASTONIA 28054	ORS 036 A P * AC 704 865-6487
NELSON, DAVID STEPHEN 248 FLINTSHIRE ROAD WINSTON-SALEM 27104	EM /GS 034 A AC 919 765-3950	NEWMAN, WILLIAM HAROLD 3427 MELROSE ROAD FAYETTEVILLE 28304	GS /TS 026 A AC 919 484-4106	NISS, GARY STEWART 1413 ELIZABETH AVE. CHARLOTTE 28204	CD 060 AC 704 372-8750
NELSON, JOHN DOUGLAS 3345 4TH ST. BLVD. NW HICKORY 28601	FP 018 A AC 704 256-9853	NEWMAN, WILLIAM NEAL WAKE HEART ASSOCIATES PO BOX 14427 RALEIGH 27620	CD /IM 092 AC 919 832-9253	NIFONG, FRANK MILLER P. O. BOX 988 CLEMMONS 27012	FP 034 L 919 766-6811
NELSON, LEWIS HENRY, III BOWMAN GRAY, DEPT. OF OBG WINSTON-SALEM 27103	OBG /GYN 034 A AC 919 748-4291	NEWSOM, GEORGIA L. 101 ASHEVILLE HIGHWAY SYLVA 28779	IM 032 A AC 704 586-2132	NISBETT, DONALD ALWIN 616 ATKINSON ST. LAURINBURG 28352	032 A S 919 277-0971
NELSON, PHILIP GROESBECK 1211 E. ROCK SPRING RD. GREENVILLE 27834	P 074 A L 919 758-3145	NEWSOME, ALBERT RAY 1405 PLAZA DRIVE WINSTON-SALEM 27103	CD 034 A AC 919 765-4131	NIX, JERRY DALE B-5 TAR HEEL MANOR CARRBORO 27510	032 A S 919 942-3947
NELSON, ROBERT BARRY P. O. BOX 10707 RALEIGH 27605	ORS 092 A AC 919 781-5600	NEWSOME, SAMUEL CARL P. O. BOX 1129 KING 27021	FP 034 A AC 919 983-4346	NIXON, WILLIAM PRESTON, JR. 1302 MEDICAL CENTER DRIVE WILMINGTON 28401	NEP /IM 065 A AC 919 763-3651
NEMEROFF, CHARLES BARNET BOX 3859, DUMC DURHAM 27710	P 032 A AC 919 684-6562	NEWTON, DALE ALAN 101 CLINIC DRIVE TARBORO 27886	IM /PD 033 A P AC 919 823-2105	NOAH, HUGH BRYAN 624 QUAKER LANE, SUITE D-200 HIGH POINT 27262	ORS /HS 040 AC 919 841-6262
NERNESS, JOHN LAVON 513 N. JUSTICE ST. HENDERSONVILLE 28739	OBG 045 AC 704 693-0736	NEWTON, DOUGLAS FRISBIE 1705 W. SIXTH STREET GREENVILLE 27834	GE /IM 074 P AC 919 752-6101	NOAH, VAN BATCHELOR 3900 OLD WAKE FOREST RD. SUITE 104 RALEIGH 27609	OPH 092 A P * AC 919 872-3242
NERNEY, JOHN JOSEPH 116 HOSPITAL DRIVE CLYDE 28721	OPH 044 AC 704 452-5816	NEWTON, GRAHAM DOUGALD 1600 E. FIFTH STREET CHARLOTTE 28204	D 060 A AC 704 376-1523	NOBLE, RICHARD CLAIBORNE 2620 NEW BERN AVE. RALEIGH 27615	IM 092 A AC 919 755-1111
NESBIT, FREDERICK 1900 RANDOLPH ROAD, STE. 900 CHARLOTTE 28207	P 060 AC 704 333-7722	NEWTON, JIMMIE ISAAC 3030 TRENWEST DRIVE WINSTON-SALEM 27103	OBG 034 A AC 919 768-4310	NOECKER, ROBERT J. PO BOX 884 CHAPEL HILL 27514	032 A * S 919 781-0707
NESBIT, WILLIAM MICHAEL DOCTORS BLDG. SUITE 223 1012 S. KINGS DR. CHARLOTTE 28283	N 060 A AC 704 333-2853	NEWTON, JOHN THOMAS 403 FAIRVIEW ST. CLINTON 28328	FP 082 AC 919 592-6011	NOEL, RICHARD DAVID 1026 COLLEGE STREET OXFORD 27565	GS 039 A AC 919 693-7066
NESI, MARC HENRY 200 E. NORTHWOOD ST., STE. 206 GREENSBORO 27401	U 041 AC 919 373-0871	NG, GODOFREDO TAN 1101 DRESSER COURT RALEIGH 27609	GS /TS 092 AC 919 876-2010	NOEL, ROBERT F., JR. RT. #11, BOX 94 CHAPEL HILL 27516	032 A S 919 968-6454
NETTLES, GEORGE STUEARD 2505 N. ELM STREET LUMBERTON 28358	IM 078 AC 919 739-2854	NG, KHYE WENG 1830 HILLANDALE ROAD DURHAM 27705	N /IM 032 A AC 919 383-5531	NOELL, JOHN STANFORD RT. 2, BOX 630-A NEBO 28761	FP 011 AC 704 584-0956
NEVILLE, CECIL HOWELL, JR. PINEHURST ORS CLINIC P. O. BOX 1650 PINEHURST 28374	ORS 063 A * AC 919 295-1392	NG, VICTOR WANG TA PO BOX 999 ROBERSONVILLE 27871	FP 007 AC 919 795-3018	NOLAN, CLYDE, JR. 1317 N. ELM ST. STE. 9 GREENSBORO 27401	D 041 AC 919 379-1193
NEWBORG, BARBARA BOX 3385, DUMC DURHAM 27710	IM 032 A AC 919 684-3418	NGO, CORAZON PO BOX 538 KENANSVILLE 28349	IM 031 A AC 919 296-1811	NOLAN, ROBERT EARL 1901 S. HAWTHORNE, STE. 210 WINSTON-SALEM 27103	GS /VS 034 A AC 919 765-5101
NEWELL, ERNEST T. DUKE POWER MCGUIRE STA. PO BOX 448 CORNELIUS 28031	OM /FP 060 A AC 704 588-1265	NIAZI-SAI, ABDOLHAKIM 208 HALL STREET WADESBOO 28170	IM /HEM 004 A AC 704 694-5159	NOMEIR, ABDEL-MOHSEN 3219 PENSBY ROAD WINSTON-SALEM 27106	CD /IM 034 A AC 919 748-4581
NEWELL, HOWARD WILSON, JR. 2400 WAYNE MEM. DR. GOLDSBORO 27530	096 AC 919 734-4845	NICASTRO, JOSEPH FRANCIS 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	ORS 034 A AC 919 748-3947	NONEMAN, JACK W., JR. 3400 EXECUTIVE DR., STE. 201 RALEIGH 27609	CD 092 A AC 919 872-8920
NEWELL, JOSEPHINE E. RALEIGH TOWNE, APT. #47 525 WADE AVENUE RALEIGH 27605	ADM /FP 098 A * AC 919 733-7611	NICHOLS, GEORGE LOUIS 1431 LAUREL LANE GASTONIA 28054	P /CHP 036 AC 704 867-4411	NORBURN, CHARLES S. P. O. BOX 5216 BILTMORE 28803	GS 011 A L 704 272-6204
		NICHOLS, MARK LOVEL 2425 COLEY FOREST PLACE RALEIGH 27612	IM /EM 092 AC 919 755-8589	NORBURN, RUSSELL LEE 1617 HENDERSONVILLE RD. ASHEVILLE 28803	EM 011 A L 704 274-3557

NORCROSS, FREDERICK C. 1839 E. GARRISON BOULEVARD GASTONIA 28052	PD 036 AC 704 864-2685	O'BRIEN, THOMAS F., JR. ECU SCHOOL OF MEDICINE GREENVILLE 27834	GE /ADM 074 A P * AC 919 551-2149	OLBRANTZ, KEITH R. 445 BILTMORE CTR., STE. 301 ASHEVILLE 28801	R 011 A AC 704 254-2371
NORDAN, JOHN MCLEAN 102 LAKE CONCORD ROAD, N.E. CONCORD 28025	U 013 A AC 704 786-5131	O'CAIN, CHARLES FRANK 30 CHOCTAW STREET ASHEVILLE 28801	PUD /IM 011 A AC 704 255-7733	OLDER, ROBERT ALAN 3104 DEVON RD. DURHAM 27707	DR 032 A P AC 919 383-6984
NORDSTROM, CARL ROBERT 10 DOCTOR'S DR. BOONE 28607	FP 095 AC 704 264-3881	O'CONNOR, MICHAEL LEE BOWMAN GRAY, DEPT. OF PATH. WINSTON-SALEM 27103	PTH 034 AC 919 748-4311	OLDHAM, H. NEWLAND, JR. DUKE UNIV. MED. CTR. DURHAM 27710	CDS /GS 032 A AC 919 684-3243
NORFLEET, CHARLES MILLNER, JR. 1244 ARBOR ROAD, #199 WINSTON-SALEM 27104	U 034 A P L/RT 919 722-1464	O'CONNOR, ROBERT DARRELL FAIRGROVE CHURCH ROAD P. O. DRAWER 2484 HICKORY 28601	OTO 018 A P AC 704 322-3725	OLEEN, GEORGE GERHARD PO BOX 973 MONROE 28110	FP /IM 090 A * L 704 283-6622
NORINS, MICHAEL ELLIOTT 122 WINDSOR PLACE CHAPEL HILL 27514	032 R 919 933-0367	O'DONNELL, HELEN MARY 1921 MULINER AVE. BRONX, NY 01046	FP 000 A R 919 575-4541	OLESON, JAMES ROBERT BOX 3085, DUMC DURHAM 27710	TR /ON 032 A AC 919 684-3742
NORMAN, ANDY MURRAY 20 DOCTOR'S PARK BOONE 28607	OBG 095 AC 704 264-1232	O'DONNELL, ROBERT WILLIAM 2407 GRACE AVE. PO BOX 2587 NEW BERN 28560	P 025 A AC 919 633-4171	OLIN, DAVID BAKER 208 W. WENDOVER AVENUE GREENSBORO 27401	NEP /IM 041 919 379-9708
NORRIS, CHARLES BRADLEY 1039 AROSA AVE. CHARLOTTE 28203	IM 060 A L/RT 704 334-1506	O'HALLARON, MAUREEN A. 1902 QUEEN ST. #E-6 WINSTON-SALEM 27104	034 A S 919 724-3686	OLINGER, BENJAMIN RAY 131 MCDOWELL STREET ASHEVILLE 28801	OTO 011 A AC 704 254-3517
NORRIS, H. THOMAS PITT COUNTY MEM. HOSPITAL GREENVILLE 27834	PTH 074 A AC 919 551-4951	O'NEAL, EVA MANN 1924 WHITE HOLLOW DR. GREENVILLE 27858	074 A S 919 756-9049	OLIVER, DAVID CLARK 702 NEWMAN RD. MCCARTHY SQUARE NEW BERN 28560	CD /IM 025 AC 919 633-5333
NORTON, EVE GWENDOLYN 4000 KINGSCOTE CR. CHARLOTTE 28226	EM 060 A AC 704 364-1038	O'NEAL, RUTH BOWMAN GRAY, DEPT. OF PED. WINSTON-SALEM 27103	PD 034 A L 919 727-8105	OLIVER, FREDERICK CARLTON, JR. 103 BAINES COURT CARY 27511	IM 092 * AC 919 467-6125
NOTO, JOSEPH ANTHONY 520 BILTMORE AVENUE ASHEVILLE 28801	TS /GS 011 A AC 704 252-7357	O'NEIL, H. WILLIAM 200 MEMORIAL DR. JACKSONVILLE 28540	OBG 067 A AC 919 353-2115	OLIVER, GEORGE MOTLEY, JR. 6 MEDICAL PARK MOREHEAD CITY 28557	OBG 016 AC 919 726-8016
NOTRICA, MARC ALAN D-3 DOCTORS PARK GREENVILLE 27834	074 A S 919 758-7359	O'NEILL, MICHAEL RAYMOND 1900 RANDOLPH RD., STE. 816 CHARLOTTE 28207	U 060 A AC 704 334-3033	OLIVER, JOHN GLADSON 408 EIGHTH STREET NORTH WILKESBORO 28659	OPH 097 A P AC 919 838-5121
NOVEK, STEVEN JAI STRATFORD HILLS 36-E CHAPEL HILL 27514	032 A S 919 929-8823	O'QUINN, EDWARD NELSON 115 S. CHANNEL DR. WRIGHTSVILLE BEACH 28480	OBG 065 L/RT 919 763-9015	OLIVER, JOSEPH ANDREW P. O. BOX 458 ROCKWELL 28138	FP 080 A L 704 279-7227
NOVICK, THOMAS L. 3535 RANDOLPH RD. STE. 201-W CHARLOTTE 28211	GS /VS 060 A AC 704 364-8100	O'ROARK, HENRY CLYDE 2711 RANDOLPH RD. STE. 309 CHARLOTTE 28207	OBG 060 AC 704 377-3396	OLIVER, KENNETH LEON 1900 RANDOLPH ROAD CHARLOTTE 28207	OBG 060 AC 704 377-5675
NOWLAN, FAGG BERNARD 4308 KIMMIDGE ROAD GREENSBORO 27406	FP 041 A RT 919 674-5100	O'ROURKE, MARK ALLEN 125 BALDWIN AVE. CHARLOTTE 28204	IM /ON 060 A AC 704 338-6300	OLIVER, WILLIAM RUSSELL 114-B FIDELITY STREET CARRBORO 27510	PTH 032 A R 919 929-7120
NOWLIN, GEORGE PRESTON 1868 MARYLAND AVENUE CHARLOTTE 28209	U 060 A L/RT 704 334-0302	OAK, CHANG YOON HIGHWAY 64 EAST PO BOX 987 PLYMOUTH 27962	IM 007 A AC 919 793-9051	OLLER, DALE WILLIAM 3000 NEW BERN AVE. RALEIGH 27610	GS /VS 092 AC 919 755-8698
NUGENT, RICHARD RECHER DIV. OF HEALTH SERVICES P. O. BOX 2091 RALEIGH 27602	GPM /OBG 032 * AC 919 733-3816	OAKES, WALTER JERRY BOX 3272, DUMC DURHAM 27710	NS 032 A AC 919 684-5013	OLSEN, ELISE ARLINE BOX 3294, DUMC DURHAM 27710	D /IM 032 AC 919 684-6844
NUNEZ, MICHAEL J. 311 S. LASALLE ST., APT. 14A DURHAM 27705	032 A S 919 383-1448	OAKLEY, STANLEY PRESTON, JR. ECU, DEPT. OF PSY. MED. GREENVILLE 27834	P 074 A AC 919 551-2660	OLSEN, JEFFREY DOVE 2451 BOONE AVE. WINSTON-SALEM 27103	034 A S 919 725-9812
NUNLEY, JAMES ALBERT, II BOX 2919, DUMC DURHAM 27710	ORS /HS 032 A AC 919 684-4033	OAKLEY, WARD SAYRE, JR. P. O. BOX 1650 PINEHURST 28374	ORS 063 A P * AC 919 295-4200	OLSEN, KENNETH GEORGE 137 COKE PLACE JACKSONVILLE 28540	AN 067 AC 919 455-0188
NUNN, CHALMERS MORTON, JR. 1413 JEREMY LANE ROCKY MOUNT 27801	GE 064 * AC 919 443-9084	OATES, LARRY ALLEN 2900 HIGHWOODS BLVD. RALEIGH 27604	IM 092 A AC 919 878-9870	OLSON, DAVID GEORGE 7108 PINEVILLE-MATTHEWS RD. NALLE CLINIC CHARLOTTE 28226	092 AC 704 542-1952
NUNNALLY, JAMES THOMAS, III 2000 YORKGATE DRIVE RALEIGH 27612	CHP /P 092 A AC 919 781-1160	OBER, KARL PATRICK 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	END /IM 034 AC 919 748-2076	OLSON, PAUL RICHARD ROUTE #3, BOX 112 LEICESTER 28748	FP 011 A AC 704 258-0635
NUTT, JAMES EDWARD 3400 EXECUTIVE DR., STE. 201 RALEIGH 27609	CD /IM 092 A P AC 919 872-8920	OBERLIN, DELOY CHARLES ROUTE #3, BOX 690 NEWTON 28658	AN /EM 018 A AC 704 322-6070	OLSON, ROBERT MORTIMER ROUTE #1, BOX 229-R KENLY 27542	OPH 051 A L/RT 919 284-2526
NUTT, SUZANNE HAMILTON 717 SNOW HILL ST. AYDEN 28513	074 A S 919 746-4695	ODERE, FRED GORDON DURHAM CO. HOSP-PTH DURHAM 27704	PTH 032 P AC 919 470-5243	OLYMPIO, GEORGIA K. 526 OSBORNE RD. WINSTON-SALEM 27103	034 AC 919 768-5217
NYCUM, LAWRENCE ROSS 43 LAUREL RIDGE APPTS. CHAPEL HILL 27516	032 A P * S 919 929-3225	ODOM, GUY LEARY 2812 CHELSEA CIRCLE DURHAM 27707	NS 032 A L/RT 919 489-2206	OLYMPIO, MICHAEL A. 526 OSBORNE RD. WINSTON-SALEM 27103	AN 034 AC 919 768-5217
NYE, MARY JANE LOVE 1919 WILSHIRE DRIVE DURHAM 27707	PD /ADL 032 A AC 919 489-9534	OELRICH, AUGUST M. P. O. BOX 1169 SANFORD 27330	GS 053 A L 919 775-7146	OMAN, TIMOTHY ROY 414 HUGO ST. DURHAM 27704	FP 067 R
NYE, SYLVANUS WILLIAM 700 ROUNDTREE STREET KINSTON 28501	PTH /CLP 054 A AC 919 522-7141	OGBURN, LUNDIE CALVIN 3263 ROBINHOOD TALLAHASSEE, FL 32312	GYN 034 A P L/RT	OMER, SYED BROUGHTON HOSPITAL MORGANTON 28655	N /IM 012 A AC 704 433-2284
O'BAR, PAUL RUPERT 1350 S. KINGS DRIVE CHARLOTTE 28207	IM /ID 060 A AC 704 372-8750	OGBURN, PAUL LANIER P.O. BOX 1460 STATESVILLE 28677	GS 049 AC 704 878-2011	ONTJES, DAVID AINSWORTH UNC SCHOOL OF MEDICINE CHAPEL HILL 27514	END /IM 032 AC 919 966-4468
O'BRIEN, JAMES W. 311 S. LASALLE ST. APT. 22K DURHAM 27705	032 A S 919 383-4871	OGDEN, ROBERT HARVEY 902 COX RD., STE. F GASTONIA 28054	OBG 036 A AC 704 867-6386	ORBOCK, JACOB ALEXANDER 250 CHARLOIS BOULEVARD WINSTON-SALEM 27103	CD /IM 034 A AC 919 768-4730
O'BRIEN, MICHAEL K. 2418 LYNDHURST AVE. WINSTON-SALEM 27103	034 A S 919 723-1492	OLATIDOYE, BABATLINDE A. PO BOX 187 CHAPEL HILL 27514	032 A S 919 933-6346	ORCUTT, JAMES MICHAEL 1327 REVERE RD. WINSTON-SALEM 27103	034 A S 919 725-8866

ORGAIN, EDWARD STEWART 3321 DEVON ROAD DURHAM 27707	CD /IM 032 A L/RT 919 489-2111	OWEN, ROBERT HARRISON 127 1/2 MAIN STREET CANTON 28716	ABS /GP 044 A L 704 648-2142	PANOSH, WANDA KOTVAN ANNA GOVE HEALTH CENTER UNC AT GREENSBORO GREENSBORO 27412	PD /IM 041 AC 919 334-5340
ORLANDO, ROY CHARLES 324 CLINICAL SCIENCES BLDG. UNC DEPT. OF MEDICINE 229-H CHAPEL HILL 27514	GE /IM 032 AC 919 966-2511	OWEN, WILLIAM BOYD PO BOX 780 OWEN-SMITH CLINIC, PA WAYNESVILLE 28786	GP 044 A P AC 704 456-8601	PANTELAKOS, CONSTANTINE G. 1653 OWEN DRIVE FAYETTEVILLE 28304	OTO 026 AC 919 484-5108
ORLOWSKI, RICHARD 225 18TH ST. SE P. O. BOX 3710 HICKORY 28603	ON /HEM 018 AC 704 324-9550	OWEN, WILLIAM BOYD, JR. 106 GALLOWAY STREET WAYNESVILLE 28786	ORS 044 A AC 704 452-2207	PANZA, WILLIAM SEBASTIAN 1800 WILLIAMSBURG RD. APT. 8-E DURHAM 27707	A S 919 489-4104
ORMAND, JOHN WILLIAM, JR. 1809 GLEN MEADE ROAD WILMINGTON 28401	OBG 065 A AC 919 763-1505	OWENS, BERNARD JAMES, III 1017 PROFESSIONAL VILLAGE GREENSBORO 27401	CDS /GS 041 A AC 919 274-2933	PAOLINI, JOHN FRANK BOX 2832, DUMC DURHAM 27710	A S 032
ORMAND, THOMAS LANE 1408 E. FRANKLIN ST. MONROE 28110	GYN 090 A P AC 704 289-2553	OWENS, FRANCIS LEROY 510 N. W. BROAD STREET SOUTHERN PINES 28387	GP /ABS 063 A * L 919 692-6022	PAPADOPOULOS, SPYRIDON G. 3700-205 CHIMNEY RIDGE PL. DURHAM 27713	A S 919 493-0718
ORNITZ, ROBERT DAVID 4420 LAKE BOONE TRAIL RALEIGH 27607	ON /TR 092 A AC 919 783-3018	OWENS, FREDERICK THOMAS 912 SECOND STREET, N.E. HICKORY 28601	PUD /IM 018 AC 704 322-8265	PAPINEAU, ALBAN PO BOX 686 PLYMOUTH 27962	A L 919 793-4155
ORR, LYNN HUIE, JR. 1705 W. 6TH ST. BLDG. E GREENVILLE 27834	CD /IM 074 AC 919 752-6101	OWENS, MICHAEL C. 2907-A CEDAR CREEK RD. GREENVILLE 27834	A S 919 752-7479	PAPPAS, PAMELA ANNE DEPT. OF PSY. ECU SCH. OF MEDICINE GREENVILLE 27858	A AC 919 551-2404
ORR, RICHARD L., JR. 624 QUAKER LN., STE. 210-A HIGH POINT 27262	IM 040 A P AC	OWENS, ROBERT CARL 341 E. PARKER ROAD MORGANTON 28655	IM 012 A AC 704 433-0225	PAPPAS, PETER GEORGE 1302 MEDICAL CENTER DR. WILMINGTON 28401	ID /IM 065 A AC 919 763-3651
ORR, SAMUEL LAWRENCE CHARLOTTE MEMORIAL HOSPITAL P. O. BOX 32861 CHARLOTTE 28232	PTH 060 AC 704 338-2251	OWENS, WILLIAM LAWRENCE WOODSIDE PROF. BLDG. CLINTON 28328	IM 082 A P AC 919 592-4605	PARADA, MALCOLM PERRY 315 MOCKSVILLE AVENUE SALISBURY 28144	OBG 080 A AC 704 636-9270
ORRINGER, EUGENE PAUL UNC, DIV. OF HEM. DEPT. OF MED. 340 MACNIDER BLDG. 202-H CHAPEL HILL 27514	HEM /IM 032 AC 919 966-2467	OWENS, ZACK DOXEY P. O. BOX 422 ELIZABETH CITY 27909	GS /GYN 070 A L/RT 919 335-4492	PARFITT, HENRY E., JR. 1786 METROMEDICAL DR. FAYETTEVILLE 28303	U 026 AC 919 485-8151
ORRISON, WILLIAM GRESHAM 335 E. PARKER ROAD MORGANTON 28655	OPH 012 AC 704 433-6220	OWENSBY, CLYDE NORMAN 1339 WENDOVER ROAD CHARLOTTE 28211	P 060 AC 704 364-5026	PARHAM, SUMNER MALONE 973 MEADOW LANE HENDERSON 27536	GYN /OBS 091 A L/RT 919 438-3751
OSBORNE, JAMES C. 1904 N. CHURCH ST. GREENSBORO 27405	IM 041 A AC 919 274-3241	OWSLEY, JAMES HAROLD P. O. BOX 308 HICKORY 28601	R /NM 018 A AC 704 322-2644	PARK, H. KIM ECU, DEPT. OF CLINICAL PATH. GREENVILLE 27834	PTH 074 A * AC 919 551-4495
OSCHWALD, DONALD L.A., JR. 1112 DRESSER COURT RALEIGH 27609	PS 092 A * AC 919 892-2616	OXNER, CLAUDIA GERTRUDE DOCTOR'S BLDG., RM. #202 ASHEVILLE 28801	AN 011 A P AC 704 254-1960	PARKE, CHARLES EDWARD 614 CASWELL RD. CHAPEL HILL 27514	032 A S 919 942-6631
OSTERHOUT, SHIRLEY K. BOX 3007, DUMC DURHAM 27710	PD 032 AC 919 684-2498	OZER, HOWARD UNC 3019 OLD CLINIC BLDG. 226H CHAPEL HILL 27514	ON /IG 032 AC 919 966-4431	PARKE, JAMES CLIFTON, JR. P. O. BOX 32861 CHARLOTTE 28232	PD /NPM 060 A AC 704 338-3156
OSTMAN, DAVID LEE 518 ROBIN DR. MONROE 28110	OBG 090 A P AC 704 283-1553	PAAR, JOHN ARTHUR 3200 OLD WAKE FOREST RD. RALEIGH 27609	CD /IM 092 AC 919 872-4850	PARKER, CHARLES L. 801 MCCARTHY BLVD. NEW BERN 28560	OBG /GYN 025 A AC 919 633-3942
OSTROW, BARRY SEYMOUR 3049 ESSEX CIR. BLDG. A RALEIGH 27608	P 092 A P AC 919 782-1366	PACE, JOHN SANDERSON 825 INLET VIEW DRIVE WILMINGTON 28403	AN 065 A P * AC 919 256-4008	PARKER, HERMAN RICHARD, JR. 408-B PARKWAY DRIVE GREENSBORO 27401	IM 041 A * AC 919 275-9804
OSTROWSKI, EDWARD S. 831 WARWICK COURT BURLINGTON 27215	DR 001 AC 919 227-1147	PACKER, JOHN WESLEY 3515 GLENWOOD AVE. PO BOX 10707 RALEIGH 27605	ORS /HS 092 A AC 919 781-5600	PARKER, JAMES LEE 850-H 8TH ST. NE HICKORY 28601	PTH 018 A AC 704 322-3821
OTLEY, CLARK C. 223-A W. WOODRIDGE DR. DURHAM 27707	A S 919 490-0199	PACT, VIRGINIA W. HENDERSON NEUROLOGY CTR. MARIA PARHAM HOSP. HENDERSON 27536	N 032 A AC 919 492-0606	PARKER, JENNIFER L. 4800 UNIVERSITY DR. APT. 6-O DURHAM 27707	032 A S 919 490-1576
OTT, DAVID JAMES 4761 GREY FOX COURT WINSTON-SALEM 27104	DR 034 AC 919 765-7633	PADDISON, GEORGE MARION 3920 REGENT ROAD DURHAM 27707	R 032 A P AC 919 489-0272	PARKER, JOHN CURTIS N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514	HEM /IM 032 AC 919 966-2467
OTTENI, GERALD VINCENT 123 OVERBROOK DRIVE CONCORD 28025	DR 013 A AC 704 786-2111	PADGETT, RICHARD CAMERON 411 MCCAULEY ST. CHAPEL HILL 27514	IM 032 A S 919 942-5518	PARKER, JOSEPH B., JR. 24 STONERIDGE CIR. DURHAM 27705	P /PYM 032 A L/RT 919 684-2415
OUTLAND, ROBERT BOONE P. O. BOX 410 RICH SQUARE 27869	GP 066 A L/RT 919 539-2755	PAGANO, JOSEPH STEPHEN UNC LINEBERGER CANCER RES. CHAPEL HILL 27514	IM /ID 032 AC 919 966-3036	PARKER, MARY LOU 1214 HILLVIEW RD. CHAPEL HILL 27514	032 A S 919 942-2386
OVERBY, JOSEPH RANDAL, JR. 810 KENNEDY AVE. P. O. BOX 5409 NEW BERN 28560	FP 025 A * AC 919 633-1678	PAGE, ERNEST BENJAMIN, JR. 2500 BLUE RIDGE RD., STE. 201 RALEIGH 27607	IM 092 A P AC 919 881-0054	PARKER, MICHAEL YOUNG 3100 BLUE RIDGE RD., STE. 201 RALEIGH 27612	OTO /HNS 092 A P AC 919 787-1374
OVERCASH, HAROLD PAYNE 3616 ALAMANCE DR. RALEIGH 27609	PD 092 AC 919 787-0266	PAGE, GEORGE DANTZLER 2128 QUEENS ROAD EAST CHARLOTTE 28207	GS 060 A L/RT 704 377-9788	PARKER, PAUL EDWIN N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514	AN 032 A R 919 477-2475
OVERCASH, WILLIAM TODD PO BOX 1694 ALBEMARLE 28002	032 A S 704 982-8650	PAGTER, AMOS TOWNSEND, JR. 107 WILDERNESS ROAD TRYON 28782	IM 075 A P AC 704 859-6697	PARKER, PETER EMENS 2933 MAPLEWOOD AVENUE WINSTON-SALEM 27103	GS /VS 034 A P AC 919 765-0155
OVERTON, DOLPHIN HENRY, JR. 132 FOY DRIVE ROCKY MOUNT 27801	OBG 064 AC 919 443-6622	PALMER, JEFFRESS GARY N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514	IM /HEM 032 AC 919 966-3311	PARKER, ROBERT L., JR. 822 OLD WINSTON RD. KERNERSVILLE 27284	OBG 034 A AC 919 993-4532
OWEIDA, SAMI JOSEPH 1900 RANDOLPH RD. STE. 410 CHARLOTTE 28207	060 AC 704 339-0081	PALMER, ROBERT MARION P. O. BOX 1159 TRYON 28782	FP 075 A AC 704 894-3306	PARKER, ROY TURNAGE BOX 3097, DUMC DURHAM 27710	OBG 032 A AC 919 684-2626
OWEN, CHARLES FLETCHER, JR. P. O. BOX 146 ASHEBORO 27203	R 076 A L 919 625-5151	PANCOTTO, FRANK SALVATORE 920 N. CHURCH ST. CONCORD 28025	GE 013 AC 704 788-4186	PARKER, SAMUEL LESTER, JR. KINSTON CLINIC, NORTH KINSTON 28501	OBG 054 A L 919 522-4333
		PANDARINATH, GUPTA PO DRAWER 158 ROANOKE RAPIDS 27870	GE /IM 042 A AC 919 537-0135	PARKER, TALBOT FORT, JR. 2400 WAYNE MEM. DR. STE K GOLDSBORO 27530	OBG 096 A P AC 919 734-3344

PARKER, WILLIAM PAXTON, JR. 1303 CYPRESS GROVE DR. WILMINGTON 28401	NS 065 A AC 919 762-1804	PATE, CARL DANIEL, JR. PO BOX 986 BEULAVILLE 28518	FP 031 A AC 919 757-4100	PATTON, SUZANNE ELIZABETH 2808 ERWIN RD., APT. 6A DURHAM 27705	032 A S 919 383-0446
PARKERSON, GEORGE R., JR. BOX 2914, DUMC DURHAM 27710	FP 032 A AC 919 286-9896	PATE, DEWEY HARRIS WAKE MEMORIAL HOSPITAL RALEIGH 27610	PTH 092 A AC 919 755-8260	PAUCA, ALFREDO LAZO 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	AN 034 A AC 919 748-4473
PARKERSON, WALTER TUCK 225 HAWTHORNE LANE CHARLOTTE 28204	OPH 060 AC 704 377-3689	PATE, DORIS CATHERINE MEDICAL OAKS APTS. #C-2 GREENVILLE 27834	074 A S 919 757-3513	PAUL, FRANKLIN ARTHUR 6834 TOWBRIDGE ROAD FAYETTEVILLE 28306	GS /VS 026 A AC 919 599-3346
PARKIN, CHARLES EVAN 737 ST. CLOUD STATESVILLE 28677	AN 049 P AC 704 873-5661	PATE, EUGENE WESLEY, JR. KINSTON CLINIC, NORTH KINSTON 28501	ORS 054 AC 919 522-4155	PAUL, VINCENT EDGAR 530 N. ELAM AVENUE GREENSBORO 27403	ORS 041 A P AC 919 292-8824
PARKS, WILLIAM B., III 205-B LINDBETH DR. GREENVILLE 27834	074 A S 919 355-5744	PATE, MARION BUTLER, III 555 CARTHAGE ST. SANFORD 27330	GE /IM 053 AC 919 774-4511	PAULI, JON WARREN 1896 REMOUNT RD. GASTONIA 28054	IM 036 A * AC 704 867-0735
PARKS, WILLIAM CRAIG 624 QUAKER LANE, SUITE 207-A HIGH POINT 27262	IM 040 A L 919 841-4233	PATE, WILLIAM HENRY P. O. BOX 129 PIKEVILLE 27863	GP 096 A AC 919 242-5271	PAULSON, DAVID FREEMAN BOX 2977, DUMC DURHAM 27710	U 032 A AC 919 684-5057
PARLIER, REGGIE DAVID 828 HOLLY HEDGE DR. LEWISVILLE 27023	034 A R 919 479-5559	PATEL, MAHENDRA S. PO DRAWER 158 ROANOKE RAPIDS 27870	IM /ON 042 A AC 919 537-0134	PAYNE, CLIFTON GADBERRY P. O. DRAWER 1857 REIDSVILLE 27320	FP 079 AC 919 349-5040
PARNELL, JEROME PATRICK, II 3901 COMPUTER DR. RALEIGH 27609	U 092 A AC 919 781-5104	PATEL, URVASHI B. 3067 WESTMINSTER RD. LUMBERTON 28358	AN 078 AC 919 738-6441	PAYNE, FRED WILLIAM, JR. 100 NASH MEDICAL ARTS MALL ROCKY MOUNT 27801	GS 064 AC 919 443-9084
PARR, ROBERT ALEXANDER NEW HANOVER HOSPITAL DEPT. OF EMERGENCY MED. WILMINGTON 28401	EM 065 AC 919 343-7000	PATEL, VIJESH K. 109 STEWARD LANE GREENVILLE 27834	074 A S 919 756-8948	PAYNE, JEFFREY C. 938 MADISON AVE. WINSTON-SALEM 27103	034 A * S 919 724-6286
PARRILLO, STEPHEN J. 2342 THUNDER RD. DURHAM 27712	AN 000 R 919 684-8111	PATLAK, ERWIN M. 807 SHADOWRIDGE RD. JACKSONVILLE 28540	P /EM 067 A * AC 919 577-1400	PAYNE, ROBERT BENJAMIN 3535 RANDOLPH ROAD CHARLOTTE 28211	IM /CD 060 A AC 704 365-0760
PARRIS, ALVA EDWARD 2240 CLOVERDALE AVE., STE. 219 WINSTON-SALEM 27103	FP /OM 034 AC 919 725-5881	PATOW, WARREN EDWARD 1601-B OWEN DR. FAYETTEVILLE 28304	OBG 026 A AC 919 323-1152	PAYNE, THOMAS ARTHUR 405-A COOLRIDGE ST. CHAPEL HILL 27514	032 A S 919 929-4291
PARROTT, FRANK STRONG P. O. BOX 637 SALISBURY 28144	GS 080 A L/RT	PATRICK, SIMMONS ISLER KINSTON CLINIC, NORTH DOCTOR'S DRIVE KINSTON 28501	R 054 A P AC 919 527-7077	PAYNE, WINSTON CHARLES 20/20 PLAZA, 90 ASHLAND AVE. ASHEVILLE 28801	OPH 011 A AC 704 253-4735
PARROTT, OLSON, II 1832 DOCTORS DR. SANFORD 27330	OBG 053 A P AC 919 774-8761	PATRONE, NICHOLAS ANGELO ECU DEPT. OF MED. & PED. GREENVILLE 27834	RHU /IM 074 A AC 919 551-2533	PEACE, ROBERT JOSEPH 1447 YORK COURT BURLINGTON 27215	PTH 001 A AC 919 584-5171
PARROTT, WILLIAM THOMAS, JR. 905 N. QUEEN STREET KINSTON 28501	IM 054 L 919 523-4269	PATSEAVOURAS, LOUIE LEE 522 N. ELAM AVENUE GREENSBORO 27403	PSF 041 A AC 919 299-4907	PEACH, CHARLES ARTHUR 902 COX RD., STE. F GASTONIA 28054	OBG 036 A AC 704 867-6386
PARSLEY, BETSY ALLEN 3420 THORESBY COURT WINSTON-SALEM 27104	PD 034 AC 919 768-6830	PATTERSON, CARL NORRIS 1110 W. MAIN STREET DURHAM 27701	HNS /MFS 032 A AC 919 682-9341	PEACOCK, ERLE EWART, JR. 109 CONNER DR., STE. 2204 CHAPEL HILL 27514	PS /GS 032 AC 919 933-0005
PARSONS, JAMES SHERIDAN 704 W. JONES STREET RALEIGH 27603	IM 092 A AC 919 832-5125	PATTERSON, DAVID READ 721 GREEN VALLEY RD. GREENSBORO 27408	GE /IM 041 AC 919 378-0774	PEACOCK, JAMES EDWARD, JR. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	ID /IM 034 AC 919 748-4507
PARSONS, LACY JACK 2204 ROWLAND AVENUE LUMBERTON 28358	OBS 078 A L/RT 919 739-6431	PATTERSON, F. M. SIMMONS 4503 MORGAN LANE NEW BERN 28560	GS 025 A * L/RT 919 633-3492	PEAK, LATHAM CONRAD ROSEBORO MEDICAL CLINIC ROSEBORO 28382	FP 082 AC 919 525-5055
PARSONS, MARSHALL RAY 2104 RANDOLPH RD. CHARLOTTE 28207	GS 060 A AC 704 377-3900	PATTERSON, F. M. SIMMONS, JR. PO BOX 519 205 PAGE ROAD PINEHURST 28374	CD /IM 063 A AC 919 295-5511	PEARCE, LARRY ALLEN 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	N 034 A AC 919 748-4101
PARSONS, RICKEY 1612 OAKLAWN AVE. GREENVILLE 27834	074 A S 919 756-5478	PATTERSON, HUBERT CLIFTON 602 S. COLUMBIA STREET CHAPEL HILL 27514	GS 032 A L/RT 919 968-3051	PEARCE, PHILIP HENDERSON 1821 GREEN STREET DURHAM 27705	OBG 032 A P AC 919 286-1258
PARSONS, ROBERT GREGORY 3535 RANDOLPH RD. CHARLOTTE 28211	DR 060 P AC 704 365-0343	PATTERSON, HUBERT CLIFTON P. O. BOX 18946 RALEIGH 27619	OTO /PSF 092 A AC 919 787-7171	PEARCE, RICHARD EDWARD 202-B LINDBETH DR. GREENVILLE 27834	074 A S 919 756-8447
PARTRICK, CORNELIUS T. 615 E. 12TH STREET WASHINGTON 27889	IM /CD 007 AC 919 946-2101	PATTERSON, JAMES BENSON 1638 MEMORIAL DR. BURLINGTON 27215	D 001 A AC 919 226-8000	PEARLMAN, WM. GLENN RT. #1, BOX 54-A GREENVILLE 27834	074 A S
PASCALE, JAMES A. 3710 HAZEL LN. GREENSBORO 27408	PD /NPM 041 A P AC 919 854-6115	PATTERSON, JAN LOUISE PO BOX 513 N. C. MEMORIAL HOSP. CHAPEL HILL 27514	032 A R 919 966-2491	PEARSALL, DAVID W. 2315 EXECUTIVE PARK CIR. GREENVILLE 27834	GS 074 A AC 919 830-5392
PASCHAL, BARTON RILEY ONE DOCTORS DR. ASHEVILLE 28801	ON /HEM 011 A AC 704 254-8232	PATTERSON, RICHARD BRUCE 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	PHO /PD 034 A AC 919 748-4085	PEARSE, RICHARD LEHMER 154 MONTROSE DR. DURHAM 27707	OBG /HYP 032 A L/RT 919 493-3995
PASCHAL, GEORGE W., JR. 3334 ALAMANCE DRIVE RALEIGH 27609	GS 092 A * L/RT 919 787-2177	PATTERSON, ROBERT WILLIAM 110 FIELDS DR. PO BOX 1860 SANFORD 27330	FP /OM 053 A P AC 919 774-6320	PEARSON, JOHN KENT P. O. BOX 727 APEX 27502	FP 092 A AC 919 362-8312
PASCHAL, GEORGE W., III 3814 BROWNING PLACE RALEIGH 27609	GS /CDS 092 AC 919 781-0710	PATTERSON, RONALD HALFORD 1902-J N. SANDHILLS BLVD. ABERDEEN 28315	ORS 063 A AC 919 295-1471	PEARSON, LAWRENCE HAMILTON 700 N. LAFAYETTE ST. SHELBY 28150	D 023 A AC 704 484-0464
PASCHOLD, EUGENE H. 3314 HEALY DR. STE. 107 WINSTON-SALEM 27103	ON /IM 034 A * AC 919 768-2521	PATTERSON, THOMAS HENRY, JR. 701 N. MAIN STREET FARMVILLE 27828	FP 074 AC 919 753-3193	PEARSON, WILLIAM SEYMOUR BOWMAN GRAY SCH. OF MED. 300 S. HAWTHORNE RD WINSTON-SALEM 27103	P 034 A AC 919 748-4553
PASQUINI, JOHN ALDO 1413 ELIZABETH AVE. CHARLOTTE 28204	CD /IM 060 A AC 704 338-6300	PATTON, DENZIL D. DEPT. OF FAMILY MEDICINE ECU FAMILY PRACTICE CTR. GREENVILLE 27858	FP 074 A AC 919 551-4614	PEDEN, JAMES GWYN, JR. DEPT. OF MEDICINE ECU SCHOOL OF MEDICINE GREENVILLE 27834	IM /P 074 A AC 919 551-4633
PATE, BARRY REEVES 285 MCDOWELL STREET ASHEVILLE 28803	OTO /HNS 011 AC 704 252-1853			PEDERSON, WM. CHRISTOPHER BOX 3974, DUMC DURHAM 27710	PS /HS 032 A AC 919 684-4114

PEDIADITAKIS, NICHOLAS P. 5100 LEADLINE ROAD RALEIGH 27612	P 092 A AC 919 787-0710	PERRY, GLENN BRADFORD 1822 BRUNSWICK AVE. CHARLOTTE 28207	ORS /TRS 060 A AC 704 373-0544	PHAN, THAI TIEN 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	P 034 A AC 919 748-3920
PEEDIN, JAMES HAROLD, JR. P. O. BOX 1177 BURGAW 28425	FP 065 A AC 919 259-5721	PERRY, HENRY BAKER, JR. 477 HAWTHORNE RD. ELKIN 28621	GYN 086 A L/RT 919 835-6183	PHELAN, JOHN WILLIAM JOSEPH 503 WILLOW DR. THOMASVILLE 27360	P /IM 029 AC 919 475-8184
PEELER, FORREST EDWARDS ROUTE #3, BOX 436 MAIDEN 28650	FP 018 A AC 704 428-2446	PERRY, IRVIN SAMUEL 2825 LYNTHURST AVENUE WINSTON-SALEM 27103	PUD /IM 034 A AC 919 765-0383	PHELAN, WESTELL C. PO BOX 659 401 MULBERRY ST. SW STE. 111 LENOIR 28645	DR 014 A AC 704 754-2283
PEETE, CHARLES HENRY, JR. BOX 3192, DUMC DURHAM 27710	OBG 032 A AC 919 684-2346	PERRY, JOHN CHRISTOPHER P. O. BOX 429 EDENTON 27932	FP 021 A AC 919 482-2116	PHILLIPS, BRUCE ALTON, JR. P. O. BOX 86 ELIZABETHTOWN 28337	IM /GE 009 AC 919 862-3212
PEETE, WILLIAM P.J. BOX 3506, DUMC DURHAM 27710	GS 032 A AC 919 684-3727	PERRY, SAMUEL JOSEPH 1723 VIRGINIA RD. 1/2 WINSTON-SALEM 27104	034 A S 919 724-7680	PHILLIPS, CHARLES A. SPEAS 165 PAGE ROAD, #2 PINEHURST 28374	063 L/RT 919 295-5311
PEGAM, PAUL SAMUEL, JR 2332 ELIZABETH AVENUE WINSTON-SALEM 27103	ID /IM 034 A AC 919 748-4246	PESANO, RICK LOUIS 1407-A SENECA ST. WINSTON-SALEM 27103	034 A S 919 748-0946	PHILLIPS, CHARLES WOODROW, JR. 108 E. MINNEOLA STREET GIBSONVILLE 27249	FP 001 AC 919 449-4132
PEKMAN, WILLIAM MARTIN 250 18TH ST. CIRCLE, SE HICKORY 28602	HS /ORS 018 A P AC 704 322-5172	PETERS, BRYAN MACLIN 3821 MERTON DR. RALEIGH 27609	DR 092 A AC 919 755-8511	PHILLIPS, DEWITT DEWEY, JR. 1012 S. KINGS DR. STE. 822 CHARLOTTE 28283	GP 060 AC 704 375-6350
PELLIGRA, SALVATORE JOHN 1200 N. ELM ST. GREENSBORO 27401	PM 041 A AC 919 379-3667	PETERS, DONALD W. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	P 034 A AC 919 748-3693	PHILLIPS, HARRY RISSLER, III BOX 3126, DUMC DURHAM 27710	CD /IM 032 A AC 919 681-5816
PENCE, CARLA RAFFETY 1900 QUEEN ST. A-4 WINSTON-SALEM 27103	IM 034 A R 919 725-7499	PETERS, PETER DEMJANTSCHUK 1115 KATHERINE ST. VALDESE 28690	GP /EM 012 A AC 704 874-0519	PHILLIPS, HERBERT ORLANDAH, IV SYLVA ORTHOPEDIC ASSOC. SYLVA 28779	ORS 050 A AC 704 586-5531
PENCE, JAMES JEROME, JR. 2110 SOUTH 17TH ST. WILMINGTON 28401	FP 065 AC 919 763-3481	PETERS, RANDY ALAN 1830 S. HAWTHORNE RD. WINSTON-SALEM 27103	GE /IM 034 AC 919 765-0463	PHILLIPS, KATHRYN ELIZABETH 200 BLUERIDGE RD. CARRBORO 27510	032 A S 919 967-1058
PENDER, JOHN ROBERT, III 1851 E. THIRD STREET, STE. 105 CHARLOTTE 28204	GS 060 AC 704 332-4169	PETERS, ROBERT BROOKES, IV 101 CLINIC DRIVE TARBORO 27886	FP 033 A AC 919 823-2105	PHILLIPS, MARVIN WORTH P. O. BOX 367 THOMASVILLE 27360	FP 029 A AC 919 472-7262
PENDLEY, ROBERT ALAN 211 S. CHESTNUT STREET GASTONIA 28054	GE /IM 036 AC 704 867-4406	PETERS, STANLEY 250 18TH ST. CIR. SE HICKORY 28602	ORS 018 AC 704 322-5172	PHILLIPS, STAN DALE 2683 MULBERRY LN. ARLINGTON SQUARE APTS. GREENVILLE 27858	074 A S 919 355-5145
PENDSE, PRABHAKAR D. 1018 PROFESSIONAL VILLAGE GREENSBORO 27401	PDS /GS 041 A P AC 919 272-6161	PETERS, WILLIAM ANTHONY, JR. P. O. BOX 392 ELIZABETH CITY 27909	GYN 070 A RT 919 335-2355	PHILLIPS, WESLEY FLETCHER P. O. BOX 727 KERNERSVILLE 27284	FP 034 A * AC 919 993-8181
PENKAR, SURESH JAGANNATH 3333 SILAS CREEK PARKWAY WINSTON-SALEM 27103	AN 034 AC 919 760-5180	PETERSEN, KENNETH MICHAEL 4 MEDICAL PARK DR. LEXINGTON 27292	GS /CDS 029 AC 704 246-2487	PHILLIPS, WILLIAM ALLAN 3208 OLEANDER DRIVE WILMINGTON 28403	D 010 A RT 919 763-7333
PENNEL, TIMOTHY CLINARD BOWMAN GRAY - SURGERY WINSTON-SALEM 27103	GS /TS 034 A AC 919 748-4671	PETERSEN, MARTA JEAN NC MEMORIAL HOSP. ROOM 137 CHAPEL HILL 27514	D 032 AC 919 966-3321	PHILP, ELIZABETH BEATSON BOWMAN GRAY SCH. OF MED. WINSTON-SALEM 27103	034 A AC 919 748-2235
PENNINK, MENNO 3314 MELROSE RD. STE. 103 FAYETTEVILLE 28304	NS 026 A P AC 919 323-0475	PETERSEN, NICOLE M. 520-Z PARK RIDGE CT. WINSTON-SALEM 27104	034 A S 919 765-5023	PHIPPS, CARL SPENCER 3333 SILAS CREEK PARKWAY WINSTON-SALEM 27103	END /IM 034 A P AC 919 765-1640
PEPPER, FRANCIS DEWITT, JR. 3155 MAPLEWOOD AVENUE WINSTON-SALEM 27103	DR /NR 034 A AC 919 765-2702	PETERSON, ERIC WEBSTER 5 CROWNINGWAY DR. ASHEVILLE 28804	P 011 A * AC 704 254-3201	PHIPPS, ERVIN LAMAR 2652 MULBERRY LN. GREENVILLE 27834	074 A S 919 551-3379
PERDUE, JASPER BURT, JR. 111 JOLLY STREET LOUISBURG 27549	GS 035 AC 919 496-4177	PETERSON, HUGH DUANE UNC, BURNETT-WOMACK BLDG. CHAPEL HILL 27514	PS 032 AC 919 966-3693	PICKARD, CARL GLENN, JR. N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514	IM 032 AC 919 966-4205
PEREZ-NAVARRO, PAUL A. RT. #8, BOX 330-A GREENVILLE 27834	074 A S 919 757-0532	PETERSON, JEFFREY MCBRAYER 2 SPRING GARDEN, HOLLAND DR. CHAPEL HILL 27514	032 A S 919 933-0153	PICKARD, HENRY MACK P. O. BOX 3351 WILMINGTON 28401	IM 065 A L/RT 919 791-1417
PEREZ-REYES, MARIO 107 HUNTER HILL PLACE CHAPEL HILL 27514	P 032 A AC 919 933-9829	PETERSON, LLOYD JOHN 200 E. NORTHWOOD ST., STE. 302 GREENSBORO 27401	U 041 A AC 919 275-6115	PICKLESIMER, FRED L., JR. 1930 ELIZABETH AVE. APT. 3 WINSTON-SALEM 27103	034 A S 919 723-7547
PEREZ-SELDEN, ALICE R. 601-A BERKSHIRE RD. SMITHFIELD 27577	GS 051 AC 919 934-0281	PETERSON, NEIL PAUL P. O. BOX 2959 ASHEVILLE 28802	R /NM 011 AC 704 254-4617	PICKLESIMER, FRED LEON 624 QUAKER LN. STE. 301-D HIGH POINT 27262	OTO 040 A AC 919 883-1366
PERKINS, ROBERT SANBORN 3406 COUNTRY CLUB DR. GASTONIA 28054	TS /GS 036 AC 704 864-8377	PETERSON, ROBERT L., JR. 400 S. CURTIS ST. AHOSKIE 27910	OBG 008 A P AC 919 332-8109	PICKREL, JERRY CLINE P. O. DRAWER 403 ELIZABETH CITY 27909	PTH 070 A AC 919 335-2258
PERNO, JOSEPH R. BOX 2809, DUMC DURHAM 27710	032 A S 919 684-1306	PETERSON, ROBERT LIND 210 13TH AVENUE PLACE, N.W. HICKORY 28601	OBG 018 AC 704 322-3018	PICOT, DOUGLAS WM. 31 COURTNEY SQUARE GREENVILLE 27858	074 A S 919 756-9538
PERONA, BARBARA PIEZ 1022 GREEN ST. DURHAM 27701	032 A S 919 682-3942	PETRILLI, ROBERT 5465 STYERS FERRY RD. CLEMMONS 27012	EM 034 A * AC 919 766-0479	PIECH, KENNETH STOWELL 1211 PINKNEY ST. WHITEVILLE 28472	PTH 024 A AC 919 642-8011
PERRAUT, THOMAS CHRISTOPHER 212 HOSPITAL DRIVE COLUMBUS 28722	OPH 075 AC 704 894-3037	PETROU, HOMER DONALD RUIN CREEK ROAD HENDERSON 27536	GS 091 A P AC 919 438-5755	PIERCE, CHARLES GRAINGER 201 S. COLONY AVENUE AHOSKIE 27910	PD /PDA 008 AC 919 332-5041
PERRIN, THOMAS SAMUEL, JR. 3535 RANDOLPH ROAD CHARLOTTE 28211	IM 060 A AC 704 365-0760	PETROZZA, JOSEPH ANTHONY 110-H STOCKTON ST. STATESVILLE 28677	GE /IM 049 A AC 704 873-1904	PIERCE, HUBERT GAINES 313 AIRPORT ROAD KINSTON 28501	IM /CD 054 A AC 919 522-3072
PERRY, CAREY JONES 113 JOLLY STREET LOUISBURG 27549	FP 035 A AC 919 496-4250	PETROZZA, PATRICIA HARPER 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	AN 034 A P AC 919 748-4498	PIERCE, JEFFREY N. BOX 274, 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	034 A S 919 724-3509
PERRY, DAVID RUSSELL, JR. 3175 MAPLEWOOD AVENUE WINSTON-SALEM 27103	PD 034 A AC 919 768-7030	PETTY, JERRY MILLER 1010 EDGEHILL ROAD, N. CHARLOTTE 28207	NS 060 A P AC 704 376-1606	PIERCE, ROBERT JAMES, JR. 1202 N. CENTER STREET HICKORY 28601	U 018 A AC 704 322-4340
PERRY, DWIGHT DEAN 512 SIMMONS ST. DURHAM 27707	OPH 032 A P * AC 919 682-7175	PFEIFFER, FREDERICK EARLY 126 COTTAGE PLACE CHARLOTTE 28207	N /IM 060 A AC 704 334-7311		

PIERSON, GEORGE HERMAN, JR P. O. BOX 13005 GREENSBORO 27415	R /DR 041 A AC 919 379-4140	PLYLER, EDWARD THURMAN 2203 S. STERLING ST. MORGANTON 28655	FP 012 AC 704 437-4211	POPE, THOMAS DAVID 403 S. KING STREET MORGANTON 28655	OBG 012 A AC 704 433-4661
PIERSON, STEVEN S. 2028 ELIZABETH AVE. WINSTON-SALEM 27103	P 034 A AC 919 722-2323	POCOCK, DONALD ANDREW 5003 TRENT WOODS DRIVE NEW BERN 28560	IM /ID 025 A AC 919 633-1010	PORCHEY, CARL JOSEPH, JR. 3630 WINDING CREEK WAY WINSTON-SALEM 27106	IM 034 A AC 919 768-4730
PIERSON, WILLARD CRESSE, JR. 1212 CEDARHURST DR. RALEIGH 27609	GE /IM 092 AC 919 872-4850	PODGER, KENNETH ARTHUR 7701 BEACH DRIVE MYRTLE BEACH, SC 29577	GYN 032 A L/RT 803 449-3459	PORIES, WALTER JULIUS 203 CHOWAN ROAD GREENVILLE 27834	GS /TS 074 A AC 919 551-4629
PIGFORD, ROBERT TOMS 301 COLONIAL DRIVE WILMINGTON 28403	IM /CD 065 A L/RT 919 762-5020	PODGORNY, GEORGE 2115 GEORGIA AVENUE WINSTON-SALEM 27104	EM /GS 034 A P * AC 919 727-1161	PORTER, CEDRIC WARREN, JR. 93 VICTORIA ROAD ASHEVILLE 28801	OBG /GPM 011 A P AC 704 253-4821
PIKE, ISADORE MURRAY 9 BROOKWOOD COURT ASHEVILLE 28804	ON /HEM 011 AC 704 255-0231	POEHLING, GARY GEORGE BOWMAN GRAY, DEPT. OF ORS WINSTON-SALEM 27103	ORS /HS 034 A AC 919 748-3948	PORTER, CHARLES ALEXANDER 1712 E. FOURTH STREET CHARLOTTE 28204	OBG 060 A AC 704 375-9074
PIKE, MICHAEL ROBERT 101 S. W. CARY PARKWAY CARY 27511	GE /IM 092 P AC 919 469-1858	POINTS, GERALD LEE, II 5305 WRIGHTSVILLE AVE. BLDG.B WILMINGTON 28403	IM /FP 065 A AC 919 791-3506	PORTER, DEAN PRIEST 250 S. ESTES DR. #34 CHAPEL HILL 27514	032 A * S 919 933-7840
PIKULA, LOUIS, JR. 3080 TRENWEST DRIVE WINSTON-SALEM 27103	NS 034 A AC 919 765-3750	POLE, DONALD TALIAFERRO 5305-J WRIGHTSVILLE AVE. WILMINGTON 28403	OBG 065 AC 919 343-1113	PORTER, LISA ELLEN 2681 HITCHCOCK DR. DURHAM 27705	032 A S 919 471-9289
PILLAI, JEYAKUMAR P. 238-3 WILMOT DR. #239 GASTONIA 28054	P 036 A AC 704 867-2338	POLLAK, MICHAEL JOSEPH 302 FORSYTH MEDICAL PARK WINSTON-SALEM 27103	OBG 034 AC	PORTER, RICHARD ALLISON 1107 WOODMONT DR. HENDERSONVILLE 28739	FP 045 A L/RT 704 693-5128
PILLSBURY, HAROLD C., III UNC, CB #7070 BURNETT-WOMACK BLDG. CHAPEL HILL 27599	OTO /HNS 032 A * AC 919 966-3341	POLLARD, HAROLD CALLOWAY, III 2927 LYNTHURST AVE. WINSTON-SALEM 27103	OBG 034 A AC 919 765-9350	PORTO, CAMILLE WARREN STATESVILLE MEDICAL GROUP OLD MOCKSVILLE RD. STATESVILLE 28677	IM /PD 049 AC
PIPPIN, RICHARD LEE 201 N. MAIN ST. FARMVILLE 27828	IM 074 A AC 919 756-9569	POLLARD, JOHN ALAN 1620 SCOTT AVE. CHARLOTTE 28211	AN 060 AC 704 331-2372	POSSINGER, CLIVE FRANCIS, JR. P. O. BOX 217 NAPLES 28760	IM 045 A AC 704 684-1030
PISHKO, MICHAEL THEODORE P. O. BOX 339 PINEHURST 28374	OBG 063 A * L/RT 919 295-6634	POLLARD, JOHN CHRISTOPHER 1213 WALTER REED DRIVE FAYETTEVILLE 28304	PD 026 AC 919 484-6121	POSTLETHWAIT, RAYMOND W. 143 PINECREST RD. DURHAM 27705	GS 032 A L/RT 919 489-8865
PITSER, WILLIAM ROSS 1420 PLAZA DRIVE WINSTON SALEM N C 27103	OTO 034 A AC 919 765-4922	POLLARD, RICHARD J. 124 FIDELITY ST., #20 CARRBORO 27510	S 032 919 942-9470	POSTON, ROBERT LEWIS 1142 N. ROAD STREET ELIZABETH CITY 27909	FP 070 AC 919 338-4117
PITTARD, JESSE C. 706 WILKINS ST. SMITHFIELD 27577	FP 051 AC 919 934-5149	POLLEY, DENNIS CHARLES 902 BROAD ST. WILSON 27893	D 098 AC 919 291-5600	POTEAT, HUBERT MCNEILL, JR. P. O. BOX 88 SMITHFIELD 27577	GS 051 A L/RT 919 934-2524
PITTAWAY, DONALD EDWARD 578 MAIDSTONE LANE CLEMMONS 27012	OBG 034 AC 919 748-2368	POLLOCK, FRANK EDWARD SALEM ORTHOPAEDIC ASSOC. PA PO BOX 25007 WINSTON-SALEM 27114	ORS 034 A AC 919 768-1270	POTOCKI, LANCE DEWITT PO BOX 429 EDENTON 27932	FP 021 A AC 919 482-2116
PITTMAN, ALFRED ROWLAND, JR. 2606 N. ELM STREET LUMBERTON 28358	IM 078 L/RT 919 739-3362	POLLOCK, HOKE DICKINSON 1625 DOCTOR'S CIRCLE WILMINGTON 28401	OTO 065 A AC 919 762-0234	POTTER, JOAN GARSKA 109 CONNER DR., STE. 2203 CHAPEL HILL 27514	FP 032 AC 919 929-5700
PITTMAN, CLYDE EDWIN 2230 MAPLEWOOD AVE. WINSTON-SALEM 27103	034 A R 919 748-2011	POLLOCK, JOSEPH J. 912 SECOND ST., NE HICKORY 28601	PUD /IM 018 AC 704 322-8265	POTTER, PATRICIA LYNN 6439 BENTRIDGE DR. CHARLOTTE 28207	AN 060 A P AC 704 377-1647
PITTMAN, ERIC WILLIAMS IREDELL MEM. HOSP. BOX 1460 STATESVILLE 28677	PTH 049 A P AC 704 873-5661	POLLOCK, MORRIS ARTHUR 1212 CEDARHURST DR. RALEIGH 27609	GE /IM 092 AC 919 872-4850	POTTS, FREDERICK LATHAM, III 403 BLOUNT PLACE WASHINGTON 27889	EM 007 A AC 919 975-1066
PITTMAN, JERRY MICHAEL 220 OAKCREST DR. WAKE FOREST 27587	092 AC 919 846-7403	POLLOCK, NELSON EARL P. O. BOX 5904 HIGH POINT 27262	IM 040 A AC 919 841-2114	POTTS, JAMES MARTIN 809 N. LAFAYETTE STREET SHELBY 28150	GS /TS 023 A AC 919 487-8591
PITTMAN, WILLIAM BRYAN 100 NASH MEDICAL ARTS MALL ROCKY MOUNT 27804	GE /IM 064 P AC 919 443-9084	POMERANS, MARK ROANOKE-CHOWAN HOSPITAL AHOSKIE 27910	EM /FP 008 AC 919 332-8121	POTTS, LEO JOSEPH HIGHLAND HOSPITAL PO BOX 1101 ASHEVILLE 28802	P 011 A AC 704 254-3201
PITTS, WILLIAM REID 429 EASTOVER ROAD CHARLOTTE 28207	NS /GS 060 A L/RT 704 333-0407	PONDER, PHILIP WADE 405-A COOLIDGE ST. CHAPEL HILL 27516	032 A S 919 968-6926	POTTS, RONALD SARGENT 115 WAVERLY CIRCLE SALISBURY 28144	PTH 080 A P AC 704 633-7765
PIVER, JAMES DECAMP 1002 SCHALL PLACE JACKSONVILLE 28540	GS /ABS 067 L/RT 919 353-7848	PONZI, JOSEPH WILLIAM 2706 MEDICAL OFFICE PLACE GOLDSBORO 27530	PD 096 AC 919 734-4736	POULOS, JOHN E. 1306-B E. 14TH ST. GREENVILLE 27834	074 A S 919 758-3751
PIXLEY, ROLAND THEO 1023 EDGEHILL ROAD, SOUTH CHARLOTTE 28207	OBG 060 A AC 704 373-1541	POOL, ROBERT SMITHWICK FORSYTH MEMORIAL HOSPITAL WINSTON-SALEM 27103	PTH /CLP 034 A AC 919 773-3840	POWE, CHARLES EDWIN, JR. 3535 RANDOLPH ROAD, STE. 105 CHARLOTTE 28211	OBG 060 A AC 704 365-0470
PLESCIA, MARCUS 106 STINSON ST. CHAPEL HILL 27516	032 A S 919 967-8905	POOLE, ERNEST TILGHMAN 2310 DELANEY AVENUE WILMINGTON 28403	OPH /P 065 A AC 919 763-3664	POWELL, ALLEN ORLO 2325 ENGLEWOOD AVE. DURHAM 27705	032 A S 919 286-5436
PLONK, GEORGE WEBB 902 CRESCENT CIRCLE KINGS MOUNTAIN 28086	GS 023 A L/RT 704 739-2272	POOLE, GORDON JOSEPH PO BOX 13005 DECEASED--5-5-88 GREENSBORO 27415	DR 041 A 919 379-4140	POWELL, BAYARD LOWERY 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	ON /HEM 034 A AC 919 748-2946
PLONK, GEORGE WEBB, JR. BOWMAN GRAY - SURGERY WINSTON-SALEM 27103	GS /VS 034 A AC 919 748-4449	POOLE, JAMES MORRISON 3803 COMPUTER DR., STE. 207 RALEIGH 27609	PD /ADL 092 AC 919 782-5273	POWELL, BENJAMIN PHILIP 421 VANDERBILT ROAD ASHEVILLE 28803	AN 011 A AC 704 252-1016
PLOWDEN, JAMES FRANCIS P. O. BOX 5904 HIGH POINT 27262	ON /HEM 040 A AC 919 841-2114	POOLE, TERRY WAYNE 2500 BLUE RIDGE CTR., STE. 401 RALEIGH 27607	OBG 092 A P AC 919 781-5510	POWELL, CHARLES S. ECU SCHOOL OF MEDICINE DEPT. OF SURGERY GREENVILLE 27858	GS 074 A AC 919 551-4667
PLUMMER, CHARLES WAYNE 50 E. MAIN ST., STE. 111 THOMASVILLE 27360	AN 029 A P AC 919 472-2000	POPE, ROBERT CLYDE WILSON CLINIC WILSON 27893	PD 098 A AC 919 291-7001	POWELL, DAVID CLIFTON 1101 DRESSER COURT RALEIGH 27609	GS 092 AC 919 876-2010
PLUNKETT, STEVEN ROCKWELL PO BOX 33549 CHARLOTTE 28233	TR 060 A AC 704 371-4189	POPE, SAMUEL A. BEULAVILLE 28518	IM 031 A L/RT 919 298-3193		

POWELL, DON WATSON UNC BURNETT-WOMACK BLDG. CB #7080, RM. 326 CHAPEL HILL 27599	GE /IM 032 AC	PRESSLY, DAVID LOWRY 1109 DAVIE AVENUE STATESVILLE 28677	FP 049 A L 704 872-5671	PROCTOR, RICHARD CULPEPPER 381 WESTVIEW DR., S.W. WINSTON-SALEM 27104	P 034 A L/RT 919 723-6020
POWELL, E. CHARLES 100 WOOTEN POINT ROAD GOLDSBORO 27530	OBG 096 A L 919 778-2692	PRESSLY, JAMES ALLEN 2300-B RANDOLPH ROAD CHARLOTTE 28207	ORS 060 AC 704 375-5955	PROIA, ALAN DAVID 4118 DEEPWOOD CIRCLE DURHAM 27707	PTH 032 A AC 919 489-3161
POWELL, JACK 190 W. DOCTOR'S BUILDING ASHEVILLE 28801	GS 011 AC 704 253-1529	PRESSLY, JAMES PATTERSON 3535 RANDOLPH ROAD CHARLOTTE 28211	OPH 060 A AC 704 364-8576	PROSNITZ, LEONARD R. BOX 3085, DUMC DURHAM 27710	TR 032 A AC 919 684-3805
POWELL, JAMES BLACKMON, II 131 MCDOWELL STREET ASHEVILLE 28801	HNS /PSF 011 A AC 704 254-3517	PRESSON, THOMAS LEMUEL PO BOX 14580 315 W. WENDOVER AVE. GREENSBORO 27415	ORS 041 A P AC 919 275-0724	PROUGH, DONALD SANDERSON 1890 RUNNYMEADE RD. WINSTON-SALEM 27104	AN 034 A AC 919 748-4684
POWELL, JAMES BOBBITT 1447 YORK COURT BURLINGTON 27215	PTH 001 A AC 919 584-5171	PRESTON, EDWIN THORNTON 110 S. ESTES DRIVE CHAPEL HILL 27514	ORS 032 A AC 919 942-3171	PRUETT, DENNIS DERWOOD 1611 W. FIRST STREET WINSTON-SALEM 27104	EM 034 A P AC 919 721-1075
POWELL, JAMES MEYERS, JR. 2315 RANDOLPH ROAD CHARLOTTE 28207	P /CHP 060 AC 704 377-4243	PRESTON, RONALD ALLYN P. O. BOX 68 POLLOCKSVILLE 28573	IM 025 A AC 919 633-1010	PRUITT, JERRY L. 24 SECOND AVENUE, N.E. HICKORY 28601	D 018 A AC 704 328-6185
POWELL, JESS AVERETTE, III 201 GROVER STREET SHELBY 28150	DR 023 A P AC 704 487-3141	PRICE, AMY DENISE VANN 207 SPEIGHT DR. GREENVILLE 27834	A R 919 551-4909	PRUITT, RONALD ANTHONY 316 N. GRAHAM-HOPEDALE RD. BURLINGTON 27215	ORS 001 AC 919 227-3621
POWELL, KENNETH ALTON P. O. BOX 330 RUTHERFORD COLLEGE 28671	FP 012 * AC 704 874-2107	PRICE, ANDREW RICHARD 1901 S. TARBORO ST. PO BOX 3188 WILSON 27893	IM 098 A AC 919 243-5505	PRUTHI, ASIT SOM 2752 MIDDLETON AVE. 31-I DURHAM 27705	A S 919 286-2615
POWELL, ROBERT NARROWAY 1142 N. ROAD STREET ELIZABETH CITY 27909	IM 070 AC 919 338-4117	PRICE, BILLY LEE, JR. 3260 LANDMARK ST. C-6 GREENVILLE 27834	A S 919 756-5425	PRYOR, ROBERT E. 500 WOODCROFT PKWY. #7-D DURHAM 27713	IM 032 A R 919 684-8111
POWELL, THOMAS EDWARD, III P. O. BOX 2536 BURLINGTON 27215	PTH 001 A P AC 919 227-1235	PRICE, DOUGLAS S. ECU SCHOOL OF MEDICINE GREENVILLE 27858	GE 074 A AC 919 551-4652	PUCKETT, JAMES BUTLER 68 LAKE CONCORD RD., NE CONCORD 28025	IM /ON 013 A AC 704 782-3135
POWELL, THOMAS WILLIAM 48 ARDSLEY AVE., NE CONCORD 28025	GS /CDS 013 A AC 704 786-1108	PRICE, GRADY EDWIN 2001 RANDOLPH ROAD CHARLOTTE 28207	ORS 060 A P AC 704 377-4907	PUGH, HOLLY P. 416 RIDGEHAVEN DR. WINSTON-SALEM 27104	OPH 034 A R 919 748-3504
POWELL, WILLIAM CARLYLE P. O. BOX 53127 FAYETTEVILLE 28305	PD 026 A AC 919 484-3121	PRICE, HARVEY CRAIG 1905 STURBRIDGE COURT RALEIGH 27612	HNS 092 A * AC 919 782-8955	PUGH, JAMES EDWIN, JR. 126 COTTAGE PLACE CHARLOTTE 28207	N 060 A AC 704 334-7311
POWELL, WILLIAM ERNEST, JR. 1 CHESTNUT STREET MARS HILL 28754	GP 057 A AC 704 689-2581	PRICE, JAMES LOUIS, III 1612 DOCTOR'S CIRCLE WILMINGTON 28401	OBG 065 A AC 919 763-9015	PUGH, RAEFORD THEODORE 619 E. 12TH STREET WASHINGTON 27889	FP 007 AC 919 946-6486
POWELL, WILLIAM FLYNN 62 GERTRUDE PLACE ASHEVILLE 28801	OPH /OTO 011 A L/RT 704 252-8931	PRICE, JERRY THEODORE 322 KEYWOOD DR. LYNCHBURG, VA 24501	A R 804 239-4961	PUGH, VERNON WATSON, JR. 1321 OBERLIN ROAD RALEIGH 27608	PD 092 A AC 919 828-4747
POWER, BHASKAR DAYARAM 240 SMITH CHURCH ROAD ROANOKE RAPIDS 27870	OTO /A 042 A AC 919 535-1411	PRICE, ROBERT EDWIN, JR. 1830 HILLANDALE ROAD DURHAM 27705	NS 032 A P * AC 919 383-5531	PULEO, ELLEN ANNE CCNC, P. O. BOX 786 PINEHURST 28374	OBG 063 AC
POWERS, BARRY 306 STANWOOD DRIVE GREENVILLE 27834	DR 074 A AC 919 752-5000	PRICE, THOMAS BAKER 200 E. NORTHWOOD ST., STE. 304 GREENSBORO 27401	GS 041 A AC 919 378-9811	PULKINGHAM, NATHAN CARR 28 LEXINGTON SQUARE APTS. GREENVILLE 27858	074 A S 919 756-4752
POWERS, STEPHEN KENT UNC, 148 CLINICAL SCI. BLDG. CHAPEL HILL 27514	NS 032 A AC 919 966-1374	PRICHARD, ROBERT WILLIAMS 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	PTH 034 A AC 919 748-2649	PULLIAM, THOMAS JACKSON 311 STAFFORDSHIRE RD. WINSTON-SALEM 27104	IM 034 A P R 919 760-4557
POZNER, ROBERT S. 445 BILTMORE CTR. STE. 305 ASHEVILLE 28801	IM 011 A AC	PRIDE, HAROLD SYLVESTER 700 E. STONEWALL ST., STE. 200 CHARLOTTE 28202	FP /PD 060 AC 704 377-3015	PULLY, ROSE 805 ROUNTREE ST. KINSTON 28501	FP 054 A * L/RT 919 523-2569
PRACYK, JOHN BRADFORD 610 DOUGLAS ST., APT. 312-B DURHAM 27705	032 A S 919 286-7365	PRIDE, GEORGE EDWARD 3709 ST. REGIS DR. GASTONIA 28054	PD 036 A * AC 704 866-3222	PURCELL, PETER NELSON 220 LORRAINE AVE. APT. #3 CINCINNATI, OH 45220	074 A S
PRANGE, ARTHUR JERGEN, JR. NCMH, DEPT. OF PSYCHIATRY CHAPEL HILL 27514	P 032 A AC 919 966-1480	PRINCE, JAMES WILLIAM RT. #1, BOX 15Y HARRELLSVILLE 27942	P 008 AC 919 332-4137	PURCELL, WILLIAM ROBERT 418 KING STREET LAURINBURG 28352	PD 083 AC 919 276-7570
PRATHER, DONNA LYNN 311 BLUERIDGE RD. CARRBORO 27510	P 032 AC 919 929-6519	PRINGLE, JOSEPH ROSS, JR. 711 HERMITAGE RD. BURLINGTON 27215	PD 001 AC 919 229-5341	PURUSHOTHAMAN, C. V. #4 MEDICAL PARK MOREHEAD CITY 28557	CD /IM 016 A AC 919 247-5426
PRATHER, FONZO GOFF 5 FAIRWAY DRIVE ASHEVILLE 28805	GP 011 A L/RT 704 298-4071	PRINTZ, DON RALPH 10 DEERFIELD ROAD ASHEVILLE 28803	D 011 A L/RT 704 274-1234	PURUT, CEMIL M. 500 N. DUKE ST. APT. 53-202 DURHAM 27701	032 A R 919 684-8111
PRATT, LAURA WINSTEAD 3400 EXECUTIVE DR. STE. 203 RALEIGH 27609	FP 092 A AC 919 878-0340	PRITCHARD, DOUGLAS DUSSEL 504 CATS PAW LN., RT. 10 STATESVILLE 28677	AN 049 AC 919 873-0281	PURVIS, JOSEPH D., III 3030 CORNWALLIS RD. RESEARCH TRIANGLE PK. 27709	ON 032 A AC 919 248-4642
PRATT, REBECCA ANN 209 ALEXANDER ST. APT. D DURHAM 27705	032 A S 919 684-7590	PRITCHARD, WILLIAM LEE 3314 MELROSE RD. FAYETTEVILLE 28304	NS 026 A AC	PURVIS, WILLIAM HENRY 1816 DOCTORS DR. SANFORD 27330	U 053 A AC
PREFONTAINE, J. EDOUARD 830 SOUTHEASTERN BLDG. GREENSBORO 27401	OPH 041 A L/RT 919 272-3523	PRITCHETT, NEWTON GEORGE 2800 BLUE RIDGE, STE. 205 RALEIGH 27607	IM 092 A AC 919 782-0414	PUSTOM, EINAR 239 WILMONT ROAD GASTONIA 28054	P /CHP 036 AC 704 867-2338
PRENDERGAST, MARK L. 702 HARTNESS RD. STATESVILLE 28677	OTO 049 A AC 704 873-5224	PRIVETTE, DOUGLAS CRAIG 326 DUPONT CR. GREENVILLE 27858	CD /IM 074 A AC 919 752-6101	PUTMAN, CHARLES EDGAR BOX 3808, DUMC DURHAM 27710	R /IM 032 A AC 919 684-3403
PRENTICE, ROBERT DEREK 3500 WESTGATE DR., STE. 705 DURHAM 27707	FP 032 AC 919 493-8600	PRIVETTE, MELINDA HILL 20 FLEMINGTON RD. CHAPEL HILL 27514	032 A R 919 929-8862	PUTMAN, STEVEN FREDERICK 2608 E. SEVENTH ST. CHARLOTTE 28204	N 060 AC 704 377-9323
PRESSLY, CLAUDE LOWRY 1863 CASSAMIA PL. CHARLOTTE 28211	GS /TS 060 A L/RT 704 376-0327	PROCTER, WILLIAM IVAN 3900 BROWNING PLACE RALEIGH 27609	IM 092 A AC 919 781-9650	PUTNEY, ROBERT HUBBARD, JR. P. O. BOX 519 ELM CITY 27822	FP 098 A L 919 236-4341
				PYERITZ, ERIC ALLEN 501 BILTMORE AVE. ASHEVILLE 28801	FP 011 AC 704 258-0670

PYLES, JERALD DENNIS 510 7TH AVENUE, WEST HENDERSONVILLE 28739	IM 045 A AC 704 692-2231	RAGOZZINO, MARK WM. 2212 DELANEY AVE. WILMINGTON 28403	R 065 A AC 919 762-3882	RAO, INNANJE RAVINDRANATH 2330 RANDOLPH RD CHARLOTTE 28207	CD /IM 060 A P AC 704 377-0575
QUEEN, HUGH OSCAR 315 CHARLOTTE STREET HAMLET 28345	FP 077 A AS 919 582-3241	RAIFORD, FLETCHER LINDSAY 1023 FOREST HILL RD. HENDERSONVILLE 28739	PD 045 A L 704 693-3296	RAPER, JAMES SIDNEY 29 MARTINDALE ROAD ASHEVILLE 28804	R 011 A L/RT 704 253-0027
QUEEN, JEFFREY SCOTT 115 TURTLE CREEK RD. #2 CHARLOTTESVILLE, VA 22901	PD /AN 000 A R 804 295-8774	RAKFAL, SUSAN MAFFEY ECU SCHOOL OF MED. RADIATION ONCOLOGY CTR. GREENVILLE 27835	TR 074 AC 919 551-2900	RARDIN, THOMAS EDWIN 43 OAKLAND ROAD ASHEVILLE 28801	RHU 011 A AC 704 253-2824
QUEEN, KATE TAYLOR 102 HOSPITAL DR. CLYDE 28721	RHU /IM 044 P AC 704 452-0331	RALLIS, MICHAEL GEORGE 301 S. MCNEIL ST. PO BOX 1179 BURGAW 28425	IM 065 A P AC 919 259-5011	RASBERRY, EDWIN ALBERT, JR. WILSON CLINIC WILSON 27893	IM 098 A L 919 291-7001
QUEEN, LAURINDA LEE 4505 FAIR MEADOWS LN.,STE.103 RALEIGH 27607	D 092 A AC 919 783-7877	RAM, BERNARD ALLEN 760 HARTNESS ROAD STATESVILLE 28677	U 049 A AC 704 873-4741	RATCHFORD, GEORGE RUFUS, JR. 100 NASH MEDICAL ARTS MALL ROCKY MOUNT 27801	IM 064 AC 919 443-9084
QUERY, LUKE WALTER, JR. 132 W. MILLER STREET ASHEBORO 27203	IM 076 A L/RT 919 629-2009	RAM, CECIL CASPER 774 HARTNESS ROAD STATESVILLE 28677	U 049 A P AC 704 873-3231	RATHBUN, LEWIS STANDISH 76 FOREST RD. ASHEVILLE 28803	GYN 011 A L/RT 704 274-0748
QUERY, RICHARD ZIMRI, JR. 1903 QUEENS RD. WEST CHARLOTTE 28207	RHU /IM 060 A L/RT 704 333-8055	RAMBO, V. BIRCH 1200 AURORA BLVD. BRADENTON, FL 34202	GS 006 P H 919 323-5491	RATHBUN, MARY ANNE CHARLOTTE MEM. HOSPITAL P. O. BOX 32861 CHARLOTTE 28232	NPM /PD 060 A AC 704 338-3156
QUIGLESS, MILTON DOUGLAS, JR. 100 SUNNYBROOK ROAD P. O. BOX 14445 RALEIGH 27620	GS 092 A AC 919 821-5771	RAMPULLA, ELLIOT JOHN 1762 METROMEDICAL DRIVE P. O. BOX 64405 FAYETTEVILLE 28306	AN 026 A AC 919 443-4031	RAU, BRUCE WILLIAM 190 CHARLOIS BLVD. WINSTON-SALEM 27103	P 034 A AC 919 768-6930
QUIGLESS, MILTON DOUGLAS, SR. P. O. BOX 368 TARBORO 27886	GP /D 033 AC 919 823-2112	RAMQUIST, NEIL ALBERT 2713 TOWNEDGE CT. RALEIGH 27612	DR 092 A AC 919 783-3023	RAUCK, RICHARD LEE 1740 VIRGINIA RD. WINSTON-SALEM 27104	AN 034 A AC 919 748-2591
QUIGLEY, PATRICIA MARY 910 CONSTITUTION DR., APT. 1010 DURHAM 27705	032 R 919 684-8111	RAMSDALL, CHARLES MICHAEL 1705 W. SIXTH STREET GREENVILLE 27834	RHU /IM 074 AC 919 752-6101	RAVENEL, SAMUEL DUBOSE 624 QUAKER LANE HIGH POINT 27262	PD 041 A AC 919 882-4171
QUINN, CLIFTON LEE 3125 GLENWOOD PROF VILLAGE RALEIGH NC 27608	P 092 A AC 919 782-0166	RAMSEY, EDWARD ALLISON 124 FOYE DRIVE ROCKY MOUNT 27804	PD 064 AC 919 443-4031	RAVIN, CARL ERIC BOX 3808, DUMC DURHAM 27710	R 032 A AC 919 681-5268
QUINN, CORBETT LATIMER 112-116 N. R.R. ST. MAGNOLIA 28453	FP /PH 031 AC 919 289-4165	RAND, CECIL HOLMES, JR. 1800 W. FIFTH STREET GREENVILLE 27834	IM /PUD 074 AC 919 752-3185	RAWL, RICHARD PRESTON P. O. BOX 339 BETHEL 27812	FP 074 A AC 919 825-0355
QUINN, MARSHALL K. PO BOX 189 MAGNOLIA 28453	FP 031 AC 919 289-4165	RAND, TOM SLADE 1704 S. TARBORO ST. WILSON 27893	ORS 098 A AC 919 291-7001	RAWLS, WILLIAM 801 MCCARTHY BLVD. NEW BERN 28560	OBG 025 A AC 919 633-3942
QUINN, ROBERT P. 11 ARDSLEY AVE. CONCORD 28025	OTO /HNS 013 * AC 704 788-1103	RANDALL, MARCUS EDDIE 300 S. HAWTHORNE RD. DIV. RADIATION ONCOLOGY WINSTON-SALEM 27103	ON /TR 034 AC 919 748-4981	RAY, V. GAIL DEPT. OF EMERGENCY MED. ECU SCHOOL OF MEDICINE GREENVILLE 27834	EM 074 A AC 919 551-4757
QURESHI, AFTAB AHMAD 226 S. ACADEMY ST. AHOSKIE 27910	GS /OBG 008 A AC 919 332-2244	RANDOLPH, ANGUS CRAWFORD 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	P /N 034 L 919 748-4635	RAY, VERONICA JOSEPHINE F. 1301 FAYETTEVILLE ST. DURHAM 27707	IM 032 AC 919 683-1316
QURESHI, AYYAZ MAHMOOD 505 N. THIRD AVE. MAYODAN 27027	IM /ON 079 AC 919 548-2456	RANEY, RICHARD BEVERLY, SR. N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514	ORS 032 A L/RT 919 966-2030	RAY, WALTER CARROLL 522 N. ELAM AVE. GREENSBORO 27403	GYN 041 A * AC 919 299-3101
QURESHI, FAIQA AFTAB 222 S. ACADEMY ST. AHOSKIE 27910	PD 008 AC 919 332-3403	RANGAR, JITINDER SINGH P. O. BOX 58 SMITHFIELD 27577	DR /NM 051 AC 919 934-8171	RAYMER, JAMES BARKER 1928 RANDOLPH ROAD CHARLOTTE 28207	GS 060 A AC 704 333-6524
RAAB, MARY JERISTA ECU SCHOOL OF MEDICINE GREENVILLE 27834	ON /HEM 074 A AC 919 551-2383	RANKIN, CHARLES ALBERT, JR. 80 VICTORIA ROAD ASHEVILLE 28801	OBG 011 A AC 704 255-8900	RAYNOR, LEIGHTON ALVIN 335 E. PARKER RD. MORGANTON 28655	OPH 012 AC 704 433-6220
RAAB, SPENCER O. ECU SCHOOL OF MEDICINE GREENVILLE 27834	ON /HEM 074 A AC 919 551-2383	RANKIN, JAMES SCOTT BOX 3851, DUMC DURHAM 27710	TS 032 A AC 919 684-2718	REAMES, PATRICK MARTIN PO BOX 33549 CHARLOTTE 28233	R 060 A AC 704 371-4056
RABEN, MILTON N. C. BAPTIST HOSPITAL WINSTON-SALEM 27103	TR 034 AC 919 748-4981	RANKIN, PRESSLEY ROBINSON, JR. P. O. BOX 40 ELLERBE 28338	FP 077 * AC 919 652-3321	REAVES, LEONARD ERATUS, III 2841 SKYE DR. FAYETTEVILLE 28303	IM /GE 026 A AC 919 483-5100
RABIL, WILLIAM EDMOND 2240 CLOVERDALE AVE., STE. 218 WINSTON-SALEM 27103	GS /GYN 034 A AC 919 722-3691	RANKIN, RICHARD BRANDON, JR. 500 LAKE CONCORD RD., NE CONCORD 28025	OPH 013 A AC 704 782-1127	RECKER, SCOTT F. PO BOX 6028 REGIONAL REHABILITATION CTR. GREENVILLE 27834	PM 074 A AC 919 551-4440
RABOLD, LEONARD JAMES 209 HOMEWOOD AVENUE GREENSBORO 27403	IM 041 A L/RT 919 379-4025	RANKIN, RICHARD EUGENE RANKIN CLINIC MOUNT HOLLY 28120	FP /GP 036 A AC 704 827-3031	RECKLESS, JOHN BRIAN 1816 FRONT ST., STE. 310 DURHAM 27705	P /PYM 032 A AC 919 383-1502
RABON, THOMAS R. RT. #3, BOX 3, RUSTIC RIDGE GREENVILLE 27858	074 A S 919 758-0645	RANKIN, RUFUS PINKNEY, JR. 1851 E. THIRD STREET CHARLOTTE 28204	GYN 060 AC 704 332-8103	RECORD, S. LEO, JR. P. O. BOX 627 KERNERSVILLE 27284	FP 034 A AC 919 993-8181
RACKLEY, JAMES WAYNE 250 CHARLOIS BLVD. WINSTON-SALEM 27103	PD /HEM 034 A AC 919 768-4730	RANN, EMERY LOUVELLE 1001 BEATTIES FORD ROAD CHARLOTTE 28216	FP 060 A L/RT 704 333-0721	REDDING, MARSHALL SIMMS 1142 N. ROAD ST. PO BOX 1402 ELIZABETH CITY 27909	OPH 070 A P * AC 919 335-5446
RADFORD, HOWARD LEE P. O. BOX 427 CLIFFSIDE 28024	FP 081 A L/RT 704 657-5221	RANSOM, JAMES LAURENCE 1200 N. ELM ST. GREENSBORO 27401	IM 060 L 704 376-4852	REDDY, AMARENDRA BUSA 3020 NEW BERN AVE., STE. 410 RALEIGH 27610	CD /IM 092 A AC 919 828-8967
RADFORD, WANDA LEE 2800 BLUE RIDGE BLVD.,STE. 206 RALEIGH 27607	OBG 092 AC 919 781-7450	RANSON, JOHN LESTER, JR. 335 N. CASWELL ROAD CHARLOTTE 28204	NPM /PHO 041 AC 919 379-3977	REDDY, PARVATA CHINNA P. DURHAM CO. GENERAL HOSP. DURHAM 27704	AN 032 A P AC 919 471-3411
RAFT, ELIZABETH VANCE 33 KIMBERLY DRIVE DURHAM 27707	CHP /P 032 AC 919 489-7011	RANSON, WILLIAM ALEXANDER 1012 S. KINGS DR. CHARLOTTE 28283	IM 060 A AC 704 374-0773	REDDY, PUTLUR RAMACHANDRA MEDICAL ARTS BUILDING RUIN CREEK ROAD HENDERSON 27536	IM /ON 091 A AC 919 492-6127

REDDY, SREENIVAS MADDURI PO BOX 726 VALDESE 28690	IM /ON 012 AC 704 874-2921	REINES, ERIC DAVID 445 BILTMORE CTR. STE. 404 ASHEVILLE 28801	ID 011 AC 704 258-9365	RHYNE, JAMES MOODY 757 BRYANT ST. STATESVILLE 28677	IM /N 049 * AC 704 873-5658
REDICK, LLOYD FRANKLIN BOX 3094, DUMC DURHAM 27710	AN 032 A P AC 919 684-6736	REISER, HARVEY J. 9TH AND WALNUT STREETS PHILADELPHIA, PA 19107	OPH 032 A R	RHYNE, JIMMIE LEE DIV. OF HEALTH SERVICES PO BOX 2091	PH /PD 092 * AC
REDWINE, JAMES DANIEL 6 WILLIAMS CIRCLE LEXINGTON 27292	GP 029 A L/RT 704 246-2658	REITER, RICHARD MARTIN 603 BEAMON ST. CLINTON 28328	GS 082 AC 919 592-8711	RALEIGH 27602	919 733-7791
REED, CHARLES NATHAN 24 SECOND AVE., NE HICKORY 28601	D /IM 018 A AC 704 328-6185	REKUC, GREGORY M. 1212 CEDARHURST DR. RALEIGH 27609	IM 092 AC 919 872-4850	RIBNER, BRUCE STEVEN VA MEDICAL CENTER ASHEVILLE 28805	ID 011 AC 704 298-7911
REED, JAMES CROFT 300 S. HAWTHORNE RD. DEPT. OF RADIOLOGY WINSTON-SALEM 27103	R 034 A AC	REMINGTON, JOHN LAUREN 2101 S. LIVE OAK PARKWAY WILMINGTON 28403	DR 065 A AC 919 762-3882	RICE, DANIEL MICHAEL 701 WARDS BRIDGE RD. WARSAW 28398	IM 031 AC 919 289-3086
REED, JOHN WILLIAM BOWMAN GRAY, DEPT. OF OPH WINSTON-SALEM 27103	OPH 034 A P AC 919 748-4091	RENALDO, DONALD PHILIP 1416 E. MOREHEAD ST., STE. 300 CHARLOTTE 28204	OPH 060 A P AC 704 376-5424	RICE, A. DOUGLAS 2919 COLONY ROAD DURHAM 27705	PD 032 A L/RT 919 489-9158
REEDER, PAUL ARLINGTON 1026 COLLEGE STREET OXFORD 27565	GS 039 A AC 919 693-7066	RENDALL, JOHN LLOYD, III 108 KEMP ROAD, EAST GREENSBORO 27410	ORS 041 A P AC 919 275-6318	RICE, EDMOND LEE UNITED CHRISTIAN HOSPITAL LAHORE, WEST PAKISTAN	GS 036 A H
REES, MICHAEL STEVENS 3101 ESSEX CIRCLE, BLDG. E RALEIGH 27608	IM 092 A AC 919 782-2631	RENDLEMAN, DAVID ATWELL, III 3410 EXECUTIVE DRIVE RALEIGH 27609	ORS 092 A P AC 919 872-5296	RICE, JOHN RUSSELL BOX 3383, DUMC DURHAM 27710	IM 011 AC 919 684-3313
REESE, MITCHELL CRAWFORD 555 CARTHAGE STREET SANFORD 27330	PD 053 AC 919 776-7534	RENDLEMAN, DAVID ATWELL, JR. P. O. BOX 4327 SALISBURY 28144	FP 080 AC 704 633-0844	RICE, LUCIAN CANDLER, JR. 147 ASHELAND AVENUE ASHEVILLE 28801	DR 032 A AC 919 684-2711
REEVES, CHARLES EDWIN 1012 S. KINGS DR. STE. 705 CHARLOTTE 28283	D /DMP 060 AC 704 333-2147	RENNICK, JOHN H., JR. PO BOX 425 MANSON 27553	FP 091 A AC 919 456-2181	RICE, WILLIAM CHARLES 1012 S. KINGS DR., STE. 806 CHARLOTTE 28283	U 060 A AC 704 334-6449
REEVES, WILLIAM JOHN CABARRUS MEM. HOSP. CONCORD 28025	PTH 013 A P AC 704 786-2111	RENSNER, RICHARD WM., JR. 1304 FENIMORE ST. WINSTON-SALEM 27103	034 A S 919 761-8933	RICE, WILLIAM YATES, III 706 FRIAR TUCK ROAD WINSTON-SALEM 27104	034 A S 919 768-7293
REEVES, WM. CHARLES ECU SCHOOL OF MEDICINE SECTION OF CARDIOLOGY GREENVILLE 27858	CD 074 AC 919 757-4651	RENUART, ADHEMAR WILLIAM, III 1830 HILLANDALE ROAD DURHAM 27705	N /PD 032 AC 919 383-5531	RICH, CHARLES BOYCE, JR. 212 S. TRYON ST., STE. 1500 CHARLOTTE 28281	IM 060 A AC 704 333-6544
REEVES, WOODROW WILSON, JR. 123 1/2 BANBERRY LANE LEXINGTON, KY 40503	U 000 A R 606 277-5344	REVELLE, BONNIE CAULKINS 222 S. ACADEMY ST. AHOSKIE 27910	PD 008 AC 919 332-3403	RICH, KENNETH J. 3320 WAKE FOREST RD. STE. 410 RALEIGH 27609	NS 092 A AC 919 850-9911
REGISTER, JOHN FRANCIS 310 ROCKFORD ROAD GREENSBORO 27401	ORS 041 A L 919 274-0161	REVES, JOS. GERALD BOX 3094, DUMC DURHAM 27710	AN 032 A AC 919 681-6646	RICHARDS, FREDERICK, II 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	ON /HEM 034 A AC 919 748-4337
REIBEL, DONALD BAUMANN P. O. BOX 10707 RALEIGH 27605	ORS 092 A AC 919 781-5600	REYNOLDS, ERNEST HAROLD P. O. BOX 330 REIDSVILLE 27320	FP 079 A L 919 349-3332	RICHARDS, ROBERT DAY ROUTE #2 WILSON 27893	FP 098 A AC 919 291-2215
REICHLING, GEORGE HENRY 300 WESTERN BLVD. JACKSONVILLE 28540	D 067 AC 919 577-7288	REYNOLDS, FRANK RUSSELL 1613 DOCK STREET WILMINGTON 28401	PD 065 A P * AC 919 763-4272	RICHARDSON, DAN N. 618 KNOLLWOOD ST. WINSTON-SALEM 27103	DR 034 A R 919 748-4435
REICHLING, PIRKKO ESTERI 300 WESTERN BLVD. JACKSONVILLE 28540	GP 067 AC 919 353-0176	REYNOLDS, JAMES W., JR. 826 W. HENDERSON STREET SALISBURY 28144	OTO /A 080 AC 704 633-8276	RICHARDSON, DAVID LEE 395 WEST 27TH STREET LUMBERTON 28358	IM 078 A AC 919 739-7551
REID, CHARLES FREDRIC 1806 S. HAWTHORNE RD. PO BOX 5655 WINSTON-SALEM 27103	U 034 A AC 919 768-0735	REYNOLDS, JOHN LAURENCE 404 MELODY LANE SHELBY 28150	AN 023 AC 704 482-5716	RICHARDSON, ERNEST C., JR. 4001 TRENT PINES DR. NEW BERN 28560	GYN /OBS 025 A L/RT 919 633-3942
REID, CHARLES HAMILTON, JR. 215 PLYMOUTH AVE. WINSTON-SALEM 27104	IM 034 A L/RT 919 768-0994	REYNOLDS, JOHN OZMENT, JR. 410 MOCKSVILLE AVE. SALISBURY 28144	OPH 080 A AC 704 637-0158	RICHARDSON, GEORGE IRVIN P. O. BOX 1857 REIDSVILLE 27320	FP 079 AC 919 349-5040
REID, JAMES EDWARD, JR. 103 W. 6TH AVE. LEXINGTON 27292	029 AC 919 246-5161	REYNOLDS, ROBERT JACK 445 BILTMORE AVE. STE. 407 ASHEVILLE 28801	IM 011 A AC 704 258-0397	RICHARDSON, LUCILE WELSH 355 PEACH STREET PINEBLUFF 28373	PUD /IM 047 L/RT 919 281-3236
REID, ROBERT LEARY 110 DOCTOR'S PARK P. O. BOX 578 LINCOLNTON 28092	FP /CD 055 AC 704 735-7414	RHOADES, VADE G. 2240-98 CLOVERDALE AVE. W-S PROF. BLDG. PO BOX 5128 WINSTON-SALEM 27113	D 034 A * AC 919 723-1834	RICHARDSON, WM. JAMES BOX 3077, DUMC DURHAM 27710	ORS 032 A AC 919 684-5711
REID, ROBERT LEARY, JR. 110 DOCTOR'S PARK P. O. BOX 578 LINCOLNTON 28092	FP 055 AC 704 735-7413	RHOADS, EDWARD JOHN 606 WALTER REED DR. GREENSBORO 27403	P /PYA 041 AC 919 299-0511	RICHER, CHARLOTTE MARTHA DIV. OF HEALTH SERVICES STE. 506, WACHOVIA BLDG. FAYETTEVILLE 28301	PUD /PD 047 A AC 919 486-1191
REID, STEVEN HUNTER 803 DELANEY ST. RICHMOND, VA 23229	DR 000 A R 804 741-5748	RHOADS, JOHN MCFARLANE BOX 3903, DUMC DURHAM 27710	P /PYA 032 AC 919 684-6224	RICHMOND, GLENN HICKAM, JR. CAMELOT VILLAGE, J-4 CHAPEL HILL 27514	032 A S 919 929-4483
REID, WILLIAM JOSEPH 2301 DANBURY ROAD GREENSBORO 27408	FP 041 A P L 919 274-6171	RHODES, CECIL DAVID, JR. P. O. BOX 27894-0309 WILSON 27894	IM /A 098 A AC 919 792-2036	RICHTER, JOEL EDWARDS 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	GE /IM 034 AC 919 748-2810
REIDA, RONALD JACK 4514 GREENVIEW RD. NEW BERN 28560	EM /PD 025 A AC 919 637-4016	RHODES, CHARLES WINSTON W. PO BOX 1058 MOUNT PLEASANT 28124	FP 013 A AC 704 436-6521	RICHTER, RICHARD LESTER 1640 NORTHWEST BLVD. WINSTON-SALEM 27104	034 A S 919 722-5918
REIFLER, BURTON V. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	P /GER 034 A AC 919 748-4552	RHODES, JAMES SLADE, JR. 407 N. SMITHWICK ST. WILLIAMSTON 27892	GP 007 A L/RT 919 781-7113	RIDGWAY, ALTON H. RFD #3, BOX 34-I EAST BEND 27018	OPH 054 A AC 919 522-1611
REINDOLLER, ROBERT WILLIAM 1900 RANDOLPH RD., STE. 310 CHARLOTTE 28207	GE /IM 060 A AC 704 372-7974	RHODES, JOHN FLINT 2800 BLUE RIDGE BLVD. STE. 403 RALEIGH 27607	U 092 A AC 919 781-7113	RIDLEY, MIRIAM E. 1416 E. MOREHEAD ST., #300 CHARLOTTE 28204	AN /FP 086 A AC 919 699-8283

RIEFKOH, RONALD DUMC, DIV. OF PLASTIC SURG. DURHAM 27710	PS /GS 032 * AC 919 684-2854	ROBB, JEFFREY WALLACE PHYSICIANS QUADRANGLE PITT CO. ANESTHESIA GREENVILLE 27834	AN 074 A AC 919 752-2140	ROBILLARD, ROBERT B. 518 S. VAN BUREN RD. EDEN 27288	OTO 079 A AC 919 623-7033
RIEKER, ROBERT PAUL 2827 LYNDRHURST AVE., STE.203 WINSTON-SALEM 27103	AN /PDC 034 A P AC 919 768-3212	ROBBINS, JACK GUYES 823 BROAD STREET DURHAM 27705	D 032 A P * AC 919 286-4195	ROBINSON, CHARLES HALL, JR. 3900 OLD WAKE FOREST ROAD SUITE 104 RALEIGH 27609	OPH 092 A * AC 919 872-3242
RIELA, ANTHONY RICHARD 211 RIVERBEND DR. BERMUDA RUN 27006	CHN /N 034 A AC 919 998-7646	ROBERSON, GEORGE DON 3535 RANDOLPH ROAD CHARLOTTE 28211	OTO /A 060 A AC 704 365-0711	ROBINSON, CHARLES WILSON 8919 PARK RD., COTTAGE #3 CHARLOTTE 28210	GP 060 A L/RT 704 551-7053
RIEMAN, GILBERT FLETCHER 2148 ECHO LANE WILMINGTON 28403	OBG 065 A RT 919 763-2827	ROBERSON, ROBERT STUART 305 GRIMBALL DR. HAZELWOOD 28738	PH 044 A L 704 456-3662	ROBINSON, JAMES ELBERT FORSYTH MEDICAL PARK, STE. 504 WINSTON-SALEM 27103	ORS 034 AC 919 768-9500
RIESER, GEOFFREY DAVIS 2833 BIRCHWOOD DR. WINSTON-SALEM 27103	DR 034 A R 919 760-3090	ROBERSON, VIRGIL ODELL, III 502 LINDSAY ST. PO BOX 2324 HIGH POINT 27261	AN 040 A AC 919 882-2567	ROBINSON, JAMES THOMAS, JR. 1124 E. LEXINGTON AVENUE HIGH POINT 27262	FP 040 A AC 919 882-1606
RIGGS, MILLARD MCADOO 105 WOODSWAY LANE MORGANTON 28655	FP 012 L/RT 704 433-1585	ROBERSON, WILLIAM E. 5305-L WRIGHTSVILLE AVE. WILMINGTON 28403	OBG 065 AC 919 343-1031	ROBINSON, LINDA MOORE COATS MEDICAL CLINIC P. O. BOX 280 COATS 27521	FP 043 A AC 919 897-6423
RILEY, DAVID LINDLEY 130 LAKE CONCORD RD. CONCORD 28025	DR 013 A AC 704 786-0214	ROBERTS, HAROLD ROSS UNC, CB #7035 416 BURNETT-WOMACK BLDG. CHAPEL HILL 27599	HEM 032 AC 919 966-4305	ROBINSON, NORMAN JEFFREY 2131 S. 17TH ST. PO BOX 9000 WILMINGTON 28402	CD /IM 065 A AC 919 343-0161
RILEY, JAMES CHARLES 125 BALDWIN AVE. CHARLOTTE 28204	IM /GE 060 A AC 704 374-1696	ROBERTS, JESSE EARLE 1425 PLAZA DRIVE WINSTON-SALEM 27103	RHU /IM 034 A AC 919 768-5221	ROBINSON, RONALD E. 1329 ROBESON ST. FAYETTEVILLE 28305	R 026 AC 919 323-2012
RILEY, PATRICK MICHAEL 504 ALDERSON WASHINGTON 27889	AN 007 A AC 919 946-5846	ROBERTS, JOHN MILTON, JR. 400 COOPER DRIVE CLINTON 28328	OBG 082 AC 919 592-1414	ROBINSON, SAM 106 EDMONTON DRIVE KINGS MOUNTAIN 28086	GS /TS 023 P AC 704 739-4749
RILEY, WILLIAM JOSEPH 605 W. 25TH STREET NEWTON 28658	GS 018 AC 704 464-5340	ROBERTS, JOSEPH E. 1333 MADISON AVE. WINSTON-SALEM 27103	034 A S 919 722-6835	ROBINSON, STEPHEN CARY 200 E. NORTHWOOD, SUITE 504 GREENSBORO 27401	NS 041 A AC 919 272-4578
RIMER, BOBBY ALAN 121 LESTER DAVIS RD. WAXHAW 28173	OBG 060 A AC 704 331-3149	ROBERTS, JOSEPH E., JR. 3836-L MIZELL RD. GREENSBORO 27405	FP 000 R 919 375-7127	ROBISON, WILLIAM PETERSON 2023 SOUTH 17TH STREET WILMINGTON 28401	P 065 A AC 919 343-0151
RINEHART, DAVID APGAR 9 FOREST HILL ROAD BELMONT 28012	FP 036 A AC 704 825-5333	ROBERTS, LLOYD EUGENE 1612 DOCTOR'S CIRCLE WILMINGTON 28401	OBG 065 A AC 919 763-9015	ROCHMAN, STEPHEN CHARLES 513 OWEN DRIVE FAYETTEVILLE 28304	U 026 A * AC 919 485-8801
RINKER, GEORGE ERNEST 817 COLONIAL DRIVE BURLINGTON 27215	PTH /IM 001 A AC 919 584-5171	ROBERTS, LOUIS CARROLL 3950 PLYMOUTH ROAD DURHAM 27707	U 032 A L/RT 919 489-4215	ROCKWELL, DAVID ALLEN 2701 MEDICAL OFFICE PLACE GOLDSBORO 27530	ORS 096 A * AC 919 736-2157
RIOPEL, DONALD AIME 1960 RANDOLPH ROAD CHARLOTTE 28207	PDC 060 A AC 704 373-1503	ROBERTS, MARIE BOX #7 BAHAMA 27503	PH 032 A L/RT 919 477-2378	ROCKWELL, WILLIAM J. K. DUKE, DEPT. OF PSYCHIATRY DURHAM 27710	P 032 A P AC 919 684-3073
RIPPY, WILLIAM DENNIS 1610 VAUGHN ROAD BURLINGTON 27215	FP 001 * AC 919 226-4471	ROBERTS, RICHARD SCOTT 1050 X-RAY DRIVE, SUITE A GASTONIA 28054	AI /PD 036 P AC 704 861-0515	RODDEY, J. GARDINER R., JR. 109 ISLEY ST. CHAPEL HILL 27514	032 S 919 929-0536
RIRIE, DOUGLAS G. 130 #M E. LONGVIEW CHAPEL HILL 27514	032 A S 919 967-0746	ROBERTS, ROY FOSTER P. O. BOX 8127 ASHEVILLE 28814	IM /CD 011 A L 704 253-6549	RODDEY, OLIVER FENNELL, JR. 2711-501 RANDOLPH ROAD CHARLOTTE 28207	PD 060 A AC 704 374-1736
RISKA, PAUL FRANK NATL. INST. MEDICAL RESEARCH THE RIDGEWAY MILL HILL, LONDON	032 A S	ROBERTS, SURRY PARKER 700 RUNNYMEDE ROAD RALEIGH 27607	011 A L 919 781-1274	RODGERS, THEODORE YOUNG, III 507 W. COVINGTON STREET LAURINBURG 28352	ORS 083 A AC 919 276-3541
RISNER, ROBERT J. 127 MCARTHUR ST. ASHEBORO 27203	OBG 076 A P AC 919 626-2184	ROBERTS, THOMAS ADAMS, JR. 1350 S. KINGS DR. CHARLOTTE 28207	GE /IM 060 A AC 704 372-8750	RODMAN, CLARK 615 E. 12TH STREET WASHINGTON 27889	IM 007 L/RT 919 946-2101
RITCH, DOUGLAS LAMAR 335 N. CASWELL ROAD CHARLOTTE 28204	IM 060 A AC 704 376-4852	ROBERTS, WILLIAM STANLEY 1413 ELIZABETH AVE. CHARLOTTE 28204	CD /IM 060 AC 704 365-1633	RODWELL, ELEANOR 1118 HILLANDALE ROAD DURHAM 27705	GP 032 A L/RT 919 286-1119
RITCH, KARL ANDREW 2907 SHAFTSBURY ST. DURHAM 27704	032 A S 919 477-2977	ROBERTSON, BRISON OAKLEY, III N-1 DOCTOR'S DR. ASHEVILLE 28885	FP 011 AC 704 252-8885	ROEMER, CLIFFORD ERIC PO BOX 33549 CHARLOTTE 28233	DR 060 A AC 704 371-4056
RITCHEY, JOHN PHILLIP 6816 UPPINGHAM ROAD FAYETTEVILLE 28306	OPH 026 AC 919 484-6141	ROBERTSON, HOWARD D. 10 DOCTOR'S PK. GREENVILLE 27834	CRS /GS 074 A AC 919 758-1747	ROGERS, ANN T. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	034 AC
RITCHIE, HENRY JACKSON 865 CHURCH STREET, NORTH CONCORD 28025	GP 013 A AC 704 786-3181	ROBERTSON, JAMES MEBANE PO BOX 150 HARMONY 28634	GP 049 A L 704 546-7587	ROGERS, CHARLES STEWART 1200 N. ELM STREET GREENSBORO 27401	IM 041 AC 919 379-4062
RIVERS, RUEBEN NORMAN 1738 METROMEDICAL DRIVE FAYETTEVILLE 28304	IM 026 A AC 919 323-2503	ROBERTSON, JOSEPH L., JR. NORTH ROAD ST. ELIZABETH CITY 27909	PTH 070 A AC 919 335-2258	ROGERS, DAVID YORK 115 1/2 MT. CARMETL RD. ASHEVILLE 28806	FP /EM 011 AC 704 253-3717
RIZZUTI, RICHARD PHILIP 5908 TATTERSALL DR. #11 DURHAM 27713	074 A R	ROBERTSON, KENT ALAN 420 N. CENTER ST. HICKORY 28601	AN /IM 018 AC 704 324-3369	ROGERS, HOBART RAY 103 LANE DR. RUTHERFORDTON 28139	ORS /HS 081 AC 704 286-4298
ROACH, ROBERT BURCHELL 401 MULBERRY ST. SW, STE.101 LENOIR 28645	GS 014 A AC 704 758-5501	ROBERTSON, LEON WHITFIELD 107 MEDICAL ARTS MALL ROCKY MOUNT 27801	FP /OM 064 AC 919 443-8810	ROGERS, JACK MARRELL BOWMAN GRAY, DEPT. OF PSY. WINSTON-SALEM 27103	P /N 034 A AC 919 748-3617
ROARK, GARY LEE 1106 MELROSE ST. WINSTON-SALEM 27103	034 A S 919 761-1590	ROBERTSON, LLOYD HARVEY, JR. 909 W. HENDERSON STREET SALISBURY 28144	U 080 A AC 704 633-9441	ROGERS, JAMES MICHAEL 3318 HEALY DRIVE WINSTON-SALEM 27103	PD 034 A AC 919 765-8490
ROARK, ROGER LEE 750 E. HARTNESS ROAD STATESVILLE 28677	GS 049 AC 704 873-2516	ROBICSEK, FRANCIS 1960 RANDOLPH ROAD CHARLOTTE 28207	TS /CDS 060 A AC 704 373-1500	ROGERS, LARRY ARCH 1010 EDGEHILL ROAD, NORTH CHARLOTTE 28207	NS 060 A AC 704 376-1605
ROBACZEWSKI, DAVID L. 206 OAKWOOD CT. WINSTON-SALEM 27103	034 A S 919 760-1643	ROBIE, PETER WILLIAM 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	IM 034 A * AC 919 748-2085	ROGERS, NOEL BRUCE 128 MEMORIAL DRIVE JACKSONVILLE 28540	ORS 067 A P * AC 919 353-4500

ROGERS, RICHARD O., JR. BOX 724 FRANKLIN, VA 23851	IM 070 A AC 919 491-2446	ROSS, JOHN MARION 630 FIFTH AVENUE, WEST HENDERSONVILLE 28739	OBG 045 AC 704 692-2258	RUARK, ROBERT JAMES 525 WADE AVENUE, APT. #51 RALEIGH 27605	OBG 092 A L/RT 919 832-4722
ROGERS, ROBERT LEE, JR P. O. BOX 2640 LENOIR 28645	OBG 014 A AC 704 758-2309	ROSS, OTHO B., JR. 3022 FERNCLIFF RD. CHARLOTTE 28211	IM 060 A L/RT 704 366-7820	RUB, JOSE MARK 2700 COTTAGE PL. #326 GREENSBORO 27405	000 A R 919 288-3960
ROGERS, SEYMOUR SHULMAN 1503 ALLENDALE ROAD GREENSBORO 27408	GS 041 A L/RT 919 273-6695	ROSS, ROBERT MITCHELL 1401-A OLD MILL CIR. WINSTON-SALEM 27103	AI 034 P AC 919 768-0914	RUBIN, MICHAEL HOTELLING 1830 S. HAWTHORNE ROAD WINSTON-SALEM 27103	034 AC 919 765-0463
ROGERS, TED 79 PARAGON PARKWAY CLYDE 28721	OPH 044 A P AC 704 456-9423	ROSS, THOMAS EDGAR P. O. BOX 1827 ROCKINGHAM 28379	FP 077 A P AC 919 895-5253	RUBINO, JOHN 3521 HAWORTH DR. RALEIGH 27609	092 AC 919 782-1806
ROLLINS, CHARLES DICK 507 GRANITE STREET HENDERSON 27536	GP 091 A L 919 438-7263	ROSS, WILLIS RICHARD 320 YADKIN STREET ALBEMARLE 28001	FP 084 A AC 704 982-9144	RUCH, DAVID SIMMS 3807 PORTER ST. NW #303 WASHINGTON, DC 20016	034 A S
ROLLINS, HAL JUDD, JR. 348 N. ELM STREET GREENSBORO 27401	OPH 041 A * AC 919 274-4626	ROSSER, GEORGE THOMAS 1925 TRILLIUM LANE CHARLOTTE 28211	R 013 A AC 704 786-0214	RUCKER, WILLIAM L. 10 DOCTOR'S PARK GREENVILLE 27834	074 A * AC 919 758-1747
ROLLINS, ROBERT LEROY, JR. 2500 WAKE DRIVE RALEIGH 27608	FPY 092 A AC 919 733-5525	ROSTAN, STEPHEN EDWIN P. O. BOX 669 PINEHURST 28374	D/DMP 063 A P AC 919 295-5567	RUDD, EUGENE GREGORY PO BOX 1413 MEDICAL COURT SOUTH MARION 28752	059 AC 704 652-3019
ROMEO, BRUNO JOSEPH 501 SIXTH AVENUE, WEST HENDERSONVILLE 28739	IM/NM 045 L 704 693-3483	ROSTAND, ROBERT ALTON 624 QUAKER LANE, STE. B211 HIGH POINT 27262	IM/PUD 040 AC 919 889-1496	RUDD, STEPHEN MILES 2462 STANTONSBURG RD. STE. 140 GREENVILLE 27834	074 A * S 919 753-3321
ROMM, FREDRIC JAY BOWMAN GRAY-FAMILY MED. WINSTON-SALEM 27103	FP/GPM 034 AC 919 748-2229	ROTH, NEIL S. BOX 2817, DUMC DURHAM 27705	032 A S 919 383-8278	RUDISILL, ELBERT ANDREW, JR. 133 FIRST AVE., SE HICKORY 28601	018 A AC 704 322-5915
ROMM, WILLIAM HENRY PO BOX 232 CURRITUCK 27929	FP 070 L/RT 919 232-3387	ROTHSTEIN, MANFRED SHELDON 1308 MEDICAL DRIVE FAYETTEVILLE 28304	D 026 A * AC 919 323-2227	RUFF, GREGORY LLOYD BOX 3974, DUMC DURHAM 27710	032 A AC 919 684-6740
ROOS, STEVEN DAVID 104 WINDWARD DR. ASHEVILLE 28803	AN 011 A AC 704 298-9639	ROUFAIL, WALTER MICHEL 1901 S. HAWTHORNE RD., #310 WINSTON-SALEM 27103	GE/IM 034 A P AC 919 760-4340	RUFFIN, MACK THOMAS, IV 3112 GEORGIA AVE. S. ST. LOUIS PARK, MN 55426	074 R
ROPER, JOHN TRACY 2001 RANDOLPH ROAD CHARLOTTE 28207	ORS 060 A AC 704 377-4907	ROUNDS, JOHN CARSON 970 BLACKBERRY CIR. CHARLOTTE 28209	074 A S	RUFTY, ALFRED JACKSON, JR. BOWMAN GRAY, DEPT. OF MED. WINSTON-SALEM 27103	034 A AC 919 748-4469
ROSE, GREGORY C. ECU SCHOOL OF MEDICINE SECT. OF CARDIOLOGY GREENVILLE 27858	CD 074 AC 919 551-4651	ROUSE, JAMES BRISTOL 306 S. GREGSON STREET DURHAM 27701	PD/N 032 A AC 919 688-6349	RUIZ, FERNANDO REY 4096 BARRETT DR. RALEIGH 27609	092 A AC 919 832-7606
ROSE, JOHN DAVID 1800 W. 5TH ST., #2 GREENVILLE 27834	CD/IM 074 AC 919 752-3185	ROUSE, JOHN LAWRENCE, III 403 FAIRVIEW ST. CLINTON 28328	FP 082 AC 919 592-6011	RUMLEY, RICHARD LEE DEPT. OF MEDICINE ECU SCHOOL OF MEDICINE GREENVILLE 27834	074 A AC 919 551-2550
ROSE, RICHARD PHILLIP FORSYTH MEDICAL PARK, STE. 504 WINSTON-SALEM 27103	ORS 034 AC 919 768-9500	ROVERE, GEORGE DAVITTO 300 S. HAWTHORNE ROAD WINSTON-SALEM 27103	ORS/SM 034 A AC 919 748-3946	RUNGE, JEFFREY WILLIAM PO BOX 32861 CHARLOTTE 28232	060 AC 704 331-3181
ROSEN, RICHARD JAMES 1032 PROFESSIONAL VILLAGE GREENSBORO 27401	IM/HEM 041 AC 919 273-9758	ROWE, CHARLES EUGENE, JR. 624 QUAKER LANE, SUITE D-100 HIGH POINT 27262	U 040 A P AC 919 886-5151	RUPPENTHAL, C. ROBERT, JR. 1350 S. KINGS DRIVE CHARLOTTE 28207	060 A AC 704 372-8750
ROSEN, ROBERT DEAN 147 COLUMBINE DRIVE WINSTON-SALEM 27106	FP 034 A AC 919 722-9535	ROWE, CHARLES ROY, JR. 750 HARTNESS ROAD STATESVILLE 28677	GS 049 AC 704 873-3929	RUSH, PAUL F. RT. #6, BOX 99E ANGUS DR. LAURINBURG 28352	083 A AC 919 276-4611
ROSENBERG, ERIC RONALD 1924 S. LIVE OAK PARKWAY WILMINGTON 28403	DR 065 A AC 919 762-3882	ROWE, CHARLES THOMAS DOCTOR'S BLDG. STE. 103 PO BOX 2959 ASHEVILLE 28802	DR 011 P AC 704 254-4617	RUSKIN, JEROME 1904 N. CHURCH STREET GREENSBORO 27405	041 A AC 919 274-3241
ROSENBERG, JOEL BENJAMIN 445 BILTMORE CENTER, STE. 305 ASHEVILLE 28801	IM 011 A AC 704 253-1482	ROWE, WILLIAM THOMAS 1511 WESTOVER TERRACE GREENSBORO 27408	RHU/IM 041 AC 919 378-1461	RUSS, DONALD BARNARD RT. #10, BOX 200-H MORGANTON 28655	012 A AC 704 377-4243
ROSENBERG, MARK ROBERT BOX 3837, DUMC DURHAM 27710	P 032 A S 919 493-2846	ROWLAND, MICHAEL CLARK P. O. BOX 2000 PINEHURST 28374	GS 063 A P AC 919 295-2232	RUSS, DONALD JAMES 3535 RANDOLPH ROAD CHARLOTTE 28211	060 A P AC 704 365-0760
ROSENOW, PHILIP JOHN 1616 MEMORIAL DR. BURLINGTON 27215	OBG 001 AC 919 226-8817	ROY, RAYMOND CLYDE 454 WESTOVER AVENUE WINSTON-SALEM 27104	AN 034 A P AC 919 748-4498	RUSSELL, DOUGLAS MACARTHUR 304 GLEN OAK DRIVE GOLDSBORO 27530	096 A P * AC 919 734-5010
ROSENSON, MALCOLM D. 1212 CEDARHURST DR. RALEIGH 27612	ID/IM 092 AC 919 872-4850	ROYAL, BILLY WILLIAMSON P. O. BOX 2387 CHAPEL HILL 27514	P 032 A P * AC 919 733-5540	RUSSELL, EUGENE FAIRCHILD, III 1309 N. ELM STREET GREENSBORO 27401	041 A AC 919 273-2563
ROSENSTEIN, BYRON DAVID 205 NORTHWOOD DR. CHAPEL HILL 27514	ORS 032 A R 919 942-4209	ROYAL, DONNIE MARTIN BOX 156 SALEMBURG 28385	GP 082 A L 919 525-4538	RUSSELL, JEFFREY KENT 445 BILTMORE CENTER, STE. 302 ASHEVILLE 28801	011 A P AC 704 253-6812
ROSS, ALLAN 408 PARKWAY GREENSBORO 27401	OBG 041 A P AC 919 378-1110	ROYAL, PHILIP WAYNE RT. #1, BOX 323-E CHAPEL HILL 27514	032 A S	RUSSELL, JOHN HUNTER 14 MCDOWELL ST. ASHEVILLE 28801	011 AC 704 254-8054
ROSS, ARTHUR J., III 34TH ST. & CIVIC CENTER BLVD. PHILADELPHIA, PA 19104	PDS 000 A AC 215 596-9375	ROYSTER, CHAUNCEY LAKE 1801 MCDONALD LANE RALEIGH 27608	IM 092 A L/RT 919 832-0796	RUSSELL, JOSEPH DWIGHT 1700 S. TARBORO ST. WILSON 27893	098 A * AC 919 291-1300
ROSS, DAVID B. 624 QUAKER LN. STE. D-200 HIGH POINT 27262	ORS 040 AC 919 841-6262	ROYSTER, ROGER LEE N. C. BAPTIST HOSPITAL WINSTON-SALEM 27103	AN 034 AC 919 748-2927	RUSSELL, PHILIP EVERITT 204 DOCTOR'S BUILDING ASHEVILLE 28801	011 A AC 704 253-9371
ROSS, DONALD MACCONNELL 510 FOUNTAIN PL. BURLINGTON 27215	GS 001 A L/RT 919 227-3381	ROZEAR, MARVIN PRICE BOX 3849, DUKE UNIV. MED. CTR. DURHAM 27710	N 032 A AC 919 684-8111	RUSSELL, ROGER BIVINS 2501 NORTH ST., STE. 500 RALEIGH 27607	092 * AC 919 782-7762
ROSS, JAMES MILLER P. O. BOX 490 CLAREMONT 28610	FP 018 A AC 704 459-7324	ROZIER, JOHN CHARLES, JR. 4300 FAYETTEVILLE ROAD LUMBERTON 28358	OBG 078 A AC 919 738-9601	RUSSELL, WILLIAM MICHAEL P. O. BOX 250 ELIZABETH CITY 27909	070 A AC 919 335-0531

RUSSELL, WILSON GLOVER FORSYTH MEM HOSP-PTH WINSTON-SALEM 27103	PTH 034 A AC 919 773-3840	SALLE, GEORGE FREDERIC 1703 W. SIXTH STREET GREENVILLE 27834	U 074 A L 919 752-2507	SAPPENFIELD, DAVID LUTHER 1332 JOSEPH ST. NEW ORLEANS, LA 70115	OPH 000 A P R
RUST, CARL KING, II 1202 MEDICAL CENTER DR. WILMINGTON 28401	GE /IM 065 A * AC 919 341-3300	SALLEE, D. SKIP BOX 3808, DUMC DURHAM 27710	032 A R 919 383-6548	SAPPENFIELD, LUTHER COOK, JR. 1629 OWEN DRIVE FAYETTEVILLE 28304	OPH 026 * AC 919 484-6141
RUTH, WAYNE KIMBERLY 1214 VAUGHN RD. STE. A BURLINGTON 27215	PUD /IM 001 P AC 919 229-4441	SALLEY, BRUNSON MARTIN 2322 SEDLEY RD. CHARLOTTE 28211	FP 060 A AC 704 537-0020	SARAZEN, PAUL MARK, JR. 101 GROVER STREET SHELBY 28150	PD 023 A AC 704 482-1435
RUTHERFORD, EDMUND 2131 S. 17TH ST. WILMINGTON 28401	GS 000 A R 919 343-7000	SALMON, ROBERT BRUCE 3535 RANDOLPH RD. CHARLOTTE 28211	R 060 A AC 704 338-2270	SARDI, CARL ANTHONY 7100 BETHLEHEM CHURCH RD. CLIMAX 27233	OTO /A 041 A L 919 674-2509
RUTLEDGE, JOHN HOYLE, III 105 GROVER ST. SHELBY 28150	GYN 023 AC 704 482-2486	SALTER, TERESA PALMER 101 W. DURHAM ROAD CARY 27511	PD 092 AC 919 467-5543	SARGENT, WINSTON ARTHUR Y. 37 SUMMIT ST. BURNSVILLE 28714	GP 061 A L/RT
RUTLEDGE, MARY LOUISE 2157 NORTON ROAD CHARLOTTE 28207	PD 060 A L/RT 704 334-9218	SALTON, RUSSELL ARTHUR, III 1618 E. MOREHEAD ST. CHARLOTTE 28207	FP 060 AC 704 523-1157	SASSER, PATRICK HENRY 100 E. LOCKHAVEN DRIVE GOLDSBORO 27530	GP 096 A AC 919 734-2924
RUTLEDGE, ROBERT UNC, DEPT. OF SURGERY CAMPUS BOX 7050 CHAPEL HILL 27599	GS 032 A AC 919 962-7555	SALTZMAN, HERBERT AARON BOX 3838, DUMC DURHAM 27710	PUD /A 032 A AC 919 684-4149	SASSER, PAUL WM. 518 S. VAN BUREN RD. #8 EDEN 27288	FP 079 A AC 704 623-5171
RYAN, ALBERT OLEN, JR. P. O. BOX 200 PISGAH FOREST 28768	OM 088 A AC 704 877-2806	SALVAGGIO, MARK ANTHONY 900 SUNSET DR. MONROE 28110	GS /VS 090 A AC 704 289-2561	SATHER, RANDALL KENNETH 1901 HILLDALE ROAD DURHAM 27705	R 032 A AC 919 383-9407
RYAN, W. JAMES, II 723 EDITH STREET BURLINGTON 27215	P 001 AC 919 227-0126	SAMPSON, JOSEPH LUTHER, JR. 346 SHANDY LANE WILMINGTON 28401	PS /GS 065 A AC 919 343-9774	SATO, TAKAO LEWIS 6730 AMBERLEY LN. CLEMMONS 27012	IM 034 A R 919 766-9505
RYAN, WILLIAM SCOTT 103 W. 27TH ST. LUMBERTON 28358	PD 078 AC 919 739-3318	SAMUELS, WALTER RAY 150 PROVIDENCE ROAD CHARLOTTE 28207	OBG 060 A AC 704 377-0461	SATTERFIELD, BENTON SAPP 1326 BLUE RIDGE RD. RALEIGH 27612	OBG 092 P AC 919 782-3865
RYBURN, SAMUEL BENJAMIN WILSON CLINIC WILSON 27893	PD 098 A AC 919 291-7001	SANCHEZ, CLARE JEANNE 3000 NEW BERN AVE. WAKE AHEC TEACHING SERV. RALEIGH 27610	GER /IM 092 A * AC 919 755-8520	SATTERFIELD, G. HOWARD, JR. DOCTOR'S PARK, BUILDING #5 GREENVILLE 27834	OBG 074 AC 919 758-5246
RYDEN, JANICE BETH 300 S. HAWTHORNE RD. STUDENT BOX 543-BOWMAN GRAY WINSTON-SALEM 27103	034 A S 919 748-1783	SANCHEZ, RAFAEL CAMILO DEPT. OF FAM. MED. BRODY 4N72 ECU SCHOOL OF MEDICINE GREENVILLE 27858	FP /ADL 074 A AC 919 757-2608	SATTERLY, ROBERT ALAN WILSON CLINIC WILSON 27893	OTO 098 A AC 919 291-7001
RYMUZA, JEFFREY PO BOX 1460 OLD MOCKSVILLE RD. STATESVILLE 28677	IM /PUD 049 AC 704 878-2011	SANDBORN, WILLIAM DEAL P. O. BOX 5400 FLETCHER 28732	GS 045 AC 704 687-1418	SATTERWHITE, WILLIAM M. 1420 PLAZA DRIVE WINSTON-SALEM 27103	OTO /HNS 034 A AC 919 765-4922
SAAD, MAGED HANNA 3010 FALSTAFF ROAD RALEIGH 27610	P /GP 092 AC 919 821-0300	SANDERFORD, JAMES LYON, JR. 3155 MAPLEWOOD AVENUE WINSTON-SALEM 27103	DR /NM 034 A AC 919 773-3874	SATTLER, RAYMOND LOUIS 1310 MEDICAL CENTER DR. WILMINGTON 28403	NS 065 A * AC 919 762-3111
SABISTON, DAVID COSTON, JR. DUKE UNIV. MED. CTR. DURHAM 27710	GS /TS 032 A AC 919 684-2831	SANDERS, GEO. HERBERT S. 119 F-4 FIDELITY ST. CARRBORO 27510	032 A S 919 942-0546	SAUNDERS, CHARLES L., JR. 523 WILDWOOD LN. BURLINGTON 27215	GYN 001 L/RT
SABISTON, FRANK, JR. KINSTON CLINIC, NORTH BOX 1316 KINSTON 28501	GS /TS 054 A AC 919 522-1626	SANDERS, JAMES ALLEN 902 COX RD. GASTONIA 28052	ORS 036 A AC 704 867-2333	SAUNDERS, JAMES E. 1413 BROAD ST. DURHAM 27705	032 A R 919 684-8111
SABISTON, WALTER ROBERTS KINSTON CLINIC, NORTH, STE. K KINSTON 28501	OTO 054 A * AC 919 523-0687	SANDERS, JAMES HENRY, JR. P. O. BOX 389 BREVARD 28712	FP /GER 088 A AC 704 884-9362	SAUNDERS, JAY FRED BOX 309 AULANDER 27805	FP 008 AC 919 345-3791
SACCO, RUSSELL JOHN 506 PARK HILL COURT HENDERSONVILLE 28739	IM 045 A * AC 704 692-3538	SANDERS, LEE HYMAN 2502 ANDERSON DRIVE RALEIGH 27608	PD 092 L/RT 919 787-9888	SAUNDERS, TIMOTHY GRAY 1600 E. THIRD ST. CHARLOTTE 28204	OPH 060 A AC 704 372-3300
SACRINTY, NICHOLAS WILLIAM 608 LINDEN DR. EDEN 27288	IM /GE 079 AC 919 623-9794	SANDERS, STEPHEN BRIAN 903 NORTHSORE COURT HIGH POINT 27260	P 040 AC 919 884-7946	SAUNDERS, WADE HAMPTON, III 14 MCDOWELL STREET ASHEVILLE 28801	CD 011 P AC 704 254-8054
SAENDERSON, WM. EARL 2175 VILLAGE DR. FAYETTEVILLE 28305	FP 026 AC 919 483-7565	SANDLER, ROBERT SAMUEL UNC, CB #7080 423 BURNETT-WOMACK BLDG. CHAPEL HILL 27599	GE 032 AC 919 966-2511	SAUTER, SUZANNE VAN HOUTEN UNC, TRAILER 33, CB #7200 CHAPEL HILL 27599	RHU /IM 032 AC 919 966-5164
SAEGER, PAUL JAY 129 MCDOWELL ST. ASHEVILLE 28801	ORS 011 A AC 704 258-8800	SANDRIDGE, DAVID ALLEN 50 DOCTORS DR. #120 W. ANNEX ASHEVILLE 28801	OBG 011 A AC 704 255-8900	SAVARESE, CHARLES J., JR. P. O. BOX 1948 SHALLOTTE 28459	FP /CD 010 A AC 919 754-8105
SAFIR, ARAN 3 ELLSWORTH AVE. CAMBRIDGE, MA 02139	OPH 063 AC	SANDRIDGE, DAVID ALLEN 50 DOCTORS DR. #120 W. ANNEX ASHEVILLE 28801	GE 032 AC 919 966-2511	SAVIDGE, THOMAS OLIVER 906 N. ATLANTIC AVE. SOUTHPORT 28461	IM /CD 010 A AC
SAGBERG, ANNE ELISABETH 343 BARNARD AVENUE ASHEVILLE 28804	P 011 A AC 704 254-3201	SANDRIDGE, DAVID ALLEN 50 DOCTORS DR. #120 W. ANNEX ASHEVILLE 28801	OBG 011 A AC 704 255-8900	SAVITT, JOSEPH S. 101 ECHO GLEN DR. APT. B1 WINSTON-SALEM 27106	034 A S 919 761-0236
SAHBA, MEHRDAD MAJDAZADEH 306 S. GREGSON STREET DURHAM 27701	GE /IM 032 A AC 919 682-5561	SANDY, ROBERT EUGENE 608 E. 12TH STREET WASHINGTON 27889	R 007 A AC 919 946-2137	SAVITT, MICHAEL ANDREW 1315 MOREENE RD. #22F DURHAM 27707	032 A S 919 286-1989
SALDANHA, RITA LOUIS 213 WOODHAVEN ROAD GREENVILLE 27834	NPM /PD 074 AC 919 551-4684	SANFILIPPO, ALFRED PAUL 3315 STONEYBROOK DRIVE DURHAM 27705	PTH /IG 032 A AC 919 684-2482	SAVORY, PAUL BORRODAILE 78 FOREST RD. ASHEVILLE 28803	R 011 AC 704 274-3628
SALEEBY, RICHARD GEORGE 3801 COMPUTER DRIVE RALEIGH 27609	CRS 092 A P AC 919 787-2542	SANFORD, VIRGINIA OATES 811 SIMMONS ST. PO BOX 146 GOLDSBORO 27530	GP /PD 096 AC 919 734-8242	SAWHNEY, DEEPAK 4 GOOSENECK CIRCLE CHAPEL HILL 27514	032 A S 919 968-1747
SALIBA, CONSTANTIN 3318 MELROSE ROAD FAYETTEVILLE 28304	GS 026 A AC 919 323-0280	SANKAR, SEEPLAPUTHUR G. 2118 COY ST. BURLINGTON 27215	GS /VS 001 A AC 919 226-3417	SAWYER, BARBARA ANN BIRCHWOOD SANDS MOBILE HOME A ESTATES, LOT #28 GREENVILLE 27834	074 * S 919 758-3155
SALISBURY, KENT WILLIAM 14 MCDOWELL STREET ASHEVILLE 28801	CD /IM 011 A AC 704 254-8054	SANTOSO, RUDY ADRIAN ROUTE #3, BOX 331 HICKORY 28602	N /P 018 A AC 704 324-4143	SAWYER, CHARLES GLENN 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	CD /IM 034 A AC 919 748-4462

SAWYER, CHARLES JUDSON, III MEDICAL ARTS CTR., ACADEMY ST. AHOSKIE 27910	FP 008 AC 919 332-3548	SCHIESS, ROBERT JOHN, III 2713 NEUSE BOULEVARD NEW BERN 28560	NS 025 A P AC 919 633-6070	SCHWARTZ, EARL 3465 DIXIANA LANE PFAFFTOWN 27040	EM 034 A AC 919 748-4625
SAWYER, JOHN WILSON 609 WALTER REED DRIVE GREENSBORO 27403	IM 041 AC 919 299-2815	SCHILLER, HERBERT MILES 2570 EMPIRE DR. WINSTON-SALEM 27103	PTH /CLP 034 AC 919 760-4620	SCHWARTZ, JARED NAPHTALI P. O. BOX 33549 CHARLOTTE 28233	PTH 060 A P * AC 704 371-4814
SAWYER, THOMAS R. PO BOX 2445 PINEHURST 28374	OPH 063 AC 919 295-2100	SCHIMIZZI, GREGORY F. 1202 MEDICAL CENTER DR. WILMINGTON 28401	RHU 065 AC 919 341-3300	SCHWARTZ, ROBERT PAUL CHARLOTTE MEM. HOSP. P. O. BOX 32861 CHARLOTTE 28232	PD /PDE 060 A * AC 704 338-3156
SAWYER, TIMOTHY T. 1522 VAUGHN RD. BURLINGTON 27215	D 001 AC 919 226-9393	SCHKOLNE, BENZION 300 BEECHCLIFF COURT WINSTON-SALEM 27104	AN 034 AC 919 765-9091	SCHWARZ, RONALD PAUL 3521 HAWORTH DR. RALEIGH 27609	GE /IM 092 AC 919 782-1806
SAXE, JESSICA SCHORR 2216 DILWORTH ROAD, WEST CHARLOTTE 28203	FP 060 AC 704 338-3084	SCHLASEMAN, GUY W. 3643 N. ROXBORO ST. DURHAM 27704	R 032 L/RT 919 471-3411	SCHWEIZER, DONALD CONRAD 4 CHESAPEAKE CT. GREENSBORO 27410	GYN 041 A L/RT 919 379-8460
SAYERS, DANIEL GARVIN 2804 MONTCLAIR ROAD WINSTON-SALEM 27106	EM 034 A P * AC 919 748-4625	SCHLOSSMAN, DAVID MICHAEL BOX 3843, DUMC DURHAM 27710	IM /ON 032 AC 919 684-2297	SCHWILM, ARLEN LEE 3535 RANDOLPH ROAD, STE. 101 CHARLOTTE 28211	D 060 A AC 704 364-6110
SAYERS, WILLIAM FLOYD 3318 HEALY DRIVE WINSTON-SALEM 27103	PD 034 AC 919 765-8490	SCHMALTZ, ROBERT ANDREW 604 W. KNOX ST. DURHAM 27701	032 S 919 383-5972	SCHWINN, DEBRA ANNE BOX 3094, DUMC DURHAM 27710	AN 032 A R 919 681-6646
SCANLAN, JAMES GEORGE 3400 EXECUTIVE DR., STE. 201 RALEIGH 27609	CD /IM 092 AC 919 872-8920	SCHMID, HERMAN ERNEST, JR. 147 COLUMBINE DR. WINSTON-SALEM 27106	FP /GER 034 A P AC 919 722-9535	SCHYMIK, LINDA GLAUBITZ 2001 VAIL AVE. CHARLOTTE 28207	PTH 060 A AC 704 362-0448
SCARANTINO, CHARLES WALTER RADIATION ONCOLOGY CTR. ECU SCHOOL OF MEDICINE GREENVILLE 27834	TR 074 AC 919 551-2900	SCHMIDT, CARL JACOB GENERAL ELECTRIC CO. P.O.BOX 780, M/C B06 WILMINGTON 28401	OM 065 AC 919 675-5320	SCOTT, ALAN FULTON P. O. BOX 63 SALISBURY 28144	FP 080 A AC 704 636-5431
SCARBOROUGH, CHARLES F., JR. PO BOX 159 STAR 27356	GP 062 A * AC 919 428-2144	SCHMIDT, EVELYN 1301 FAYETTEVILLE STREET DURHAM 27707	PD /PH 032 A * AC 919 683-1316	SCOTT, CHARLES KIMREY 530 W. WEBB AVENUE BURLINGTON 27215	PD /ADL 001 * AC 919 228-8316
SCARBOROUGH, DAWSON E. WAKE CO. MED. CTR., -PATH. RALEIGH 27610	PTH 092 A * AC 919 755-8260	SCHMITT, JOHN WILSON 2800 BLUE RIDGE BLVD #502 RALEIGH 27607	OBG 092 AC 919 781-5510	SCOTT, CHARLES MATTHEW 543 MASONBORO SOUND RD. WILMINGTON 28403	GS /VS 065 AC 919 763-6289
SCARBOROUGH, WALTER A., JR. 1004 DRESSER COURT, STE. 101 RALEIGH 27609	P 092 AC 919 876-0090	SCHMITT, PHILIP JULIAN PO BOX 9149 HICKORY 28603	P /CHP 018 A AC 704 327-7888	SCOTT, CORIDALIA WALD 2803 LAKE FOREST DR. GREENSBORO 27408	PTH 041 A AC 919 854-6455
SCARFF, JOHN EDWIN, JR. 603 BEAMAN ST. CLINTON 28328	U /GS 082 * AC 919 592-7129	SCHMITT, RAYMOND F., JR. 215-A RIVER TRAIL RIVERVIEW APTS. MORGANTON 28655	CHP /P 012 A P AC 704 433-2058	SCOTT, DIANNE LYNNETTE BOX 3094, DUMC DURHAM 27710	AN 032 AC 919 684-3239
SCARLATA, SALVATORE 4121-A IVYSTONE CT. CHARLOTTE 28226	AN 060 AC 704 377-1647	SCHMITTER, KARL JOSEPH 902 COX RD., STE. C GASTONIA 28054	GS /HNS 036 A AC 704 864-7821	SCOTT, HARRY WHITE 3900 BROWNING PL., STE. 202 RALEIGH 27609	D 092 AC 919 782-2735
SCATLIFF, JAMES HOWARD N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514	R 032 A AC 919 966-4238	SCHNEIDER, FRANK D. 1142 PADDINGTON PLACE FAYETTEVILLE 28304	FP 000 R 919 868-5290	SCOTT, JACKSON VANCE 101 W. CATAWBA AVENUE MOUNT HOLLY 28120	FP /IM 036 A AC 704 827-3014
SCHAAF, ROBERT EDMUND WAKE RADIOLOGY CONSULTANT P. O. BOX 19366 RALEIGH 27619	DR 092 AC 919 787-8199	SCHNEIDER, INAAM J. PO BOX 1020 LENOIR 28645	IM 014 A AC 704 758-5544	SCOTT, JOHN LAYNE 2803 LAKE FOREST DR. GREENSBORO 27408	DR /NM 041 A AC 919 855-8972
SCHAAL, JENNIFER C. 1507 WESTOVER TERR., STE. C GREENSBORO 27408	OBG 041 A AC 919 273-0936	SCHNEIDER, MICHAEL J. 300 S. HAWTHORNE RD. BOX 280 WINSTON-SALEM 27103	034 S 919 723-2935	SCOTT, LEGRAND THURMAN, JR. 1102 CAROLINA DRIVE ROCKINGHAM 28379	FP 077 A RT 919 895-9901
SCHAFERMEYER, ROBERT WM. CHARLOTTE MEM. HOSPITAL P. O. BOX 32861 CHARLOTTE 28232	EM /PD 060 * AC 704 338-3181	SCHNEIDER, RICHARD J. PO BOX 1020 LENOIR 28645	IM 014 A AC 704 758-5544	SCOTT, LINCOLN BAIN UNC STUDENT HEALTH SERVICE CHAPEL HILL 27514	ADL 032 AC 919 782-2735
SCHALL, STEWART ALLAN 1200 N. ELM ST. MOSES CONE MEM. HOSP. GREENSBORO 27401	PDC /PD 041 AC 919 379-4060	SCHOLL, GEORGE KENNETH, JR. 1012 KINGS DR., STE. 806 CHARLOTTE 28283	U 060 A AC 704 334-6449	SCOTT, SAMUEL EDWIN ROUTE #2, BOX 159 BURLINGTON 27215	FP 001 A AC 919 421-3247
SCHARF, FORREST LARRY PO BOX 22490 KING FAHAD NATIONAL HOSP. RIYADH 11426SAUDI ARABIA	CLP /HEM 096 A AC 919 748-2632	SCHUG, JOHN BUTLER 3535 RANDOLPH ROAD, STE. 105 CHARLOTTE 28211	GYN 060 A AC 704 364-1041	SCOTT, STEVEN MARTIN 3711 STONEYBROOK DR. DURHAM 27705	OBG /EM 032 A P AC 919 383-0355
SCHARYJ, MODESTO BOWMAN GRAY, DEPT. OF PATH. WINSTON-SALEM 27103	PTH 034 A AC 919 872-0940	SCHULHOF, LARY ALAN 7 MCDOWELL STREET ASHEVILLE 28801	NS 011 A AC 704 255-7776	SCOVIL, JAMES A., JR. 4021 BARRETT DR. RALEIGH 27609	CD /IM 092 A P AC 919 782-1550
SCHecter, NANCY POST 3320 EXECUTIVE DRIVE RALEIGH 27609	N 092 A * AC 919 967-4308	SCHULTEN, HERBERT JOHN 912 SECOND ST. NE HICKORY 28601	ORS 018 A AC 704 324-2800	SCUDERI, PHILLIP EDWARD 1728 BUENA VISTA RD. WINSTON-SALEM 27104	AN 034 A AC 919 773-3180
SCHeil, CHARLES DAVID 24-F STRATFORD HILLS CHAPEL HILL 27514	032 S 919 967-4308	SCHULTZ, JOHN LOESCH 3155 MAPLEWOOD AVENUE WINSTON-SALEM 27103	DR /NM 034 A AC 919 760-5948	SCULLY, KEVIN SLEAN 1616 MEDICAL CENTER DR. WILMINGTON 28401	ORS 065 A P AC 919 762-2655
SCHeil, CHARLES PHILIP P. O. BOX 960 LENOIR 28645	FP 014 AC 704 754-0541	SCHUMACHER, DONALD 335 N. CASWELL ROAD CHARLOTTE 28204	IM 060 A AC 704 376-4852	SEAGLE, LEE MARCUS, JR. 133 FIRST AVENUE, S.E. HICKORY 28602	FP 018 A AC 704 322-5915
SCHERER, IRVIN GEORGE P. O. BOX 7 UNION GROVE 28689	FP 049 A AC 704 538-4731	SCHUMACK, EDWARD JAMES PO BOX 535 WILMINGTON 28402	P /FP 065 A AC 919 839-8570	SEALY, WILL CAMP 777 HEMLOCK ST., BOX 6000 MACON, GA 31208	TS /CDS 032 A L 912 744-1000
SCHERER, JAMES LEROY 3155 MAPLEWOOD AVENUE WINSTON-SALEM 27103	R /DR 034 A AC 919 760-5874	SCHUPBACH, CURTIS WAYNE 1350 S. KINGS DRIVE CHARLOTTE 28207	D 060 AC 704 372-8750	SEARS, RICHARD JOHN 730-P WALNUT FOREST RD. WINSTON-SALEM 27103	034 A S 919 765-1396
SCHIEBEL, HERMAN MAX 1020 ANDERSON ST. DURHAM 27705	GS /TS 032 L 919 489-5109	SCHURTER, LONIS LEON 505 NORTHWOOD CIRCLE DECEASED-6-6-88 GARNER 27529	LM 092 A RT 919 772-3363	SEARS, VICTOR W., JR. 3556 HEATHROW DR. WINSTON-SALEM 27127	034 A S 919 722-8650
		SCHUTTE, HAROLD DELANO 53 S. FRENCH BROAD AVE. ASHEVILLE 28801	PD 011 A AC 704 258-0969	SEATON, KAREN GIPSON 59 POLKS LANDING CHAPEL HILL 27516	IM /END 032 A S 919 933-9515

SEAY, HILLIS LEDBETTER PO BOX 528 HUNTERSVILLE 28078	GP 060 A * L 704 875-6946	SERFAS, DAVID HILL 14 MCDOWELL ST. ASHEVILLE 28801	CD 011 AC 704 254-8054	SHAPIRO, MARK THOMAS 1311 N. ELM ST. GREENSBORO 27401	OPH 041 AC 919 378-9993
SECOSAN, CRAIG JOHN PO BOX 517 SYLVA 28779	OPH 050 A P AC 704 586-2129	SERVOSS, RONALD LEE P. O. BOX 984 SYLVA 28779	AN 050 AC 704 586-8941	SHAPIRO, WILLIAM HARTMAN NORRIS-BIGGS CLINIC RUTHERFORDTON 28139	IM /CD 081 AC 704 286-9036
SECREST, ALVIN JACKSON, JR. 1001 N. WASHINGTON STREET SHELBY 28150	U 023 A AC 704 482-2011	SERVOSS, SUE ANNE B. P. O. BOX 984 SYLVA 28779	FP /PH 050 A AC 704 586-4083	SHAPPLEY, BEN GORDON 1800 W. FIFTH STREET GREENVILLE 27834	PD 074 AC 919 752-7141
SEDDON, JOHN MICHAEL 714 TILGHMAN DR. DUNN 28334	U 043 A AC 919 892-1068	SESSIONS, JOHN TURNER, JR. UNC, 324 CLINICAL SCI. 229-H CHAPEL HILL 27514	GE /IM 032 AC 919 966-2511	SHARMA, DEVENDRA P. O. BOX 1690 SMITHFIELD 27577	IM 051 AC 919 934-5568
SEDWITZ, JOSEPH LEE 231 HOSPITAL ROAD ZEBULON 27597	GS /GYN 092 * AC 919 269-9310	SESSIONS, RICK PAUL 210 WESTBROOK DR. CARRBORO 27510	032 A S 919 933-5880	SHARPLESS, EDWARD ARTHUR DRAWER X-3 GREENSBORO 27402	PTH 041 A AC 919 299-6815
SEEAR, TORBEN 938 PARAMOUNT CIRCLE GASTONIA 28052	GYN 036 A * L/RT 704 864-7935	SETHI, SHASHI K. 111 W. WENDOVER AVE. GREENSBORO 27401	OPH 041 AC 919 275-5673	SHARPLESS, ELIZABETH P. 207 CONNER DR. APT. 23 CHAPEL HILL 27514	032 A S 919 967-6791
SEELY, THOMAS J. 606 WALTER REED DR. GREENSBORO 27403	P 041 AC 919 299-5400	SEVERN, HENRY DOELLER 4 PINE TREE RD. ASHEVILLE 28804	ORS 011 A L/RT 704 252-9948	SHARPLESS, MARTHA KORNEGAY MOSES CONE HOSPITAL GREENSBORO 27401	PD 041 A AC 919 379-4064
SEEMAN, BRIAN ANDREW 702 TILGHMAN DR. DUNN 28334	AN 043 A AC 919 892-9261	SEVIER, ROBERT ENGLISH 200 E. NORTHWOOD ST., STE. 312A GREENSBORO 27401	END /IM 041 A P AC 919 274-7609	SHARPTON, BENNIE REEVES 106 BROADVIEW RD. WAYNESVILLE 28786	GS 044 A AC 704 456-8633
SEEN, NELSON DER 1631 PARK AVE. NEW HYDE PARK, NY 11040	034 A S	SHACKELFORD, DONALD P., JR. BOX 284, BOWMAN GRAY 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	034 A S 919 725-8605	SHASTRY, CHANDRASHEKARA 607 E. GARRISON BLVD. GASTONIA 28054	IM /END 036 AC 704 866-4607
SEGRETI, EILEEN MARIE 3127 N. RACINE AVE., 2ND FLOOR CHICAGO, IL 60657	032 A S	SHACKELFORD, ERNEST D., JR. P. O. BOX 427 ASHEBORO 27204	DR /NM 076 AC 919 629-0774	SHAVENDER, EUGENE FRANK 1830 HILLDALE ROAD DURHAM 27705	GYN 032 AC 919 383-5531
SEHGAL, NARINDER NATH ECU DEPT. OF OB-GYN GREENVILLE 27858	OBG 074 AC 919 551-4622	SHACKELFORD, JOSEPH ROY, III 210 S. CAMERON ST. HILLSBOROUGH 27278	FP 032 AC 919 732-9311	SHAVER, EDWARD FRANKLIN, JR. 1851 E. THIRD STREET CHARLOTTE 28204	OT 060 A AC 704 376-8436
SEHGAL, PRAGNA NINA ECU DEPT. OF FAMILY MED. PO BOX 1846 GREENVILLE 27835	FP /OBG 074 A AC 919 551-2059	SHACKELFORD, ROBERT HILLIARD 238 SMITH CHAPEL ROAD MOUNT OLIVE 28365	FP 096 A AC 919 658-4954	SHAW, DALE RUSSELL P. O. BOX 19366 RALEIGH 27619	DR 092 A P * AC 919 787-8199
SEIDEL, MURRAY KAYE 1222 MEDICAL CENTER DRIVE WILMINGTON 28401	ORS 065 A P * AC 919 763-2977	SHAFER, DONALD THORNTON 5 MONMOUTH COURT GREENSBORO 27410	AN 041 A P AC 919 373-8555	SHAW, FRANK STEDMAN P. O. BOX 53127 FAYETTEVILLE 28305	PD /PDA 026 A AC 919 484-3121
SEIGLER, HILLIARD FOSTER BOX 3966, DUMC DURHAM 27710	GS 032 A AC 919 684-3942	SHAFER, FRANK TYACK P. O. BOX 2129 SALISBURY 28144	IM 080 A * AC 704 636-1826	†SHAW, LLOYD ROOSEVELT 533 CAROLINA AVE. S. DECEASED -- 3-3-88	GYN 049 A 704 873-9642
SEIGMAN, EDWIN LINCOLN 105 BUNN DRIVE ROCKY MOUNT 27804	DR 064 L/RT 919 443-2044	SHAFER, IRVING EVERETT, JR. P. O. BOX 588 STATESVILLE 28677	R 049 A AC 704 873-5661	SHAW, ROBERT ARNETT 1705 W. SIXTH STREET GREENVILLE 27834	PUD /IM 074 AC 919 752-6101
SELF, JERRY LEE PO BOX 886 217 W. SECOND ST. RUTHERFORDTON 28139	DR 081 A * AC 704 287-2984	SHAFFNER, LOUIS DES 740 N. PINE VALLEY ROAD WINSTON-SALEM 27106	PDS /GS 034 A P * L/RT 919 725-1503	SHEALY, FRED GRAY, JR. 561 FLEMING STREET HENDERSONVILLE 28739	GS /VS 045 AC 704 693-1778
SELLE, JAY GREGORY 1960 RANDOLPH ROAD CHARLOTTE 28207	TS /CDS 060 A AC 704 373-1500	SHAFFNER, SUSAN CASPER 1700 ABBEY PL. CHARLOTTE 28209	PD 060 A AC 704 332-7539	SHEALY, RONALD BERNARD 175 CHARLOIS BLVD., STE. 101 WINSTON-SALEM 27103	OTO 034 A AC 919 768-3361
SELLERS, BOBBY EUGENE 3900 BROWNING PLACE RALEIGH 27609	P 092 AC 919 787-7125	SHAFTNER, KIMBERLY K. PO BOX 2363 SMITHFIELD 27577	AN /EM 051 AC 919 934-8171	SHEARER, JAMES NEIL 2711 RANDOLPH RD. STE. 502 CHARLOTTE 28207	PS /GS 060 * AC 704 372-8800
SELLERS, FRANK BARKLEY PO BOX 1606 CONCORD 27026	ORS 013 A AC 704 788-3155	SHAH, KHAN, SARDAR MAHMOOD 303 COLLEGE STREET MORGANTON 28655	IM /CD 012 A P * AC 704 437-4261	SHEARIN, JACOB CONNELL 1900 S. HAWTHORNE RD. 208 FORSYTH MEDICAL PARK WINSTON-SALEM 27103	PS /GS 034 AC 919 748-4171
SELLERS, PHILLIP ALAN 510 7TH AVENUE, WEST HENDERSONVILLE 28739	IM 045 A * AC 704 692-2231	SHAH, JYOTSNA RAMESH 116 ROBERT E. LEE DRIVE WILMINGTON 28403	AN 065 AC 919 763-4901	SHEARIN, WILBURN THADDEUS, JR. 1905 GLEN MEADE ROAD WILMINGTON 28403	U 065 A AC 919 763-6251
SELMAN, RICHARD DAVID HIGHLAND HOSPITAL P. O. BOX 1101 ASHEVILLE 28802	P 011 A AC 704 254-3201	SHAH, PRIYAVADAN MANEKLAL 121 EDINBURGH ST. #208 CARY 27511	CD /IM 092 A AC 919 469-9919	SHEARIN, WILLIAM ARTHUR 2800 BLUE RIDGE BLVD., STE. 405 RALEIGH 27607	OPH 092 * AC 919 781-7373
SELTZER, STEPHEN CHARLES 320 YADKIN STREET ALBEMARLE 28001	FP 084 A P AC 704 982-9144	SHAH, RAMESH MANHARLAL 116 ROBERT E. LEE DRIVE WILMINGTON 28401	OBG 065 AC 919 791-2301	SHEETS, DOUGLAS DEAN TRYON RD., PO BOX 1208 RUTHERFORDTON 28139	OBG 081 A P AC 704 287-7383
SEMANS, JAMES HUSTEAD DUKE UNIV. MED. CTR. DURHAM 27710	U 032 A L 919 684-2744	SHAH, SHAFQAT 1911 ERWIN RD. APT. L DURHAM 27705	032 A S 919 684-6035	SHEETS, LYNN K. 2412 FARTHING ST. DURHAM 27704	R 919 471-8562
SENAY, BRUCE ALAN KINSTON CLINIC NORTH KINSTON 28501	U 054 A AC 919 527-3043	SHAHADY, GERTRUDE KOCH 112-A W. POPLAR AVE. CARRBORO 27510	032 A S 919 942-2077	SHELBURNE, JOHN DANIEL BOX 3712, DUMC DURHAM 27710	PTH 032 AC 919 286-6925
SENER, WILLIAM JEFFRESS 704 W. JONES STREET RALEIGH 27603	IM 092 A L 919 832-5125	SHAMBLIN, WILLIAM JOSEPH, JR HIGHLAND HOSPITAL P. O. BOX 1101 ASHEVILLE 28802	CHP /P 011 A AC 704 254-3201	SHELBURNE, PALMER FRIEND 1011 PROFESSIONAL VILLAGE GREENSBORO 27401	CD 041 A AC 919 272-6133
SERAFIN, DONALD DUMC-PLASTIC SURGERY DURHAM 27710	PS /GS 032 A AC 919 684-3347	SHANKER, KASTURI GIRIJA 117 WEST SEVENTH STREET ROANOKE RAPIDS 27870	U 042 P AC 919 537-0023	SHELDON, FRANK CHADWICK BEAUFORT COUNTY HOSPITAL EAST 12TH STREET WASHINGTON 27889	EM /GS 007 AC 919 946-1911
SERENE, JAMES WILLIAM 141 N. KELLY STREET STATESVILLE 28677	ORS 049 A P AC 704 872-7492	SHANNON, WILLIAM GARY ROUTE #8, BOX 315 SALISBURY 28144	AN 080 A AC 704 637-3599	SHELDON, GEORGE FRANK UNC, 131 BURNETT-WOMACK CHAPEL HILL 27514	GS /TRS 032 A AC 919 966-4052
SERENE, MARY BRUCE M. 141 N. KELLY STREET STATESVILLE 28677	AN 049 A P AC 704 873-5661	SHAPIRO, DANIEL ALLEN 1320 JOHNS CREEK RD. WILMINGTON 28403	AN 065 A P AC 919 343-7000	SHELLHORN, DOUGLAS B. 1715 ELIZABETH AVE. WINSTON-SALEM 27103	034 A S 919 761-0895

SHELTON, STEPHEN LEE 3320 LANDMARK ST. C-8 GREENVILLE 27834	A S 919 355-5027	SHUGART, MARGARET ANN 1713 AVONDALE DR. DURHAM 27701	P /CHP 032 A R 919 688-9003	SIMMONS, EVERETT CASEY ECU, DEPT. OF PSYCHIATRY GREENVILLE 27858	A AC 919 551-2660
SHEN, SUNG FAN 2414 HOPE MILLS ROAD FAYETTEVILLE 28304	FP 026 A P AC 919 424-2426	SHULER, JIMMIE BLAKE 518 EAST H STREET PO BOX 687 ERWIN 28339	PD 043 AC 919 897-8061	SIMMONS, JAMES SLATER P. O. BOX 850 SANFORD 27330	A L/RT 919 775-7425
SHEPARD, CLAUDIA PRICHARD 1406 JARVIS ST. WINSTON-SALEM 27101	A S 919 722-8253	SHULL, KENNETH CASTLES P. O. BOX 5229 HIGH POINT 27262	GS /CDS 040 A AC 919 887-3164	SIMMONS, JIMMIE DALE SURREY COUNTY HEALTH DEPT. PO BOX 1062 DOBSON 27017	PH /FP 086 * AC 919 374-2131
SHEREFF, RICHARD HENRY 139 HUNTER CIRCLE FAYETTEVILLE 28304	D /A 026 A * AC 919 323-4888	SHULL, LONNIE NEWELL, JR. 401 MULBERRY ST. SW, STE. 101 LENOIR 28645	GS 014 A AC 704 758-5501	SIMON, JIMMY L. BOWMAN GRAY, DEPT. OF PED. WINSTON-SALEM 27103	PD 034 AC 919 748-4431
SHERIDAN, ROBERT JOHN 101 NASH MEDICAL ARTS MALL ROCKY MOUNT 27804	PD 064 AC 919 443-8820	SHULL, WILLIAM HENRY 1900 RANDOLPH ROAD CHARLOTTE 28207	IM 060 A AC 704 376-4836	SIMON, KEITH JAMES 1716 LYNNWOOD COURT SANFORD 27330	ORS 053 AC 919 775-7232
SHERMER, RICHARD WAYNE UNC, DEPT. OF PATHOLOGY BRINKHOUS-BULLITT BLDG.228H CHAPEL HILL 27599	PTH 032 A AC 919 966-2339	SHULTZ, KIRKWOOD TANNER 125 BALDWIN AVE. CHARLOTTE 28204	IM /END 060 A AC 704 374-1696	SIMONS, WILLIAM JOHN 12897 EAGLES VIEW RD. PHOENIX, MD 21131	011 R 704 258-9635
SHERRILL, GARY BRADLEY 3630 GRAMERCY RD. GREENSBORO 27410	032 A S 919 288-2972	SHUPING, JOHN ROSS 425 STANTONSBURG ROAD GREENVILLE 27834	N 074 A * AC 919 752-4848	SIMONSON, DELLA SUE MURDOCH CENTER BUTNER 27509	PD /PH 039 A AC 919 575-7740
SHERRILL, WILLIAM C., JR. 1896 REMOUNT RD. GASTONIA 28054	IM /PUD 036 A AC 704 867-0735	SIDES, EVIN HENDERSON, III 3320 EXECUTIVE DR. RALEIGH 27609	IM /ID 092 AC 919 876-9688	SIMPSON, EUGENE MYERS, JR. 250 CHARLOIS BOULEVARD WINSTON-SALEM 27103	PD 034 A AC 919 768-4730
SHERINGTON, BRIAN THOMAS 195 W. ILLINOIS AVE. SOUTHERN PINES 28387	PD 063 A AC 919 692-2444	SIDES, STEPHEN N., II 104 GATES DR. WINTERVILLE 28590	074 A S 919 355-5185	SIMPSON, JOHN LARRY 132-A W. MILLER STREET ASHEBORO 27203	FP 076 A AC 919 625-1360
SHETTERLY, ROGER DAVIS 1027-B FLEMING STREET HENDERSONVILLE 28739	OPH 045 A AC 704 693-4161	SIEFKER, JOSEPH DANIEL 3 VETERANS DR. ASHEVILLE 28805	OTO 032 A R 919 688-1816	SIMS, WILLIAM LEONARD 420 N. CENTER ST. HICKORY 28601	NS 018 A P * AC 704 324-9609
SHICK, JAFAR MO 7321 GRIST MILL RD. RALEIGH 27609	AN 092 A AC 919 755-8000	SIEGE, ALFRED GEOFFREY PO BOX 786 PINEHURST 28374	PH /GPM 063 A * L/RT 919 692-8899	SINAR, DENNIS ROBERT ECU-DEPT. OF GE GREENVILLE 27834	GE /IM 074 A * AC 919 551-4652
SHIEH, RICHARD CHEN HAI HOSPITAL DR. PO BOX 398 ELIZABETHTOWN 28337	R 009 AC 919 862-4043	SIEGEL, GLENN N. HIGHLAND HOSPITAL PO BOX 1101 ASHEVILLE 28802	P 011 AC 704 254-3201	SINCLAIR, LOUIS GORDON 3309 WHITE OAK ROAD RALEIGH 27609	GS /GYN 092 A L/RT 919 787-9356
SHIELDS, CHARLES ROBERT PO BOX 15025 ASHEVILLE 28813	PM 011 A AC 704 274-2400	SIEKER, HERBERT OTTO BOX 3822, DUMC DURHAM 27710	IM /PUD 032 A P AC 919 684-3907	SINCLAIR, ROBEY THOMAS, JR. 5301 WRIGHTSVILLE AVENUE WILMINGTON 28401	DR 065 A L/RT 919 395-8100
SHIELDS, MILTON BRUCE DUKE UNIVERSITY EYE CENTER DURHAM 27710	OPH 032 A AC 919 684-2841	SIEWERS, CHRISTIAN FOGLE S.E. REGIONAL REHAB. P. O. BOX 2000 FAYETTEVILLE 28302	ORS /PM 026 A P AC 919 323-6036	SINCOX, FRANCIS JOHN, JR. PO BOX 1309 KINGS MOUNTAIN 28086	FP 023 A AC 704 739-3681
SHIH, DEBORAH P. 1315 MORRENE RD. #17E DURHAM 27705	032 A S 919 383-2016	SIGNAL, BARRY WM. 2825 LYNDHURST AVE. STE. 101 WINSTON-SALEM 27103	A AC 704 338-3172	SINGER, JAMES DANIEL DD6 OLD WELL CONDOS CARRBORO 27510	032 A S 919 968-4482
SHIMM, CYNIA BROWN 2609 N. DUKE ST. STE. 103 DURHAM 27704	P /PYA 032 A AC 919 471-3487	SIGMAN, JAMES LEWIS, JR. P. O. BOX 32861 CHARLOTTE 28232	FP 060 A AC 704 338-3172	SINGER, JAMES WILLARD 1209 MAGNOLIA STREET GREENSBORO 27401	PD 041 A P AC 919 274-0106
SHINGLETON, WILLIAM WARNER BOX 3814, DUMC DURHAM 27710	GS 032 L 919 684-2282	SIGMON, LEE MERRELL 121 TIMBER CREEK ROAD HENDERSONVILLE 28739	PTH /DMP 045 A AC 704 693-6522	SINGER, LAWRENCE ROBERT 250 CHARLOIS BOULEVARD WINSTON-SALEM 27103	OBG 034 A AC 919 768-4730
SHINN, GEORGE CLYDE 111 N. MAIN STREET CHINA GROVE 28023	GP 080 A L 704 857-7098	SIGMON, RICHARD LEE, JR. 1900 RANDOLPH RD., STE. 310 CHARLOTTE 28207	GE /PD 060 A AC 704 372-7974	SINGH, MANMOHAN 713 NORTH ST. PO BOX 1196 SMITHFIELD 27577	032 919 934-2616
SHIREY, JOHN LUTHER NEW LEICESTER HIGHWAY RT. #4, BOX 1525 ASHEVILLE 28806	A 011 L/RT 704 683-2360	SIKES, THOMAS EDWARD, JR. 109 COUNTRY CLUB DR., NE CONCORD 28025	ORS 013 A AC 704 786-5122	SINGH, RANBIR 542 WHITE OAK STREET ASHEBORO 27203	ORS 076 A AC 919 629-4171
SHIRLEY, ROBERT E.L., JR. 1955 RANDOLPH ROAD CHARLOTTE 28207	OBG 060 AC 704 376-3536	SILBERMAN, HAROLD REITER BOX 3975-M, DUMC DURHAM 27710	EM /IM 032 A AC 919 684-5537	SINGLETARY, HENRY PATE 2131 S. 17TH ST. WILMINGTON 28401	PTH 065 A P AC 919 343-7074
SHIVERS, JAMES ALLISON STE. 301, 445 BILTMORE CENTER ASHEVILLE 28801	DR /NM 011 A AC 704 254-2371	SILBIGER, STEPHEN ALAN III FAIRVIEW PLAZA, STE. 100 5950 FAIRVIEW RD. CHARLOTTE 28210	IM 060 AC 704 551-4200	SINGLETARY, WILLIAM VANCE, JR. 306 S. GREGSON STREET DURHAM 27701	GE 032 A AC 919 682-5561
SHOAF, EDWIN HUSS, JR. 491 N. WENDOVER RD. CHARLOTTE 28211	IM 060 AC 704 366-7291	SILLMON, DAVID WILDE 1511 WESTOVER TERRACE GREENSBORO 27408	IM /HEM 041 A * AC 919 373-0611	SINGLEVICH, THOMAS E. 8910 ST. PIERRE LANE MATTHEWS 28105	AN /PA 060 AC 704 379-5956
SHOOK, EARL LESTER, JR. 100 VICTORIA ROAD ASHEVILLE 28801	U 011 P AC 704 254-8883	SILVERMAN, JAN FRANKLIN BRODY, 1F79, ECU SCH. OF MED GREENVILLE 27834	PTH 074 A AC 919 551-4495	SINNING, MARK ALAN 800 HOSPITAL DR. NEW BERN 28560	TS /VS 025 A AC 919 638-8118
SHORT, EARL DEGREY, JR., 501 BILLINGSLEY RD. CHARLOTTE 28211	P 060 A AC 704 375-3575	SILVERTHORNE, RAY GUILFORD RT. #2, BOX 35 WASHINGTON 27889	OBG 007 A L/RT 919 946-5168	SINTHUSEK, CHIRAPA 1200 TARTAN CT. WINSTON-SALEM 27106	IM /END 034 A AC 919 725-4741
SHOWN, THOMAS EARL 2932 LYNDHURST AVENUE WINSTON-SALEM 27103	034 A AC 919 755-0021	SILVOY, EDWARD JOHN 1010 X-RAY DR. GASTONIA 28054	OTO /PS 036 A AC 704 865-7677	SIPPE, JOSEPH LAWRENCE 1350 S. KINGS DRIVE CHARLOTTE 28207	OPH 060 AC 704 372-8750
SHUFORD, FULLER ADAMS 49 MCDOWELL ST. ASHEVILLE 28801	GE 011 A AC 704 254-8883	SIMEL, PAUL JOSEPH 111 W. WENDOVER AVENUE GREENSBORO 27401	OPH 041 A AC 919 275-5673	SIRISENA, OMATTA MUDALIGE 117 FOY DRIVE ROCKY MOUNT 27801	IM /P 064 AC 919 443-7678
SHUFORD, WILLIAM FERRELL, JR. 1515 DOCTOR'S CIRCLE WILMINGTON 28401	GE 011 A AC 919 763-8883	SIMMONS, CHARLES NUMA PO BOX 26 CROSSNORE 28616	R 006 A AC 704 733-3203	SIVA, SIVALINGAM 900 COX ROAD GASTONIA 28054	NS 036 A P AC 704 865-7655
				SIY-HIAN, BIENVENIDO CHAN 603 BEAMAN STREET CLINTON 28328	IM /CD 082 AC 919 592-1545

SKEEN, WILLIAM WALDO 417 E. STATESVILLE AVENUE MOORESVILLE 28115	FP 049 A AC 704 663-3063	SMITH, ALLEN DALE 182 MONTROSE DURHAM 27707	D /AM 032 A L/RT 919 489-2642	SMITH, JERRY EDWARD PO BOX 2000 PINEHURST SURGICAL CLINIC PINEHURST 28374	OBG 063 A AC 919 295-0282
SKOWRONEK, DAVID GORDON 11 SPICEWOOD LANE SALISBURY 28144	EM /ORS 080 A P AC 704 638-1035	SMITH, BERNARD MICHAEL VANCE MEDICAL ARTS BLDG. RUIN CREEK ROAD HENDERSON 27536	VS /GS 091 A AC 919 438-2070	SMITH, JOHN BALDWIN, III 160 CHARLOIS BLVD. WINSTON-SALEM 27103	N /CHN 034 A AC 919 768-5834
SLATE, FRANCIS WESLEY P. O. BOX 407 MOCKSVILLE 27028	GS 034 A AC 704 634-6121	SMITH, BRYAN WESLEY 302 PITTSBORO ST. CHAPEL HILL 27514	032 A S 919 929-7447	SMITH, JOHN BRASWELL, JR. 403 FAIRVIEW STREET CLINTON 28328	FP 082 AC 919 592-6011
SLATE, MARVIN LONGWORTH 807 PARKWOOD CIRCLE HIGH POINT 27260	FP 040 A L/RT 919 883-9756	SMITH, CAMERON LANGLEY 1705 W. SIXTH STREET GREENVILLE 27834	D 074 AC 919 752-4124	SMITH, JOSEPH PINKNEY 1508 S. YORK STREET GASTONIA 28052	GP 036 AC 704 864-3496
SLATER, PATRICK W., II ROUTE #1, BOX 379 PRINCETON 27569	074 A S 919 965-6864	SMITH, CHARLES GORDON 118 BEAGLE TRAIL DECEASED-5-26-88 WILMINGTON 28403	FP /EM 065 A L/RT 919 799-1873	SMITH, KAREN MARIE 1605-P ZUIDER ZEE DR. WINSTON-SALEM 27127	034 A S 919 784-8762
SLEDGE, JOHN BURTON, JR. P. O. BOX 610 KILL DEVIL HILLS 27948	PH 070 A AC 919 447-6182	SMITH, CHRISTOPHER EDMUND 723 EDITH ST. BURLINGTON 27215	ORS 001 AC 919 229-4256	SMITH, KEVIN LINDSAY 2215 RANDOLPH RD. CHARLOTTE 28207	PS 060 A AC 704 372-6846
SLIWINSKI, STANLEY FRANCIS, JR. P. O. BOX 1460 STATESVILLE 28677	OPH 049 AC 704 878-2011	SMITH, CLAIBORNE THWEATT 100 MEDICAL ARTS MALL ROCKY MOUNT 27801	IM 064 A L/RT 919 442-2916	SMITH, LAFAYETTE LYLE 624 QUAKER LANE, SUITE 213-B HIGH POINT 27262	IM 040 A AC 919 883-4131
SLOAN, DAVID BRYAN, JR. 1915 GLEN MEADE ROAD WILMINGTON 28403	OPH 065 A P AC 919 763-3601	SMITH, CLAUDE ALFRED 3155 MAPLEWOOD AVENUE WINSTON-SALEM 27103	R 034 A AC 919 765-2702	SMITH, LLOYD HAMLIN ROUTE #9, BOX 241-F GOLDSBORO 27530	EM 096 A AC 919 736-1110
SLOAN, JAMES BOYKIN 1915 GLEN MEADE ROAD WILMINGTON 27403	OPH 065 A P AC 919 763-3601	SMITH, DALLAS AARON, JR. 4507 KENBRIDGE DRIVE GREENSBORO 27410	DR 041 A AC 919 854-1311	SMITH, MICHAEL ALSON 848 MEADOW LANE FT. WALTON BEACH, FL 32548	FP 000 A R 919 383-4326
SLOAN, JAMES MARSHALL, III 942 TUNNEL ROAD ASHEVILLE 28805	FP 011 AC 704 298-7972	SMITH, DAVID ALDEN 200 EASTOWNE DR. STE. 216 CHAPEL HILL 27514	FP 032 AC 919 967-4202	SMITH, MICHAEL EARL ROUTE #2, BOX 93 WINTERVILLE 28590	074 A S 919 756-3960
SLOOP, NORMAN RAY 310 STATESVILLE BOULEVARD SALISBURY 28144	GP 080 A AC 704 636-5326	SMITH, DAVID CLARK 102 WESTOVER DRIVE LEXINGTON 27292	IM 029 A L/RT 704 246-2929	SMITH, MICHAEL LEE 1412 S. CHAMBERS CIRCLE AURORA, CO 80012	D /PD 000 A R 303 750-0248
SLOOP, ROBERT F., JR. WILSON CLINIC WILSON 27893	OPH 098 A AC 919 291-7008	SMITH, DAVID NIMMONS 102 MOCKSVILLE AVE., STE. 103 SALISBURY 28144	IM /CD 080 A AC 704 636-6632	SMITH, NAT ERSKINE 2900 COUNTRY CLUB ROAD WINSTON-SALEM 27104	IM 034 A AC 919 748-4524
SLOTKIN, ROBERT IRVING 2317 RANDOLPH ROAD CHARLOTTE 28207	PD 060 AC 704 376-5572	SMITH, DAVID TILLERSON GENERAL DELIVERY PAWLEYS ISLAND, S. C. 29585	PUD 004 A L 919 775-5457	SMITH, O. NORRIS 202 W. BESSEMER AVENUE GREENSBORO 27401	IM 041 A L/RT 919 273-7494
SLOTNICK, LAWRENCE SHELDON 1018 N. ELM STREET GREENSBORO 27401	PUD /A 041 A AC 919 275-7238	SMITH, DONALD DEWEY 1200 N. ELM ST. GREENSBORO 27401	PD 041 A * AC 919 379-4025	SMITH, PETER KENT BOX 3442, DUMC DURHAM 27710	CDS 032 AC 919 684-2890
SLUDER, FLETCHER SUMPTER 472 CHUNN'S COVE ROAD ASHEVILLE 28805	OBG 011 A L/RT 704 252-7374	SMITH, DUANE HOWARD 112 BOONE TRAIL N. WILKESBORO 28697	OBG 097 A AC 704 667-8241	SMITH, PHILIP PALMER P. O. BOX 2042 WILMINGTON 28402	OM /IM 065 A AC 919 371-4080
SLUSHER, M. MADISON 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	OPH 034 A AC 919 748-4091	SMITH, ERASTUS, JR. 136-A CARBANTON RD. PO BOX 1768 SANFORD 27330	IM 053 A AC 919 775-5457	SMITH, RICHARD LLOYD 30 CHOCTAW STREET ASHEVILLE 28801	GE 011 A AC 704 254-0881
SLYMAN, JAMES FRANCIS 2 HOSPITAL DR. LEXINGTON 27292	OPH 029 A P * AC 704 243-2436	SMITH, EUSTACE HENRY BOX 190 CROSSNORE 28616	FP 006 A AC 704 733-9297	SMITH, ROBERT CLEMENT BOX 248 BANNER ELK 28604	IM 006 AC 704 898-5588
SMALES, WILLIAM PALMER STUDENT BOX 411, BOWMAN GRAY 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	034 A S 919 351-4144	SMITH, EVERETT DUANE BOX 1030 CANDLER 28715	GP 011 A AC 704 667-2526	SMITH, ROBERT LEE 320 ROBIN ROAD MOUNT AIRY 27030	PTH 086 A P AC 919 789-9710
SMALL, FAIRLEIGH DAVID 3605 SHEFFIELD DR. ROCKY MOUNT 27803	EM 064 A AC 919 443-8171	SMITH, HELEN ELIZABETH 3312-L CIRCLE BROOK DR. SW ROANOKE, VA 24014	032 A R 703 772-3071	SMITH, ROGER ENOS 125 BALDWIN AVE. CHARLOTTE 28204	CD /IM 060 A * AC 704 374-1696
SMALL, KENT WILSON 818 PROLOGUE RD. DURHAM 27712	OPH 032 A R 919 684-6611	SMITH, HENRY LOUIS, II 1700 ABBEY PLACE CHARLOTTE 28209	PD 060 A * AC 704 523-7232	SMITH, RONNIE DALE 701 E. FIFTH ST. TABOR CITY 28463	GP 024 A AC 919 782-0414
SMALLEY, ROBERT ROWAN 5305-F WRIGHTSVILLE AVENUE WILMINGTON 28403	GS 065 A AC 919 799-5400	SMITH, HENRY W. B., III 1904 N. CHURCH ST. GREENSBORO 27405	CD /IM 041 A AC 919 274-3241	SMITH, RUSSELL LEE 1030 W. 25TH STREET WINSTON-SALEM 27104	IM /GP 034 A L/RT 919 723-2188
SMALLWOOD, JAMES CLAYTON 10 EASTGATE CENTER SYLVA 28779	OBG /IM 050 A AC 704 586-2135	SMITH, IRA Q. 400 CRUTCHFIELD ST., APT B DURHAM 27704	032 OBG AC 919 471-1573	SMITH, SCOTT VICTOR 4639 HOPE VALLEY RD. APT. J DURHAM 27707	032 A S 919 937-4084
SMALTO, GARY PAUL 401 S. SUNSET DR. WINSTON-SALEM 27103	034 A S 919 724-9744	SMITH, JAMES DAVID P-2 DOCTORS PARK GREENVILLE 27834	074 A S 919 758-7116	SMITH, SPENCER MARION 10007 CRESTWOOD RD. KENSINGTON, MD 20895	IM /GP 034 A L/RT 919 723-2188
SMELZER, TIMOTHY HARVEY 891 W. WILLOW DRIVE CHAPEL HILL 27514	IM /PUD 032 AC 919 942-5123	SMITH, JAMES JEFEOAT 1903 BROOK ROAD GREENVILLE 27834	074 A S 919 758-7116	SMITH, STEPHEN WAYNE 2800 BLUE RIDGE, STE. 205 RALEIGH 27607	IM /CD 092 AC 919 782-0414
SMERASKI, PHILIP JOHN ECU SCH. MED-DEPT. OF PSY. BRODY 4E98 GREENVILLE 27858	P 074 A AC 919 551-2660	SMITH, JANE SWAN 3320 OLD WAKE FOREST RD. RALEIGH 27609	GP 074 A RT 919 756-3905	SMITH, THOMAS WARREN P. O. BOX 1510 LINCOLNTON 28092	IM 055 AC 704 735-6939
SMETHIE, WILLIAM MASSIE, SR. P. O. BOX 309 WADESBORO 28170	GS 004 A L/RT 704 694-2657	SMITH, JARVIS WILTON 316 GRAHAM-HOPEDALE RD. BURLINGTON 27215	IM 092 AC 919 872-4850	SMITH, TIMOTHY CARL 1051 COUNTRY CLUB DR. PO BOX 7828 ROCKY MOUNT 27804	IM 064 A * AC 919 937-4084
SMILEY, MARGARET L. BURROUGHS WELLCOME CO. 3030 CORNWALLIS RD. RESEARCH TRI. PARK 27709	IM 032 AC 919 722-4258	SMITH, JAY LELAND, JR. P. O. BOX 85 SPENCER 28159	GS 001 A AC 919 227-3621	SMITH, WHITMAN ERSKINE, JR. P. O. BOX 1398 ALBEMARLE 28001	GS /VS 084 AC 704 982-0161
SMITH-COOK, SHARON R. 312-10 LINVILLE RIDGE CT. WINSTON-SALEM 27101	034 A * S 919 722-4258		GP 080 L 704 636-8046	SMITH, WILLIAM M. 815 E. KING STREET BOONE 28607	095 AC

SMITH, WILLIAM SIEGFRIED, JR. 104 W. NORTHWOOD STREET GREENSBORO 27401	GYN 041 A AC 919 378-1843	SONEK, MOJMIR JIRI C/O BRUSHY MOUNTAIN OB-GYN MEDICAL ARTS BLDG. NORTH WILKESBORO 28659	OBG 097 AC 919 634-0051	SPENCER, ALLEN 820 W. HENDERSON STREET SALISBURY 28144	GS /GYN 080 A AC 704 633-2883
SMITHWICK, JAMES DAVID ROUTE #3, BOX 238-B LAURINBURG 28352	PD 083 AC 919 276-7570	SONG, JULIET KIM PHYSICIAN'S QUADRANGLE GREENVILLE 27834	AN 074 A AC 919 752-1433	SPENCER, FREDERICK B., JR 803 CONFEDERATE AVE. SALISBURY 28144	IM 080 AC 704 636-5016
SMOLEN, PAUL MATHIEU 1851 E. THIRD ST., STE. 103 CHARLOTTE 28204	PD 060 AC 704 333-6659	SOOD, ANIL KUMAR 7E, ESTES PARK APTS. CARRBORO 27510	032 A S 919 929-9240	SPENCER, GEORGE MICHAEL 3000 GOLDEN RD., CONDO #7 GREENVILLE 27834	074 A S 919 758-5617
SMOLOWITZ, EDWIN LARRY 735 6TH AVE. WEST HENDERSONVILLE 28739	U 045 A P AC 704 697-0527	SOPER, HERBERT ALVA 1901 S. HAWTHORNE RD. STE. 320 WINSTON-SALEM 27103	GYN /OBS 034 A AC 919 768-1180	SPENCER, JOHN PAUL 111 VICTORIA AT OAKLAND ASHEVILLE 28801	ORS 011 A * AC 704 252-7331
SNEDEKER, JEFFREY DAVID BOX 31085, DUMC DURHAM 27710	PD /ID 032 A R 919 684-6610	SORIANO, CLINTON REYES 1901 S. HAWTHORNE RD. STE. 340 WINSTON-SALEM 27103	CDS 034 A P AC 919 765-6277	SPENCER, RICHARD LEWIS 3309-A HEALY DRIVE WINSTON-SALEM 27103	P 034 AC 919 765-6525
SNIPES, RICHARD DEAN P. O. BOX 53514 FAYETTEVILLE 28305	GYN 026 L 919 485-1191	SORROW, JOHN MITCHELL, JR. N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514	IM /CD 032 A AC 919 962-8336	SPENCER, ROGER FELIX NCMH, 201 SOUTH WING, CB #7160 CHAPEL HILL 27599	P /PYA 032 A AC 919 966-4622
SNITZ, ARNOLD IRA 2620 E. SEVENTH ST. CHARLOTTE 28204	PD 060 AC 704 332-7141	SOTO, PABLO F. 6D RIVER BIRCH RD. DURHAM 27705	032 A S 919 383-4367	SPENCER, WILLIAM JOSEPH 3310 BROOKVIEW HILLS BLVD. #106 WINSTON-SALEM 27103	IM /CD 034 A * AC 919 765-6020
SNODDY, WILLIAM RAY N-1 DOCTOR'S DR. ASHEVILLE 28801	FP 011 AC 704 252-8885	SOTOLONGO, CARLOS A. 5501 FORTUNE RIDGE DR., STE. A DURHAM 27713	FP 032 AC 919 544-3737	SPENGLER, JOHN ROBERT PO BOX 876 FLAT ROCK 28731	R 045 AC 704 693-6522
SNOW, SIDNEY LEWIS 328 MULBERRY STREET, S.W. LENOIR 28645	U 014 AC 704 754-2166	SOULSBY, DAVID L. 414 W. LEBANON ST. BOX 1544 MOUNT AIRY 27030	ORS 086 A AC 919 789-9041	SFEROS, THOMAS LEE 501 WEST 15TH STREET WASHINGTON 27889	FP 007 * AC 919 975-2667
SNOWHITE, JENNIFER CELESTE 1712 ELIZABETH AVE. WINSTON-SALEM 27103	034 A S 919 722-8712	SOUTH, STEPHEN ALAN 3160-93 BERRY LANE ROANOKE, VA 24018	IM 034 A R 703 981-7000	SPIGGLE, JOHN ALEXANDER 500 E. PARKER ROAD MORGANTON 28655	U 012 A P AC 704 433-5141
SNYDER, ALEXANDER BENJAMIN 1420 E. FRANKLIN ST. MONROE 28110	IM 090 AC 704 289-8427	SOUTHARD, JOHN K., JR. 3111 MAPLEWOOD AVE., STE. 107 WINSTON-SALEM 27103	D 034 AC 919 768-1280	SPIGNER, PRESCOTT BUSH, JR. P. O. BOX 1062 KINSTON 28501	ORS 054 AC 919 522-4155
SNYDER, EDWARD SUTTON 1216 BARCROFT PLACE RALEIGH 27615	DR /NM 092 A P AC 919 847-1289	SOUTHWORTH, ALVIN JUDSON 1134 N. ROAD STREET ELIZABETH CITY 27909	OBG 070 P AC 919 338-0887	SPIRO, PHILIP MARGET 2001 DARTMOUTH DR. DURHAM 27705	GP 032 A R 919 796-0689
SNYDER, JAMES WILLIAM 1515 DOCTOR'S CIRCLE WILMINGTON 28401	CD /IM 065 AC 919 763-5182	SOWDEN, RICHARD GUY 1503 E. FRANKLIN STREET MONROE 28110	U 090 A P AC 704 289-5402	SPIVEY, DAVID EUGENE, JR. 1511 MAIN ST. SW ROANOKE, VA. 24015	034 A R 703 985-0216
SNYDER, JOHN MICHAEL 935 EAGLE ROAD WEDDINGTON 28173	AN 060 A P AC 704 371-4049	SOX, CARL CAUGHMAN P. O. BOX 429 KENLY 27542	GP 051 A L 919 284-4149	SPIVEY, DAVID LEE 905 RABBIT RUN RD. WILMINGTON 28403	AN 065 AC 919 762-4901
SNYDER, NORMAN IRWIN 1262 OLIVER ST. FAYETTEVILLE 28304	P /CHP 026 A AC 919 484-5151	SPAETH, WALTER 1904 RIVERSHORE ROAD ELIZABETH CITY 27909	IM 070 A L/RT 919 335-7389	SPIVEY, JAMES RICHARD 1928 RANDOLPH RD. STE. 211 CHARLOTTE 28207	IM 060 AC 704 377-3439
SNYDER, RALPH EUGENE MEDICAL REVIEW OF NC, INC. PO BOX 37309 RALEIGH 27627	IM 063 A * AC 919 851-2955	SPAIN, ROBERT SPRUILL 3707 OLD LASSITER MILL ROAD RALEIGH 27609	IM 092 AC 919 782-2805	SPOCK, ALEXANDER BOX 2994, DUMC DURHAM 27710	PDA /A 032 A AC 919 681-3364
SO, GERALD MENDOZA 312 GROVE PARK AVE., APT. #3 WINSTON-SALEM 27103	034 A S 919 725-4912	SPANGENTHAL, SELWYN 1350 S. KINGS DR. CHARLOTTE 28207	PUD 060 P AC 704 372-8750	SPRAGINS, JOEL FRED 808 N. SCHENCK STREET SHELBY 28150	GE /IM 023 A AC 704 482-1482
SODEN, KEVIN JOSEPH 7019 WHITEMARSH COURT CHARLOTTE 28210	OM /EM 060 A P AC 704 554-2656	SPANGLER, ERNEST BURTON DRAWER X-3 GREENSBORO 27402	R 041 A P * AC 919 854-6546	SPRAGUE, DAVID HUGH UNC-DEPT. OF ANES. CHAPEL HILL 27514	AN 032 A P * AC 919 966-3371
SODERSTROM, LAWRENCE PAUL 10230 BALMORAL CIRCLE CHARLOTTE 28210	DR /NM 036 A AC 704 864-4378	SPANGLER, JOHN GIVEN 310 RIDGEMEDE RD., APT. 105 BALTIMORE, MD 21210	000 A R 301 955-5000	SPRINKLE, LAWRENCE TILSON BOX 218, 104 N. MAIN ST. WEAVERVILLE 28787	GP 011 A P AC 704 645-3031
SOFLEY, CARL WILSON, JR. 319 KILBOURNE RD. COLUMBIA, SC 29205	IM 032 A R 803 254-5847	SPANGLER, THOMAS CLAYTON 1066 ARTHUR DR. GRAHAM 27253	ORS 032 A * R 919 226-6586	SPRUILL, THOMAS RAYFORD RT. #5, BOX 200 HILLSBOROUGH 27278	P 032 A AC 919 821-0300
SOHMER, MARCUS FRANK, JR. 9808 REYNOLDA RD. TOBACCOVILLE 27050	GE /IM 034 A P * AC 919 924-0857	SPARGO, JOHN PRICHARD P. O. BOX 278 COOLEEMEE 27014	FP 080 A * AC 704 284-2331	SPRUNT, WM HUTCHINSON, III 6508 BROOKHOLLOW DR. RALEIGH 27609	R /RHU 092 A AC 919 787-8199
SOLOMON, DONALD JEFFREY 1202 MEDICAL CENTER DR. WILMINGTON 28401	N 065 A AC 919 341-3300	SPARLING, PHILIP FREDERICK UNC SCHOOL OF MEDICINE CHAPEL HILL 27514	ID /IM 032 AC 919 966-1191	SPUDIS, EDWARD VERHINES 1900 S. HAWTHORNE RD. STE. 674 WINSTON-SALEM 27103	N 034 A AC 919 765-2195
SOLOMON, ROBERT DOUGLAS 113 S. BELVEDERE DR. HAMPSTEAD 28443	PTH /GER 065 AC 919 270-2019	SPARROW, HARRY WARD 342 N. ELM STREET GREENSBORO 27401	IM 041 A AC 919 275-8436	SPURR, CHARLES LEWIS 1845 BEUNA VISTA RD. WINSTON-SALEM 27104	ON /HEM 034 A L/RT 919 748-2946
SOLTYS, JOHN JOSEPH UNC, MEDICAL WING D, 208-H CHAPEL HILL 27514	P /CHP 032 AC 919 966-5277	SPARROW, NATHANIEL LOUIS 3010 ANDERSON DR. PO BOX 18946 RALEIGH 27619	OTO 092 A AC 919 787-7171	SQUIRES, JERRY EWING PO BOX 36507 2425 PARK RD. CHARLOTTE 28236	PTH 060 A AC 704 376-1661
SOMERS, WILLIAM ALAN 1830 HILLANDALE ROAD DURHAM 27705	ORS 032 A AC 919 383-5531	SPAUGH, EARLE 411 N. WENDOVER RD. CHARLOTTE 28211	PD /ADL 060 AC 704 375-9795	SQUIRES, RAYMOND JAY 49 FOREST ROAD ASHEVILLE 28803	011 AC 704 274-4664
SOMERSTEIN, DAVID EUGENE 3535 RANDOLPH ROAD CHARLOTTE 28211	U 060 A AC 704 365-0371	SPEES, LYNN BEECHER THE CHILDHEALTH CENTER 1375 4TH ST. DR. NW HICKORY 28601	PD 018 A AC 704 322-4453	ST. CLAIR, STEVEN H. 101 SOUTH PEAK CARRBORO 27510	OM 032 A R 919 966-4131
SOMKUTI, STEPHEN GEORGE 2601 STUART DR. DURHAM 27707	032 A S 919 489-9434	SPEIGHT, KEVIN LEWIS 1825 GASTON ST. WINSTON-SALEM 27103	AN 034 A R 919 748-4497	ST. CLARIE, KAREN SUE BOX 31172, DUMC DURHAM 27710	032 R 919 684-6575
SOMMERVILLE, LEWIS CASS 1425 PATTON AVENUE ASHEVILLE 28806	FP 011 A AC 704 254-5385			STABLER, CAREY VASTINE NORTHERN HOSP.-SURRY CO. MOUNT AIRY 27030	EM /IM 086 A AC 919 789-9541

STACKHOUSE, WILLIAM JAMES 201 COX BLVD. GOLDSBORO 27530	IM 096 A AC 919 734-9455	STEEL, JOHN GRIFFITH 425 STANTONSBURG ROAD GREENVILLE 27834	N 074 A AC 919 752-4848	STEVENS, HUGH L. C. 204 DEPOT ST., SUITE C WAYNESVILLE 28786	IM /GE 044 A AC 704 452-5124
STAFFEL, JON G. 605 JONE FERRY RD. FF-8 CARRBORO 27510	032 A R 919 968-1030	STEELE, RICHARD AUSTIN 445 BILTMORE AVE. STE. 408 ASHEVILLE 28801	IM /CD 011 A AC 704 258-9083	STEVENS, JAMES CONRAD 445 BILTMORE AVE., STE. 403 ASHEVILLE 28801	GS 011 AC 704 253-4143
STAFFORD, STEVEN JAMES 3410 EXECUTIVE DR. STE. 201 RALEIGH 27609	U 092 A AC 919 966-2571	STEELE, ROBERT GIBSON 400 MOCKSVILLE AVENUE SALISBURY 28144	ORS 080 A P AC 704 633-6442	STEVENS, JAMES ROMER 3100 S. MANCHESTER #321 FALLS CHURCH, VA 22044	000 A R 703 671-9348
STAFFORD, WILLIE R., JR. 948 WALKER AVENUE GREENSBORO 27403	FP /OM 041 A * AC 919 275-7665	STEELE, WALTER FRANKLIN VALDESE GENERAL HOSPITAL VALDESE 28690	GS /TS 012 AC 704 874-3160	STEVENS, JOSEPH BLACKBURN 102 IRVING PARK CT. GREENSBORO 27408	IM /N 041 A L 919 272-7292
STALHEIM, RODNEY MARTIN 322 MULBERRY ST., SW PO BOX 1020 LENOIR 28645	IM /CD 014 A AC 704 758-5544	STEFFES, BRUCE CARL 1790 METROMEDICAL DR. FAYETTEVILLE 28304	GS 026 AC 919 323-2626	STEVENS, ROBERT BRUCE 3430 5TH ST. DRIVE, NW HICKORY 28601	AN 018 AC 704 327-7443
STALLINGS, DAVEY BINGHAM P. O. BOX 69 RURAL HALL 27045	GP 034 A AC 919 969-9158	STEG, BRIAN DAVID 230 18TH ST. CIRCLE SE HICKORY 28602	CD /CD 018 AC 704 324-4804	STEVENS, WILLIAM ROSS 534 MARSHALL WAY DURHAM 27705	032 A S 919 383-5653
STALLINGS, MARTIN WADE 108 EDMONT DR. KINGS MOUNTAIN 28086	PD 023 P AC 704 739-2521	STEGALL, JOHN THOMAS 310 DAVIE AVENUE STATESVILLE 28677	FP 049 L/RT 704 873-3269	STEVENSON, JOHN SAMUEL 926 BIGGS BOULEVARD ROCKINGHAM 28379	R /NM 077 A P AC 919 997-2595
STALLINGS, STEPHEN D., JR. ROUTE #2, BOX 109 ZEBULON 27597	GP 035 A AC 919 269-8802	STEIGER, HOWARD PAUL BOX 2144 PAWLEYS ISLAND, SC 29585	D 060 A L/RT 919 683-1316	STEVENSON, KARL 2609 N. DUKE ST., STE. 103 DURHAM 27704	CHP /P 032 A AC 919 471-3487
STALLINGS, THOMAS FRANKLIN 608 E. 12TH STREET WASHINGTON 27889	PD 007 AC 919 946-4134	STEIN, JEANNETTE FISCHER 1301 FAYETTEVILLE ST. DURHAM 27707	IM 032 AC 919 683-1316	STEVENSON, PAUL L. 103 BELMONT DR. GREENVILLE 27858	074 A S 919 758-9950
STALLWORTH, WILLIAM KING 2711 RANDOLPH RD. #305-A CHARLOTTE 28207	OBG 060 A AC 704 372-8020	STEINER, MICHAEL LEE 3044 SUNSET AVE., STE. 100 ROCKY MOUNT 27804	OPH 064 AC 919 443-6129	STEVENSON, ROBERT MCL. 743 SPRINGDALE RD., EAST STATESVILLE 28677	R 049 A AC 704 872-4306
STAMEY, CHARLES CLAUD 3000 BETHESDA PL. #501 WINSTON-SALEM 27103	PD 034 AC 919 768-6830	STEINER, ROBERT W. P. RT. #7, BOX 69B CHAPEL HILL 27514	FP /PH 032 A R 919 942-0108	STEWART, ALBERT, JR. 114 BROADFOOT AVENUE FAYETTEVILLE 28305	IM 026 A AC 919 484-3365
STANDISH, MYLES 838 BRENT WINSTON-SALEM 27103	034 A S 919 725-6971	STEINFELD, JOHN ROBERT P. O. BOX 2959 ASHEVILLE 28802	DR 011 AC 704 254-4617	STEWART, ANGELA GRACE RT. #2, BOX 94-5C WINTERVILLE 28590	PD 074 AC 919 355-3773
STANKUS, PAUL VICTOR 7 LITCHFORD ROAD CHAPEL HILL 27514	AN 032 A P AC 919 967-5295	STEKLOFF, SHELDON HARVEY 3741 SUNSET AVE. APT. A-1 ROCKY MOUNT 27804	AN 064 A AC 919 937-4284	STEWART, DAVID DUBOSE 114 BROADFOOT AVE. FAYETTEVILLE 28305	IM 026 * AC 919 484-1156
STANLEY, FRANKIE EDWARD 2410-B E. THIRD ST. GREENVILLE 27858	074 A S 919 752-6172	STEM, THEODORE B., JR. 1506 WOODVIEW DR. GREENSBURG, PA 15601	IM /NEP 000 AC 412 885-5448	STEWART, DOUGLAS WAYNE THOMPSON MED. SPECIALISTS, PA PO BOX 1020 LENOIR 28645	NEP /IM 014 A AC 704 758-5544
STANLEY, JOHN H., JR. 2212 DELANEY AVE. WILMINGTON 28403	R 065 A AC 919 762-3882	STEPHENS, FREEMAN IRBY 54 SUNSET PARKWAY ASHEVILLE 28801	IM 011 A L/RT 704 253-8178	STEWART, FRANCIS ASBURY 102 E. MARSHVILLE BLVD. MARSHVILLE 28103	FP 090 A P AC 704 624-5889
STANLEY, RONALD JAY 204 DOCTORS DRIVE BOONE 28607	D 095 P AC 704 264-4553	STEPHENS, JAMES EDWARD P. O. BOX 516 ROBBINSVILLE 28771	GP 020 A AC 704 479-3392	STEWART, GEORGE TERRY 2215 CANTERWOOD DRIVE WILMINGTON 28401	OBG 065 AC 919 343-1031
STANLEY, SHERBURN MOORE ROUTE #1, BOX 5 TODD 28684	OM 011 A L/RT 704 264-4274	STEPHENS, KATHRYN JOHNSON 2330-B RANDOLPH RD. CHARLOTTE 28207	OBG 060 A AC 704 338-9752	STEWART, JOHN REAGAN 515 WALNUT ST. STATESVILLE 28677	OTO /OPH 049 A L 704 873-6376
STANTON, ALLIE MCLEOD DRAWER 925 PLYMOUTH 27962	GS 007 A L/RT 919 793-4125	STEPHENS, WAYLAND C. 5043 COUNTRY CLUB RD. WINSTON-SALEM 27104	FP 034 AC 919 768-9575	STEWART, RONALD CLEVELAND 2901 MAPLEWOOD AVENUE WINSTON-SALEM 27103	PS /HS 034 A P AC 919 765-8620
STANTON, EDWARD SPIRES 1816 DOCTORS DR. P. O. BOX 1169 SANFORD 27330	GS /TS 053 A AC 919 775-7146	STEPHENSON, BENNETTE EDWARD P. O. BOX 348 RICH SQUARE 27869	GP 066 A L/RT 919 539-2343	STEWART, ROY ALLEN P. O. BOX 970 NEWTON 28658	OPH 018 A L 704 464-0982
STAPLETON, SYDNEY SCOTT 101 ROBESON ST., STE. 407 FAYETTEVILLE 28301	OPH 026 A P AC 919 483-2117	STEPHENSON, HENRY LOUIS, JR. 615 E. 12TH STREET WASHINGTON 27889	IM /CD 007 AC 919 946-2101	STEWART, WILLIAM LEE 195 W. ILLINOIS AVE. SOUTHERN PINES 28387	032 A S 919 692-2444
STAREK, PETER JOSEF KARL UNC, CB 7065 BURNETT-WOMACK DIV. OF CARDIO-SURGERY CHAPEL HILL 27599	TS /GS 032 A AC 919 966-3381	STEPHENSON, JOHN HADDON 130 HOMESTEAD RD. CHAPEL HILL 27514	OBG 092 P AC 919 467-5941	STICKEL, DELFORD LEFEW BOX 3917, DUMC DURHAM 27710	GS 032 A AC 919 684-6129
STARLING, SUZANNE P. RT. #14, BOX 47-A GREENVILLE 27834	074 A * S 919 758-0928	STEPHENSON, SHARON ROSE 101 S.W. CARY PKWY. #170 CARY 27511	PD 029 A AC 919 475-2348	STIDHAM, GREGORY ALAN 1198 WYKE RD. SHELBY 28150	FP 023 A AC 704 487-1148
STARR, HENRY FRANK, JR. 3106 ALAMANCE RD. GREENSBORO 27407	OM 041 A AC 919 299-4305	STERNBERGH, W.C.A. 3011 RIVERMONT RD. CHATTANOOGA, TN 37415	ON /GS 034 A AC 919 748-4276	STIEFEL, JOSEPH WALTER 1910 N. CHURCH ST. GREENSBORO 27405	N 041 A AC 919 273-2511
STAUB, ERNEST WILSON PINEHURST SURGICAL CLINIC PINEHURST 28374	TS /VS 063 A P AC 919 295-0266	STERNBERGH, W.C.A. 3011 RIVERMONT RD. CHATTANOOGA, TN 37415	R 060 A L/RT 615 886-0195	STIEGEL, ROBERT MARK 1960 RANDOLPH RD. CHARLOTTE 28207	060 A AC 704 373-1500
STEAD, EUGENE ANSON, JR. ROUTE #1, BOX 194 BULLOCK 27507	IM /CD 039 A L 919 684-6587	STERNER, DAVID CHARLES 3487 TANGLEBROOK TR. CLEMMONS 27012	GS /OBG 034 A S 919 766-6117	STILES, EDDIE PHILLIPS BOX A APEX 27502	FP 092 AC 919 362-7353
STEAGALL, ROBERT WORTH, JR. 6434 SARDIS ROAD CHARLOTTE 28226	D 060 A RT 704 364-1050	STETS, JOAN MARIE 2609 N. DUKE ST. #612 DURHAM 27704	PS 032 AC 919 471-3990	STILES, MATTHEW A. 14F COURTNEY SQUARE GREENVILLE 27858	000 A R 919 355-5181
STEBBINS, NANCY K. G. #3 MEETINGHOUSE LN. DURHAM 27707	P 032 A R 919 493-8230	STEUTERMAN, MARY CHRISTINE 1200 N. ELM ST. GREENSBORO 27401	PTH 041 A * AC 919 379-4074	STINSON, CHARLES S. PO BOX 1460 STATESVILLE 28677	IM 049 AC 704 878-2011
		STEVENS, ELLIOTT WALKER, JR. 1018 N. ELM STREET GREENSBORO 27401	PUD /AI 041 A AC 919 275-7238	STINSON, HELEN MARIE 1021 E. WENDOVER AVE. STE. 303 GREENSBORO 27405	PS 041 * AC 919 272-3169

STIRMAN, JERRY A., JR. 1101 DRESSER COURT RALEIGH 27609	GS /TS 092 AC 919 876-2010	STRADER, EUGENE RAY 901 E. CENTER STREET LEXINGTON 27292	FP 029 A P AC 704 249-1200	STUART, HAL MARTIN 180-C PARKWOOD DRIVE ELKIN 28621	FP 086 A * AC 919 835-3613
STOCKDALE, WAYNE HARROP 2700 WAYNE MEM. DR. GOLDSBORO 27530	EM /GS 096 AC 919 736-1110	STRADER, HUNTER GORDON, JR. 2 CHERRY STREET LEXINGTON 27292	FP 029 A P AC 704 249-9626	STUBBS, ALLSTON JULIUS 7932 LYNTHURST AVENUE WINSTON-SALEM 27103	U 034 A * AC 919 765-4021
STOCKS, LEWIS HENRY, III 1101 DRESSER CT. RALEIGH 27609	GS /TS 092 AC 919 876-2010	STRADER, KYLE WOODROW 3831 MERTON DR. RALEIGH 27609	RHU /A 092 A AC 919 781-9633	STUBER, ROBERT LEO MOORE MEMORIAL HOSPITAL PINEHURST 28374	PTH /DMP 063 A P AC 919 295-7135
STOCKS, ROSE MARY SUTTON 406 S. HARDING ST. #B GREENVILLE 27858	074 A S 919 758-3686	STRAIN, BRIAN MCCULLOUGH ROANOKE MEMORIAL HOSPITAL ROANOKE, VA 24014	GS 023 A P R 703 951-7000	STUBER, SUSAN MARIE 2050 CRAIG ST., APT. #12 WINSTON-SALEM 27103	034 A S 919 725-9443
STOKES, THOMAS ANGIER, JR. 2609 N. DUKE ST., STE. 102 DURHAM 27704	GYN 032 A AC 919 477-2183	STRANGE, JOHN NELSON, JR. 561 FLEMING ST. HENDERSONVILLE 28739	GS /VS 045 AC 704 693-1778	STUCKEY, CHARLES LEGRAND 1515 ELIZABETH AVENUE CHARLOTTE 28204	IM 060 A L 704 333-1116
STONE, GRADY MITCHELL 624 QUAKER LANE HIGH POINT 27262	IM 040 A AC 919 883-4131	STRANGES, STEVEN M. 7 MCDOWELL ST. ASHEVILLE 28801	NS 011 A AC 704 255-7778	STURKIE, H. RAY 1365 WESTGATE CENTER DR. SUITE 1-C WINSTON-SALEM 27103	GYN 034 AC 919 768-8302
STONE, HARRY BENJAMIN, III 709 PROFESSIONAL DR. PO BOX 2406 NEW BERN 28560	OTO /A 025 A AC 919 638-2666	STRASSER, STEPHAN F. PO BOX 638 SOUTHERN PINES 28387	DR 063 A AC 919 295-4400	STUTESMAN, ANDREA A. 343 SECOND ST. NW HICKORY 28601	PM 018 A AC 704 322-1300
STONE, LISA MARIE 21 PRESTWICK PLACE DURHAM 27705	032 A S 919 286-2377	STRATAS, BYRON ARISTOTLE 286 MEETING ST. #E CHARLESTON, SC 29401	000 A R 803 577-6796	STUTESMAN, JAMES L. 343 SECOND ST. NW HICKORY 28601	PM 018 A AC 704 322-1300
STONE, PERRY GALE DALTON ROAD, P. O. BOX 426 KING 27021	PD 034 AC 919 983-2531	STRATAS, NICHOLAS EMANUEL 3900 BROWNING PL. #201 RALEIGH 27609	P /HYP 092 A P * AC 919 787-7125	STYRON, CHARLES WOODROW 615 ST. MARY'S STREET RALEIGH 27605	IM /DIA 092 A * L 919 828-7773
STONE, ROBERT THOMAS 1704 S. TARBORO STREET WILSON 27893	OTO 098 A AC 919 291-7001	STRATTON, IDA JANICE DEAS 414 E. MAIN ST. DURHAM 27701	PD /PH 032 * AC 919 682-8176	SUBIN, GLEN DAVID DUMC, BOX 3000 DURHAM 27710	ORS /HS 032 A R
STONEBURNER, RICHARD G. MEDICAL VILLAGE BURLINGTON 27215	GS 001 L 919 226-0400	STRATTON, JAMES DAVID 5150 SHARON ROAD CHARLOTTE 28210	OPH 060 A L/RT 704 554-7176	SUE, SAMUEL ARTHUR, JR. PO BOX 14580 315 W. WENDOVER AVE. GREENSBORO 27415	ORS 041 A * AC 919 275-0724
STONEROCK, GRACE JANINE 5317-B QUAILWOOD DR. WINSTON-SALEM 27104	034 S 919 724-5446	STRATTON, JOHN PERLEY 2609 N. DUKE ST., STE. 304 DURHAM 27704	IM 032 AC 919 471-8446	SUGARMAN, JEREMY 28 JUSTIN CT. DURHAM 27705	IM 032 A R 919 477-9435
STOODT, GEORJEAN PO BOX 2091 NC DIV. OF HEALTH SERVICES RALEIGH 27602	PH /GPM 092 * AC 919 733-7081	STRAUSBAUCH, PAUL HENRY 1717 MORNINGSIDE PLACE GREENVILLE 27834	PTH 074 A AC 919 551-2809	SUGG, WILLIAM CASWELL, JR. 2711 RANDOLPH ROAD, SUITE 100 CHARLOTTE 28207	IM /PUD 060 AC 704 373-0700
STOPFORD, WOODHALL BOX 2914, DUMC DURHAM 27710	OM /IM 032 A AC 919 684-6677	STRAWCUTTER, HOWARD E. PO BOX 1408 LUMBERTON 28359	U 078 A P * AC 919 738-7166	SUGG, WILLIAM CUNNINGHAM 7870 FAIR OAKS DR. PO BOX 38 CLEMMONS 27012	IM 034 A AC 919 766-6401
STORCH, SAMUEL JAY 2 MEMORIAL DR. PINEHURST 28374	U 063 A AC 919 295-6782	STRECK, CHRISTIAN JOHN 311 W. WENDOVER AVE. GREENSBORO 27408	GS 041 A * AC 919 275-8415	SUGIOKA, KENNETH RT. #7, BAYBERRY DR. CHAPEL HILL 27514	AN 032 L/RT 919 933-0487
STORY, LLOYD JERRELL HAWTHORNE MED. PL. #260 1901 S. HAWTHORNE RD. WINSTON-SALEM 27103	IM /CD 034 A AC 919 768-4460	STREET, MURDO EUGENE, JR. P. O. BOX 38 GLENDALE 27251	FP 063 A L/RT 919 464-5315	SUH, KENDALL HYUNSUK PO BOX 5189 152 E. 2ND ST. OCEAN ISLE BEACH 28459	EM /FP 010 A R 919 579-9989
STORY, WILLIAM AUGUSTUS 201 GROVER STREET SHELBY 28150	R /IM 023 AC 704 487-0003	STREETER, GREGORY DEAN 200 DOCTOR'S DR. SUITE H JACKSONVILLE 28540	FP /DIA 067 AC 919 353-0565	SUH, SANG HYON P. O. BOX 266 MORGANTON 28655	GS 012 A P AC 704 433-2235
STORY, WILLIAM ROBERT 1012 KINGS DRIVE CHARLOTTE 28283	U 060 A AC 704 334-6449	STREETS, JULIA SINK 1511 WESTOVER TERR., STE. 108 GREENSBORO 27408	IM 041 A AC 919 378-9906	SUITER, THOMAS B., JR. 100 NASH MEDICAL ARTS MALL ROCKY MOUNT 27801	IM 064 AC 919 443-9084
STOUT, CHARLES WALTER 1533 N. FAYETTEVILLE ST. ASHEBORO 27203	FP 076 AC 919 672-0415	STRICKLAND, JAMES DONALD RT. #7, BOX 36 BURLINGTON 27215	EM 001 A AC 919 228-0768	SUITS, GREGORY WM. B-39 WHITE OAK APTS. CARRBORO 27510	032 A S 919 967-4356
STOUT, JAMES STEVENS E.I. DUPONT DENEMOURS, INC. BREVARD 28712	OM /EM 045 A AC 704 885-5349	STRICKLAND, NIGEL JOHN 2700 MEDICAL OFFICE PLACE GOLDSBORO 27530	DR 096 A AC 919 734-1866	SULLIVAN, DANIEL CARL BOX 3808, DUMC DURHAM 27710	R /P 032 AC 919 684-2711
STOUT, ROBERT GREGORY 415 IRVING ST. WINSTON-SALEM 27103	034 A * S 919 723-9141	STRICKLAND, WILLIAM H., JR. 510 FLEMING STREET HENDERSONVILLE 28739	FP 045 AC 704 692-8410	SULLIVAN, RAYMOND C., JR. 1511 WESTOVER TERRACE GREENSBORO 27408	IM /AM 041 AC 919 378-1461
STOUT, THOMAS F. 2673 MULBERRY LN. GREENVILLE 27858	074 A S 919 355-5168	STRIKE, WILLIAM K. 300 S. HAWTHORNE RD. BOX 416 WINSTON-SALEM 27103	034 A S 919 723-1491	SULLIVAN, ROBERT JOSEPH, JR. BOX 3003, DUMC DURHAM 27710	IM /FP 032 A AC 919 684-2248
STOUT, WILLIAM ALLEN P. O. BOX 675 TABOR CITY 28463	FP 024 A P AC 919 653-2112	STRINGER, ARTHUR V. 914 MONTICELLO ST. GREENSBORO 27410	OBG 041 A P AC 919 379-3641	SULLIVAN, WILLIAM GREGORY 3400 EXECUTIVE DR., STE. 104 P. O. BOX 17200 RALEIGH 27619	GS 092 A AC 919 876-2732
STOVER, JOHN OLIVER, JR. P. O. BOX 42 RED OAK 27868	DR /NM 064 AC 919 443-8083	STRINGER, LLEWELLYN WINN 1728 S. HAWTHORNE ROAD WINSTON-SALEM 27103	PUD 034 AC 919 765-7517	SUMMERLIN, ARTHUR ROGERS 2800 BLUE RIDGE BLVD. #401 RALEIGH 27607	OBG 092 AC 919 781-5504
STOVER, PHILLIP E. 519 BICKETT BLVD. 519 N. BUCKETT BLVD. LOUISBURG 27549	FP 035 AC 919 496-5774	STRINGFIELD, JAMES KING P. O. BOX 900 WAYNESVILLE 28786	FP 044 AC 704 456-3222	SUMMERLIN, HARRY HOLLER, JR. 944 TUNNEL ROAD ASHEVILLE 28805	FP 011 A P * AC 704 298-3090
STOWE, CLEVELAND 1600 E. THIRD ST. CHARLOTTE 28204	OPH 060 AC 704 372-3300	STROHMEYER, JON F. DUKE UNIV. MEDICAL CENTER DURHAM 27710	032 R 919 684-8111	SUMMERLIN, ROBERT LEE DUBLIN MEDICAL CLINIC PO BOX 10 DUBLIN 28332	FP 009 A AC 919 862-3528
STOWE, FRED REECE, JR. 3314 MELROSE RD., STE. 102 FAYETTEVILLE 28304	N /CHN 026 A AC 919 484-7405	STROUP, T. SCOTT 108 STINSON ST. CHAPEL HILL 27514	032 A S	SUMMERS, FRED DAVIDSON, JR. ROUTE #1, BOX 181 CHAPEL HILL 27514	OBG 032 A RT 919 929-2158

SUMNER, BRIAN MONTGOMERY 218 CEDARWOOD LANE CARRBORO 27510	032 A S 919 967-6473	SWANGER, STEPHEN JAMES RT. #1, BOX 38-B GREENVILLE 27834	074 A S 919 758-1284	TAMISIEA, J. RICHARD 1202 MEDICAL CENTER DRIVE WILMINGTON 28401	CD /IM 065 AC 919 341-3301
SUMNER, ROBERT GRIST 68 LAKE CONCORD ROAD, N.E. CONCORD 28025	IM /CD 013 A AC 704 782-3135	SWANTKOWSKI, THOMAS MARIAN 205 PAGE RD. PO BOX 519 PINEHURST 28374	IM /GE 063 A AC 919 295-5511	TAN, RICARDO MIJARES 1402 ROBINHOOD RD. WILMINGTON 28401	GS /ABS 065 A RT 919 763-0159
SUMNER, THOMAS EDWARD BOWMAN GRAY, DEPT. OF RAD. WINSTON-SALEM 27103	PDR /PD 034 A AC 919 748-4316	SWANTON, MARGARET CATHERINE P. O. BOX 1089 CLINTON 28328	PTH 082 A L 919 592-8511	TANAS, KHALIL S. 111 WEDGEWOOD CT. MORGANTON 28655	012 AC
SUMPIO, BERNARDO D. 209 FOX LAKE DRIVE CLINTON 28328	EM /IM 082 A AC 919 592-8847	SWATHWOOD, TODD C. 235 CORONA ST. APT. 203 WINSTON-SALEM 27103	034 A S 919 722-8981	TANNEHILL, JOHN FRANKLIN 120 HOSPITAL DRIVE CLYDE 28721	OTO /HNS 044 A AC 704 452-1406
SUMPTER, EDWIN ALLEN BOX 848 WELDON 27890	PD 042 AC 919 536-2557	SWEENEY, CHARLES LESLIE, JR. P. O. BOX 17263 RALEIGH 27619	FP 092 AC 919 787-5211	TANNEHILL, ROBERT BRUCE 720 GROVE STREET SALISBURY 28144	PD 080 AC 704 636-5576
SUNDBERG, THOMAS CLARKE 1335 ROMANY ROAD CHARLOTTE 28204	RHU 060 A AC 704 375-1719	SWEENEY, CHARLOTTE A. RT. #2, BOX 195 CONOVER 28613	OBG 018 A AC 704 322-4920	TANNEHILL, W. BRUCE 213 PINERIDGE DR. GREENVILLE 27834	074 A S 919 758-6973
SUNDER, THEODORE RALPH ECU DEPT. OF PEDIATRICS GREENVILLE 27834	CHN /N 074 A AC 919 551-4772	SWETENBURG, RAYMOND LEE, JR. 2711 RANDOLPH ROAD CHARLOTTE 28207	PD 060 AC 704 374-1736	TANNENBAUM, SIGMUND IAN 1904 N. CHURCH STREET GREENSBORO 27405	U 041 A P AC 919 274-1114
SUNDERMAN, MICHAEL ROBERT P. O. BOX 310 STANTONSBURG 27883	FP 098 A AC 919 238-2101	SWIFT, MICHAEL RONALD NCMH, BSRC 220-H CHAPEL HILL 27514	IM 032 AC 919 966-2266	TANNER, DAUNE D. 1575 WATERFORD PLACE FT. MILL, SC 29715	EM 000 AC 803 547-2924
SUPIK, LAWRENCE FRANCIS 207 N. JARVIS ST. GREENVILLE 27834	074 A S 919 752-7289	SWIFT, RONNIE GORMAN ROUTE #7, BOX 284 CHAPEL HILL 27514	P 032 AC 919 933-5857	TANNER, KENNETH SPENCER, JR. PO BOX 468 RUTHERFORDTON 28139	GS 081 A L/RT 704 286-9036
SURAL, RONALD FRANK 1006 PROFESSIONAL VILLAGE GREENSBORO 27401	U 041 A P AC 919 373-8323	SWING, DONALD CRAVER, JR. 107 PAUL CIRCLE GREENVILLE 27834	074 A S 919 756-6912	TANNER, TODD F. 105-A ISLEY ST. CHAPEL HILL 27514	032 A S 919 967-2682
SURRATT, JOHN PEELER 603 BEAMON ST. CLINTON 28328	D 082 A AC 919 592-5583	SYDNOR, CHARLES FORD 1214 VAUGHN ROAD BURLINGTON 27215	OPH 001 A * AC 919 228-0254	TARA, CHARLES SAMUEL 1702 S. HAWTHORNE ROAD WINSTON-SALEM 27103	OPH 034 A P AC 919 768-4140
SURRATT, ROBERT WALTER 56 ARDSLEY AVENUE, N.E. CONCORD 28025	IM 013 A AC 704 782-1101	SYKES, CHARLES LOUIS P. O. BOX 590 MOUNT AIRY 27030	FP /IM 086 A L 919 786-6105	TARLETON, HAROLD LEWIS PO BOX 649 WEST END 27376	FP /EM 063 A P AC 919 673-2403
SURRATT, WILSON FARRIS 507 COUNTRY CLUB ACRES SHELBY 28150	AN 023 AC 704 482-5716	SYKES, CHARLIE LOUIS, JR. 250 DOCTORS DRIVE BOONE 28607	IM 095 AC 704 264-6362	TARRY, WALLACE CLEMENTS 208 1/2 E. KNOX ST. DURHAM 27702	032 A S 919 693-3223
SURYANARAYAN, KAVERI BOX 2800, DUMC DURHAM 27710	032 A S 401 789-0710	SYKES, DELIA C. 1408 NORTHBRIDGE DR. ALBEMARLE 28001	AN 084 A AC 704 983-4469	TARRY, WILLIAM BURWELL, JR. 104 NEW COLLEGE STREET OXFORD 27565	FP 039 A AC 919 693-8126
SUTHER, THOMAS CORNELIUS, JR. MCCAIN HOSPITAL MCCAIN 28361	P /GP 063 AC 919 944-2351	SYKES, KASELL EUGENE, JR. 215 VANCE ST. CHAPEL HILL 27514	032 A S 919 942-8492	TART, DAVID E. 24 SECOND AVENUE, N.E. HICKORY 28601	D /IM 018 A AC 704 328-6185
SUTTLE, EVELYN AMY 244 FAIRVIEW DRIVE LEXINGTON 27292	PD 029 P AC 704 246-4333	SYKES, LISA CAROL 204-A HOWELL ST. CHAPEL HILL 27514	032 A S 919 968-4727	TART, JAMES ALVIN PINEHURST MED. CLINIC 205 PAGE ROAD PINEHURST 28374	CD /IM 063 A AC 919 295-5511
SUTTON, EDWARD COLMERY 1616 MEMORIAL DRIVE BURLINGTON 27215	GYN 001 AC 919 227-7446	SYMPHER, ROBERT V., JR. 409-E PARKWAY DR. GREENSBORO 27401	HS /ORS 041 A AC 919 378-0811	TART, JAMES MILTON, JR. 10724 PARK RD. CHARLOTTE 28210	OBG 060 P AC 704 376-3536
SUTTON, HOMER GEORGE 3722 REYNOLDA ROAD WINSTON-SALEM 27106	FP 034 AC 919 924-2900	SZABO, JANET ROSE P. O. BOX 308 HICKORY 28603	R 018 A AC 704 322-2644	TATE, ALLEN DENNY, JR. 1610 VAUGHN ROAD BURLINGTON 27215	FP 001 AC 919 226-4471
SUTTON, JULIAN T. DRAWER 100 SCOTLAND NECK 27874	FP 064 A AC 919 826-3143	TABOR, CHARLES GORDON 1360 PINEBLUFF ROAD WINSTON-SALEM 27103	IM /EM 034 A AC 919 765-9074	TATE, DAVID ANDREW 407 WALNUT ST. CHAPEL HILL 27514	CD /IM 032 A R 919 966-5201
SUTTON, STEVEN GLENN N-2 DOCTORS PARK APTS. GREENVILLE 27834	074 A S 919 752-2322	TACKETT, AMOS DARRELL 1414 MEDICAL CENTER DRIVE WILMINGTON 28401	GS 065 A AC 919 763-7363	TATE, DAVID HARRISON 3175 MAPLEWOOD AVENUE WINSTON-SALEM 27103	PD 034 A AC 919 768-7030
SUTTON, SYLVIA PO BOX 3574 CHAPEL HILL 27515	032 A S 919 967-7288	TAEKMAN, JEFFREY M. 730-P WALNUT FOREST RD. WINSTON-SALEM 27103	034 A S 919 765-1396	TATE, DENNY COOK 316 N. GRAHAM-HOPEDALE RD. BURLINGTON 27215	IM 001 A AC 919 227-3621
SUTTON, WILLIAM WAYNE 337 N. NORWOOD STREET WALLACE 28466	FP 031 AC 919 285-2111	TAFT, CHARLES VAN 1425 PLAZA DR., BOX 25007 WINSTON-SALEM 27114	ORS 034 A AC 919 768-1270	TATE, GEORGE WHALEY, JR. 2170 MIDLAND ROAD SOUTHERN PINES 28387	OPH 063 A AC 919 295-2100
SUVILLAGA, VICTOR IVAN 5097 EDINBORO LN. WILMINGTON 28403	FP /EM 065 A AC 919 395-6273	TAFT, RICHARD CHESSEON 101 BETHESDA DRIVE GREENVILLE 27834	OBG 074 A AC 919 758-4181	TATE, WILLIAM CUMMINGS, II P. O. BOX 68 BANNER ELK 28604	GS 006 A AC 704 898-4221
SVENSON, ROBERT HAROLD 1960 RANDOLPH ROAD CHARLOTTE 28207	CD /IM 060 A AC 704 373-1503	TAFT, TIMOTHY NED UNC, DIV. OF ORS CHAPEL HILL 27514	ORS 032 A AC 919 966-2039	TATUM, BEN SULLIVAN P. O. BOX 1599 LAURINBURG 28352	OBG 083 A AC 919 276-4432
SWAIM, LINDIAN JOSEPH, JR. 2500 BLUE RIDGE RD., STE. 219 RALEIGH 27607	OBG 092 A AC 919 782-9005	TAJ-ELDIN, ADNAN 200 DOCTOR'S DR. STE. I JACKSONVILLE 28540	IM /A 067 AC 919 353-6327	TAUBER, STUART DAVIS 29 RAVENSCROFT DRIVE ASHEVILLE 28801	END 011 A AC 704 258-2404
SWAN, BILL JOE 776 WILLIAMSBURG DRIVE CONCORD 28025	AN 013 A AC 704 782-7638	TALBERT, LUTHER MARCUS N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514	OBG /END 032 AC 919 966-5438	TAYLOE, DAVID THOMAS 608 E. 12TH STREET WASHINGTON 27889	PD 007 AC 919 946-4134
SWAN, ROBERT WM. 2131 S. 17TH ST. WILMINGTON 28402	OBG /ON 065 AC 919 343-0161	TALTON, DAVID SMITH 1641 N. W. BLVD., APT. R WINSTON-SALEM 27104	034 A S 919 966-5438	TAYLOE, DAVID THOMAS, JR. 2706 MEDICAL OFFICE PLACE GOLDSBORO 27530	PD 096 A P * AC 919 734-4736
SWANEY, PAUL EUGENE 1318 DAVIE AVE. STATESVILLE 28677	GS /VS 049 AC 704 872-0182	TALTON, INGEBORG HILDEBRAND 2725 MONTGOMERY ST. DURHAM 27705	AN 032 A AC	TAYLOE, JOHN COTTEN, JR. P. O. DRAWER 2604 MEDICAL ARTS CENTER NEW BERN 28560	ORS 025 P AC 919 633-1635

TAYLOE, JOSHUA 614 E. 12TH STREET WASHINGTON 27889	OBG 007 A AC 919 946-6544	TEAFORD, MICHAEL JACOB ST. JOSEPH'S HOSPITAL ASHEVILLE 28801	PTH 011 A AC 704 255-3943	THOMAS, ACHAMMA 11005 HUNTOVER DR. ROCKVILLE, MD 20852	IM 060 A RT 301 881-0229
TAYLOR, ALLEN 1711 W. 6TH ST. GREENVILLE 27834	R 074 A P AC 919 752-5000	TEAGUE, RANDALL SCOTT 837 OAKMONT DR. ASHEBORO 27203	DR /EM 076 AC 919 625-5151	THOMAS, ALAN EFIRD SOUTHEASTERN MEDICAL GROUP 637 S. KERR AVENUE WILMINGTON 28401	IM 065 AC 919 799-1810
TAYLOR, ANDREW DUVAL 2610 SELWYN AVENUE CHARLOTTE 28209	A 060 A L/RT 704 334-2397	TEAM, ROBERT ALSTON 2 CHERRY STREET LEXINGTON 27292	FP 029 AC 704 246-4539	THOMAS, BARBARA A. LOWRY 404 SOWERS FERRY RD. SALISBURY 28144	P 034 R 919 785-2073
TAYLOR, BLUCHER EHRLINGHAUS 2909 LYNTHURST AVENUE WINSTON-SALEM 27103	OBG 034 A AC 919 765-5470	TEASLEY, BARRY HOYLE P. O. BOX 10907 103 COX BLVD. GOLDSBORO 27532	OPH 096 A P AC 919 734-8440	THOMAS, BEN DAVID P. O. BOX 247 ZEBULON 27597	FP 092 AC 919 269-9111
TAYLOR, BRITTON EDGAR 2215 CANTERWOOD DRIVE WILMINGTON 28401	OBG 065 AC 919 343-1031	TEETER, ROBERT TENNANT #9 MEDICAL PARK MOREHEAD CITY 28557	OBG 016 A AC 919 726-0107	THOMAS, COLIN EDWARD 512 SIXTH AVENUE, WEST HENDERSONVILLE 28739	U 045 A AC 704 692-6262
TAYLOR, FREDERICK HARVEY 1900 RANDOLPH RD. #206 CHARLOTTE 28207	TS /CDS 060 A AC 704 372-1306	TEIGLAND, CHRIS M. 1900 RANDOLPH RD. STE. 816 CHARLOTTE 28207	U 060 A AC 704 334-3033	THOMAS, COLIN GORDON, JR UNC, BURNETT-WOMACK 229H CHAPEL HILL 27514	GS 032 A AC 919 966-4597
TAYLOR, JAMES EDWARD 631 COX ROAD GASTONIA 28052	U 036 A AC 704 867-4896	TEJANO, FELIPE MAZON KINSTON CLINIC, NORTH DOCTOR'S DRIVE KINSTON 28501	U 054 A P * AC 919 527-3043	THOMAS, EDWIN SCOTT 106 E. PARK ST. CARY 27511	IM 092 AC 919 467-8168
TAYLOR, JAMES VAN, III 1704 S. TARBORO STREET WILSON 27893	FP 098 A AC 919 291-7001	TELFER, JAMES GAVIN, JR. 305 S. ACADEMY STREET CARY 27511	IM /FP 092 AC 919 467-7528	THOMAS, FRANCIS THORNTON ECU DEPT. OF SURGERY GREENVILLE 27834	TS /GS 074 A P AC 919 551-2620
TAYLOR, JEFFREY SCOTT 1704 S. TARBORO ST. WILSON 27893	OPH 098 A * AC 919 291-7001	TEMPLE, PETER LIVERMORE 101 CLINIC DRIVE TARBORO 27886	FP 033 AC 919 823-2105	THOMAS, HENRY FULLER 902-G COX ROAD GASTONIA 28054	GS /CDS 036 A AC 704 864-7821
TAYLOR, JENNIFER ELAINE BOX 3061, DUMC DURHAM 27710	AN 032 A AC 919 684-2945	TEMPLE, RUFUS HENRY, JR. 2215 CANTERWOOD DR. WILMINGTON 28401	OBG 065 A AC 919 763-8471	THOMAS, JAMES JOSEPH 100 MEDICAL HEIGHTS DR. MORGANTON 28655	PD 012 A AC 704 433-4484
TAYLOR, JERRY JURGEN 2402-B E. THIRD ST. GREENVILLE 27834	074 A S 919 562-5174	TEMPLETON, THOMAS BREVARD 521 BROOKDALE DR. STATESVILLE 28677	IM 049 A AC 704 872-3455	THOMAS, JERRY D. 2903-D CEDAR CREEK DR. GREENVILLE 27834	074 A S 919 757-1653
TAYLOR, JIMMY LYNN 1420 E. FRANKLIN ST. MONROE 28110	FP 090 AC 704 283-1521	TENNANT, STANLEY NEAL 1011 PROFESSIONAL VILL. GREENSBORO 27401	CD 041 A AC 919 299-0111	THOMAS, MICHAEL BEMAN 1908 MEETING COURT WILMINGTON 28401	FP 065 AC 919 762-1515
TAYLOR, JOHN BRUCE 449 N. WENDOVER RD. CHARLOTTE 28211	OBG 060 A AC 704 376-0360	TENNEY, JAMES BERNARD 32 HOYT ROAD ARDEN 28704	GPM /PH 011 A AC 704 255-5671	THOMAS, MILLARD BRADY, III PO BOX 113 NEWELL 28126	074 A S 919 756-2373
TAYLOR, JULIAN RALEIGH MEDICAL ARTS CENTER AHOSKIE 27910	FP 008 AC 919 332-3548	TENNISON, MICHAEL BYRON UNC SCHOOL OF MEDICINE 751 BURNETT-WOMACK BLDG. 229-H CHAPEL HILL 27514	CHN /PD 032 A AC 919 966-2528	THOMAS, ROSEMARY ANN 2000 VENTURE TOWER DR. GREENVILLE 27834	CD /IM 074 AC 919 551-4651
TAYLOR, MARSHALL CARNEY 608 E. 12TH STREET WASHINGTON 27889	DR 007 A AC 919 946-2137	TEPLIN, STUART WARREN UNC, CDL/BSRC 220-H, CB #7255 CHAPEL HILL 27599	PD 032 AC 919 966-5171	THOMAS, WALTER E., JR. 902-C COX RD. GASTONIA 28054	PD 036 AC 704 864-6522
TAYLOR, MARY ANN HAMPTON 4450 GREEN MEADOWS WINSTON-SALEM 27106	FP 034 AC 919 761-5218	TEPPER, JOEL NC MEMORIAL HOSP. RADIATION ONC., APCF CHAPEL HILL 27514	ON 032 A AC 919 966-1101	THOMAS, WILLIAM RALPH RT. #3, BOX 476 ELIZABETH CITY 27909	GP 070 AC 919 338-2480
TAYLOR, MICHAEL ALAN 4505 FAIR MEADOWS LN. STE. 101 RALEIGH 27607	PD 092 AC 919 787-5495	TERRELL, SARA ELDORA H. 624 QUAKER LN. STE. 207-C HIGH POINT 27262	IM 040 A P AC 919 841-4233	THOMASON, HENRY CLAYTON, JR. 1021 X-RAY DR. GASTONIA 28054	CD /IM 036 A P * AC 704 867-2341
TAYLOR, RICHARD ALLEN 901 OAK FOREST DRIVE MONROE 28110	PD 090 AC 704 289-2556	TERRELL, THOMAS EUGENE 624 QUAKER LN., STE. 207-C HIGH POINT 27262	IM 040 A P AC 919 841-4233	THOMASON, ROBERT B., III N.C. BAPTIST HOSPITAL 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	GS 034 A R 919 748-2011
TAYLOR, RICHARD LEWIS 1018 COLLEGE STREET OXFORD 27565	FP 039 A P * AC 919 693-3972	TERRY, ROY CLARENCE 300-D MASON FARM RD. CHAPEL HILL 27514	032 A S 919 933-6747	THOMLEY, ALAN MILES 1960 RANDOLPH ROAD CHARLOTTE 28207	CD /IM 060 A AC 704 373-1503
TAYLOR, RUSSELL CARL 250 DOCTORS DRIVE BOONE 28607	IM /NEP 095 AC 704 264-6362	TESTER, RICHARD DEAN P. O. BOX 5007 HIGH POINT 27262	ON 040 A AC 919 883-6716	THOMPSON, BENJAMIN E., JR. 301 S. ACADEMY STREET CARY 27511	GP 092 AC 919 467-9961
TAYLOR, SHAHANE R., JR 348 N. ELM STREET GREENSBORO 27401	OPH 041 A P * AC 919 274-4626	THACKER, ROBERT KELLER 603 DOLLEY MADISON GREENSBORO 27410	R /NM 040 A AC 919 768-4730	THOMPSON, ERVIN MAGNUS 3643 N. ROXBORO ST. DURHAM 27704	P 032 A AC 919 470-6241
TAYLOR, STEVEN BRUCE RT. #3, BOX 331, STE. 22 FAIRGROVE PROF. BLDG. HICKORY 28601	R 018 A AC 704 327-6342	THALINGER, ALAN ROBERT 3535 RANDOLPH ROAD CHARLOTTE 28211	FP 041 AC 919 294-6190	THOMPSON, FRANK ALAN W-18 DOCTORS BLDG. ASHEVILLE 28801	GE /IM 011 AC 704 252-2904
TAYLOR, THOMAS JEFFERSON 616 FRANKLIN ST. ROANOKE RAPIDS 27870	GP 042 A L/RT 919 835-3425	THELAN, KENNETH MACLACHLAN 250 CHARLOIS BLVD. WINSTON-SALEM 27103	ON /IM 060 A AC 704 365-0760	THOMPSON, FREDERICK A. 322 MULBERRY ST., SW PO BOX 1020 LENOIR 28645	IM /CD 014 A L/RT 704 758-5544
TAYLOR, THOMAS LEE 116 JONES DRIVE DUNN 28334	DR 043 AC 919 892-7161	THIELE, RONALD LEWIS 503 QUEEN ANNE'S ROAD GREENVILLE 27858	IM 034 A AC 919 768-4730	THOMPSON, GEORGE R. C. 129 OLDE POINT RD. HAMPSTEAD 28443	FP 065 A L/RT 919 270-2196
TAYLOR, VERNON WILLIAMS, JR. 815 N. BRIDGE STREET ELKIN 28621	FP 086 A L 919 835-3425	THIELMAN, NATHAN M. 813 LOUISE CIRCLE DURHAM 27705	PD /PH 074 A AC 919 756-6721	THOMPSON, JAMES NICHOLAS BOWMAN GRAY-SURGERY WINSTON-SALEM 27103	OTO /PSF 034 A * AC 919 748-4161
TAYLOR, WILLIAM IVEY, JR. ROUTE #3, BOX 3680 BURGAW 28425	GP 065 A RT 919 259-2301	THIERJUNG, CHRISTINA 95 CRESCENT AVE. RYE, NY 10580	032 A S 919 383-7118	THOMPSON, JOHN ALBERT, JR. 2310 RANDOLPH ROAD CHARLOTTE 28207	D 060 A P AC 704 376-9849
TAYLOR, WILLIAM RILEY PO BOX 3710 HICKORY 28603	ON /IM 018 AC 704 324-9550	THIGPEN, FRONIS RAY 805 S. MADISON STREET WHITEVILLE 28472	A S FP /PD 024 A AC 704 642-6121	†THOMPSON, JOHN HARGETT P. O. BOX 220 DECEASED-7-88 TRENTON 28585	FP 054 A RT 919 448-4321

THOMPSON, KENNETH COCHRAN 101 CLINIC DRIVE TARBORO 27886	P 033 AC 919 823-2105	TIEDEMAN, JAMES STUART BOX 3802, DUMC DURHAM 27710	OPH 032 A AC 919 684-3090	TOOTHMAN, DONALD E. 487 47TH AVE. SAN FRANCISCO, CA 94121	000 R 415 387-5140
THOMPSON, LAWRENCE K., III 2609 N. DUKE ST., STE. 401 DURHAM 27704	PS 032 A AC 919 471-2502	TILLET, CHARLES WALTER, JR. 2130 SHARON LANE CHARLOTTE 28211	OPH 060 A L/RT 704 366-6895	TOPPLE, ANE MARIE 600-B MEDICAL COURT MARION 28752	D 059 AC
THOMPSON, MARVIN WHITAKER P. O. BOX 847 LUMBERTON 28359	PTH 078 A * AC 919 738-6441	TILLETT, GRACE MONTANA 2130 SHARON LANE CHARLOTTE 28211	OPH /R 060 A AC 704 366-6895	TOPPLE, STANLEY CRAIG 600-B MEDICAL COURT MARION 28752	ORS 059 A AC 704 652-3310
THOMPSON, OTIS RICHARD, JR. 322 MULBERRY ST., SW PO BOX 1020 LENOIR 28645	IM /CD 014 A AC 704 758-5544	TILLEY, PAUL DONALD P. O. BOX 5607 LENOIR 28645	GP 014 A AC 704 758-2368	TORRES-HECKER, LUZVIMINDA 542 W. RIDGEWAY ST. WARRENTON 27589	IM 091 AC 919 257-3141
THOMPSON, WILLARD C., III 116 RUTHERFORD ST. SALISBURY 28144	IM /CD 080 A AC 704 633-2732	TILSON, HUGH H. 3030 CORNWALLIS RD. EIS DIV. BURROUGHS WELLCOME RESEARCH TRIANGLE PK 27709	GPM /PH 092 A AC 919 248-4354	TORREY, RICHARD KENDRICK THE MIDDLESEX CLINIC P. O. BOX 100 MIDDLESEX 27557	FP 098 A AC 919 235-4078
THOMPSON, WILLARD RAY 102 MOCKSVILLE AVENUE SALISBURY 28144	OTO 080 A P AC 704 637-3344	TIMMONS, PHILLIP ZACHARY 2402-B E. THIRD ST. GREENVILLE 27834	074 A S 919 488-8162	TORRISI, PETER F. 1202 MEDICAL CENTER DR. WILMINGTON 28401	PUD 065 A AC 919 341-3300
THOMPSON, WILLIAM CECIL, III 210 13TH AVE. PL., NW HICKORY 28601	FP 018 AC 704 322-7170	TIMMONS, ROBERT LANSING 125 MOYE BOULEVARD GREENVILLE 27834	NS 074 A P * AC 919 752-5156	TORTORA, FRANK L., JR. 101 S. W. CARY PARKWAY CARY 27511	U 092 A P AC 919 467-3203
THOMPSON, WILLIAM KEITH 200 ARTHUR DRIVE THOMASVILLE 27360	PD 029 AC 919 475-2348	TINGA, JOHN HINNES 903 PINE TREE DRIVE NEW BERN 28560	OBG 025 AC 919 633-4005	TOSKY, GEORGE MICHAEL 2800 BLUE RIDGE BLVD. #206 RALEIGH 27607	OBG 092 AC 919 781-7450
THOMPSON, WINFIELD LYNN 216 S. HILLCREST DRIVE GOLDSBORO 27530	GS 096 A L/RT 919 734-2610	TINGELSTAD, JON BUNDE ECU, DEPT. OF PEDIATRICS GREENVILLE 27834	PD /PDC 074 A AC 919 551-2540	TOVE, NANCY LOUISE 101 S. W. CARY PKWY. CARY 27511	FP 092 AC 919 469-5072
THORNE, DARLENE CHERYL HALIFAX MEMORIAL HOSPITAL ROANOKE RAPIDS 27870	PTH 042 A AC 919 535-8403	TINSLEY, ELLIS ALLAN, SR. 1414 MEDICAL CENTER DRIVE WILMINGTON 28401	GS /TS 065 A AC 919 763-7363	TOWARNICKY, MICHAEL R. PO BOX 68 POLLOCKSVILLE 28573	IM /NM 025 A AC 919 633-1010
THORNE, EDWARD YOUNG COX 1700 S. TARBORO ST. WILSON 27893	PD 098 A AC 919 291-1300	TODD, STUART KITTREDGE 100 NASH MEDICAL ARTS MALL ROCKY MOUNT 27801	GS 064 A P AC 919 443-9084	TOWNSEND, MURPHY F., JR. 1007 PROFESSIONAL VILLAGE GREENSBORO 27401	IM 041 A P AC 919 272-2141
THORNE, NORMAN ALAN 829-B EDWARDS ST. CHAPEL HILL 27516	P /R 032 A R 919 968-6839	TOFFOLO, RUDOLF RONALD GOLD RUN CT., RT. 5, BOX 87 KINGS MOUNTAIN 28086	R 023 A P AC 704 739-3712	TOWNSEND, ROBERT GLENN, JR. 405 S. MAIN ST. PO BOX 665 RAEFORD 28376	FP 047 A * AC 919 875-5101
THORNHILL, EDWIN HALE 720 W. JONES STREET RALEIGH 27603	OTO /OPH 092 A L 919 834-7341	TOLBERT, FRANKLIN LEE PO BOX 666 MOCKSVILLE 27028	FP 034 AC 919 634-6128	TRACHMAN, JAYNE FELICIA 2413 DELLWOOD DR. DURHAM 27705	032 A S 919 383-1341
THORNHILL, GEORGE TUDOR 720 W. JONES STREET RALEIGH 27603	OPH 092 L 919 834-7341	TOLEDO, CHARLES H. PO DRAWER 760 BRYSON CITY 28713	PD 087 A AC 704 488-2283	TRACHTENBERG, WILLIAM 239 S. HILLCREST DRIVE GOLDSBORO 27530	GP 096 A L/RT 919 734-0956
THORNTON, JACK WALKER P. O. DRAWER 2484 HICKORY 28601	OTO /HNS 018 A P AC 704 322-3725	TOLENTINO, ANITA CHUA 6842 N. BALTUSTROL LANE CHARLOTTE 28210	AN 060 AC 704 552-8511	TRACY, JOHN WILLIAM 1618 E. MOREHEAD ST. CHARLOTTE 28207	FP 060 AC 704 377-3610
THORNTON, WILLIAM COOPER, JR. 132 W. MILLER STREET ASHEBORO 27203	IM 076 A AC 919 625-3218	TOLER, WILLIAM RICHARD 4335 COLWICK RD. CHARLOTTE 28211	OBG /FP 060 AC 704 364-2151	TRADO, CHARLES ELEMENDORF IKERD BUILDING 612 THIRD AVE., NE HICKORY 28601	P /GP 018 A P AC 704 324-9900
THORP, JAMES HORACE MERRIAM 200 NASH MEDICAL ARTS MALL ROCKY MOUNT 27804	OBG 064 A AC 919 443-5941	TOLLEY, AUBREY GRANVILLE 110 LAUREL HILL ROAD CHAPEL HILL 27514	P 032 AC 919 942-5754	TRAMM, JEANNE NORGAARD ST. JOSEPH'S HOSPITAL ASHEVILLE 28801	AN 011 A AC 704 252-1016
THORP, LEWIS SUMNER 100 MEDICAL ARTS MALL ROCKY MOUNT 27801	FP /FP 064 AC 919 443-9084	TOLLIVER, JAMES BERT 510-A TURNER STREET THOMASVILLE 27360	FP 029 AC 919 475-9171	TRAN, LUCAS VAN 101 ROBESON ST. STE. 410 FAYETTEVILLE 28301	N 026 A AC 919 483-5050
THORWARTH, WILLIAM T., JR. CATAWBA RADIOLOGICAL ASSOC. A P. O. BOX 308 HICKORY 28603	DR /NM 018 A AC 704 322-2871	TOLMIE, JOHN DUNCAN 1543 ABBEY COURT WINSTON-SALEM 27103	AN 034 A AC 919 727-4271	TRANT, CHARLES AMON, JR. 106 SCALES PL., A-8 GREENVILLE 27834	074 A S 919 830-1244
THRASH, WILLIAM VIRGIL 147 ASHELAND AVENUE ASHEVILLE 28801	IM 011 A AC 704 258-1188	TOLSON, ROGER JOHN 1134 N. ROAD STREET ELIZABETH CITY 27909	IM 070 A AC 919 335-2963	TRAPASSO, ROBERT LOUIS P. O. BOX 1928 ROCKINGHAM 28379	PTH 077 A AC 919 997-2561
THULLEN, JAMES DONALD 2311 LAKE DRIVE RALEIGH 27609	PD /NPM 092 AC 919 755-8545	TOLSON, TIMOTHY ALEXANDER 200 W. 8TH ST., APT. 5-D GREENVILLE 27858	074 A S 919 752-2099	TRASK, TODD WILSON BOX 1241, RT. #5, HWY. 70 HILLSBOROUGH 27278	032 A S 919 942-2319
THURBER, DAVID CUSHMAN, JR. MEDICAL DEPT. DOROTHEA DIX HOSP. RALEIGH 27611	IM 092 AC 919 733-5157	TOMASZEK, DAVID E. 238 RIDGEWOOD DR. GOLDSBORO 27530	NS 096 AC 919 778-7093	TRATHEN, WILLIAM THOMAS 20 DOCTORS PARK BOONE 28607	OBG 095 AC 704 264-9067
THURMAN, ROGER ZALON 1700 S. TARBORO ST. WILSON 27893	GS 098 A P AC 919 291-1300	TOMLIN, EDWIN MERRILL 102 LAKE CONCORD ROAD, N.E. CONCORD 28025	U 013 A AC 704 786-5131	TRAYLOR, HENRY WILLIAM, JR. 805 S. MADISON WHITEVILLE 28472	IM /EM 024 A AC 919 642-6121
THURSTON, THOMAS GARDINER, II P.O. DRAWER 2608 SALISBURY 28144	R /NM 080 * L 704 636-0848	TOMLINSON, MARGARET F. 324 CRAFTON ST. WINSTON-SALEM 27103	034 A S 919 723-5882	TREADWELL, EDWARD LOUIS ECU, DEPT. OF MEDICINE GREENVILLE 27834	RHU /IM 074 A * AC 919 551-2533
THURSTON, THOMAS GARDINER, III 315 MOCKSVILLE AVENUE SALISBURY 28144	OBG 080 A * AC 704 636-9270	TOMLINSON, ROBERT LEE, JR. 1700 TARBORO STREET, EXT. WILSON 27893	OBG 098 A AC 919 291-9010	TREMONT, STEPHEN J. PO BOX 30098 RALEIGH 27622	ON 092 AC 919 781-7070
TICKLE, DEWEY REID WILSON MEMORIAL HOSPITAL WILSON 27893	R 098 A AC 919 399-8112	TOMSICK, ROBERT S. UNC, DEPT. OF DERMATOLOGY CHAPEL HILL 27514	D 032 A AC 919 966-4506	TREVATHAN, G. EARL, JR. ECU, AMBULATORY PED. SECT. GREENVILLE 27834	PD 074 A P * AC 919 551-2535
TIDLER, JAMES 1919 S. SIXTEENTH STREET WILMINGTON 28401	IM 065 A AC 919 763-8184	TOMSYCK, REBECCA R. 1900-918 RANDOLPH RD. CHARLOTTE 28207	P /CHP 060 A AC 704 333-7722	TRIPP, MICHAEL DAVID 1101 SHALIMAR COURT HIGH POINT 27262	R 040 A AC 919 884-6037
TIDWELL, JOHN WILLIAM, II 1900 RANDOLPH ROAD CHARLOTTE 28207	OBG 060 AC 704 377-5675	TOOLE, JAMES FRANCIS 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	N /IM 034 A AC 919 748-4101	TRITICO, ROCCO JOSEPH P. O. BOX 803 STATESVILLE 28677	DR 049 A AC 704 872-4057

TROOST, B. TODD 300 S. HAWTHORNE RD. DEPT. OF NEUROLOGY WINSTON-SALEM 27103	N / OPH 034 A AC 919 748-4643	TURITTO, LOUIS ANTHONY 2 WHITAKER LANE ANDREWS 28901	GS 020 A AC 704 321-5010	UM, KI-BONG P. O. BOX 625 ROBERSONVILLE 27871	GP 007 A P AC 919 795-4192
TROUGHT, WILLIAM STANLEY 19 BAYWOOD DRIVE WINTERVILLE 28590	DR 074 A AC 919 752-5000	TURK, ROBERT SPENCER 3-D DOCTORS PARK ASHEVILLE 28801	GS 011 A AC 704 258-8206	UMPHLET, THOMAS LEONARD 2519 WHITE OAK ROAD RALEIGH 27609	IM 092 A L/RT 919 787-9650
TROUTMAN, BAXTER SUTTLES 521 MT. VIEW ST. LENOIR 28645	GP 014 A * L/RT	TURLINGTON, WADE ROBERT 200 DOCTOR'S DRIVE, SUITE M JACKSONVILLE 28540	FP 067 A AC 919 353-8100	UNDERHILL, THURLOW REED 800 HOSPITAL DRIVE, STE. #4 NEW BERN 28560	U 025 A P AC 919 633-2712
TROUTMAN, BELK CONNOR P. O. BOX 429 GRIFTON 28530	GP 054 AC 919 524-4273	TURNER, CHARLES SIEWERS 2819 FOREST DRIVE WINSTON-SALEM 27104	PDS 034 A AC 919 724-0345	UNGER, HENRY ALAN 101 S. W. CARY PARKWAY CARY 27511	U 092 A P * AC 919 467-3203
TROWELL, AMY REBECCA 250 CHARLOIS BOULEVARD WINSTON-SALEM 27103	PD /PHO 034 A AC 919 768-4730	TURNER, HENRY CATLETT 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	AN 034 P AC 919 748-4791	UNSICKER, CARL LESTER 5305-F WRIGHTSVILLE AVE. WILMINGTON 28403	ORS 065 A AC 919 395-0684
TROXLER, DAVID HAYS 30 CHOCTAW ST. ASHEVILLE 28801	PUD 011 A AC 704 255-7733	TURNER, JAMES ANGUS 2351 CLAY ST., STE. 510 PACIFIC MEDICAL CTR. SAN FRANCISCO, CA 94115	HS /ORS 000 A P AC	UPCHURCH, GILBERT R., JR. 103 GOLDSTON DR. CARRBORO 27510	032 A S 919 942-8105
TROXLER, EULYSS ROBERT 2314 PRINCESS ANN ST. GREENSBORO 27408	ORS 041 A L 919 288-5521	TURNER, LARRY 1110 W. MAIN STREET DURHAM 27701	OPH /OTO 032 A P L 919 682-9341	UPPIN, A. S. 400 E. CENTER STREET LEXINGTON 27292	GS 029 AC 704 249-2991
TRUED, SALLY JO NC MEMORIAL HOSP STE. 1015 CHAPEL HILL 27514	EM 032 AC 919 966-5933	TURNER, MURRAY WELLS 125 BALDWIN AVE. NORTH HILLS CHARLOTTE 28204	IM /NEP 060 A * AC 704 338-6300	URBANIAK, JAMES RANDOLPH BOX 2912, DUKE HOSPITAL DURHAM 27710	ORS /HS 032 A AC 919 684-2476
TRUESDALE, GERALD LYNN 901 N. ELM ST. GREENSBORO 27401	PS /GS 041 A AC 919 274-2757	TURNER, ROBERT A., JR. BOWMAN GRAY SCH. OF MED. WINSTON-SALEM 27103	RHU /IM 034 A AC 919 748-4209	UTHE, WILLIAM FREDERICK 1901 HILLANDALE ROAD DURHAM 27705	IM 032 AC 919 383-1518
TRUJILLO, JAIME EMILIO 3111 MAPLEWOOD AVE., STE. 101 WINSTON-SALEM 27103	IM /END 034 AC 919 768-0496	TURNER, ROBERT COY ECU, DEPT. OF MEDICINE GREENVILLE 27858	IM 074 A AC 919 551-4633	VADNAIS, PAUL ALFRED PO BOX 33549 CHARLOTTE 28233	AN 060 A P AC 704 371-4049
TRULUCK, THOMAS BRIAN 903 PINE TREE DRIVE NEW BERN 28560	OBG 025 AC 919 633-4005	TURNER, WILLIAM BOMAR, III 2400 WAYNE MEM. DR. GOLDSBORO 27530	U 096 A AC 919 735-1635	VALENCIA, RODOLFO CIRINEO 425-B U. S. HIGHWAY 70 SWANNANOVA 28778	IM 011 A AC 704 686-3881
TRUSCOTT, BASIL LIONEL 1244 ARBOR RD., #449 WINSTON-SALEM 27104	N /IM 034 AC 919 725-4441	TURNER, WILLIAM HARRISON, III 1030 PROFESSIONAL VILLAGE GREENSBORO 27401	D /IM 041 A P AC 919 373-1384	VALERI, FRANK SCOTT 2330 RANDOLPH RD. CHARLOTTE 28207	CD /IM 060 A AC 704 377-0575
TRUSLOW, ROY EARL 618 S. MAIN STREET REIDSVILLE 27320	R 079 A AC 919 349-8461	TURPIN, JAMES WESLEY PO BOX 1335 FAIRVIEW 28730	OM /FP 011 A R 704 628-4287	VALK, HENRY LEWIS 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	IM 034 A L 919 748-4677
TSAI, GEORGE SHOU-CHYUAN P. O. BOX 430 INDIAN TRAIL 28079	GP 060 AC 704 821-7056	TUTTLE, MARLER SLATE, SR. 134 S. MAIN STREET KANNAPOLIS 28081	FP 013 A L 704 932-7016	VALONE, JAMES AUSTIN 2800 BLUE RIDGE BLVD., #304 RALEIGH 27607	PS /GS 092 A L 919 781-7430
TSE, ALEX YU CHOW 120 MEMORIAL DRIVE JACKSONVILLE 28540	PD /A 067 A AC 919 353-0581	TWEED, JOHN LINDSEY 1311 GLENDALE AVE. DURHAM 27701	032 A S 919 688-0527	VAN DYKE, ALLEN H., JR. 2609 N. DUKE ST., STE. 204 DURHAM 27704	OBG /GYN 032 A AC 919 471-8402
TSE, ANDRE KON SANG 158 MEMORIAL COURT JACKSONVILLE 28540	CD /IM 067 A AC 919 353-5111	TWISLTON, LOUISE A R-9 DOCTORS PARK APTS. GREENVILLE 27834	074 A S 919 758-8812	VAN FLEET, WILLIAM VERNON 802 N. LAFAYETTE ST. SHELBY 28150	P /CHP 023 A AC 704 482-7395
TUCKER, DONALD HUGH 1705 W. SIXTH STREET GREENVILLE 27834	IM /CD 074 AC 919 752-6101	TYE, JOHN GAROLD 401 MULBERRY ST., SW. LENOIR 28645	OPH 014 A AC 704 754-0561	VAN KIRK, MARION P. 1701 OLD VILLAGE RD. HENDERSONVILLE 28739	OPH 045 A AC 704 693-1773
TUCKER, GEORGE FRANKLIN P. O. BOX 246 ZEBULON 27597	FP 092 A P * AC 919 269-9144	TYLER, MICHAEL JOSEPH RT. #5, BOX 7 PITTSBORO 27312	FP 053 A P AC 919 542-2731	VAN NOORD, GLENN RICHARD 4020 DRESDEN DR. WINSTON-SALEM 27104	FP 034 A AC 919 748-2230
TUCKER, GEORGE REGINALD, JR. RUIN CREEK RD. STE. A HENDERSON 27536	FP 091 A AC 919 492-3152	TYNDALL, HUBERT DURWOOD 2400 WAYNE MEMORIAL DRIVE GOLDSBORO 27530	GP 096 AC 919 734-4845	VAN NYNATTEN, FRED H. 1990 S. 16TH WILMINGTON 28401	IM /EM 065 AC 919 256-4555
TUCKER, LANDRUM S., JR. FRANKLIN SQUARE, BLDG 900-A CHAPEL HILL 27514	PYA /CHP 032 AC 919 942-8716	TYNER, HUGH EDWARD 2562 PINEWOOD RD. GASTONIA 28054	GS /TS 036 A AC 704 864-7821	VAN TASSEL, ERIC D. 104 SONDELEY PARKWAY ASHEVILLE 28805	CD /IM 032 A R 919 942-4810
TUCKER, PAUL CHAMBLISS, JR. NALLE CLINIC 1350 S. KINGS DR. CHARLOTTE 28207	GE /IM 060 A AC 704 372-8750	TYREE, LARRY ALLEN 1109 DRESSER COURT RALEIGH 27609	FP 092 AC 919 872-4900	VAN ZANDT, KEITH BERGEN 2805 LYNDRHURST AVE. WINSTON-SALEM 27103	034 AC 919 768-8890
TUCKER, SCOTT L. 225 HARPER ST. WINSTON-SALEM 27104	034 A R 919 765-9047	TYSINGER, JOHN REED 1511 WESTOVER TERRACE GREENSBORO 27408	CD /IM 041 AC 919 373-1562	VAN-BLARICOM, LAWRENCE S. 445 BILTMORE AVE. ASHEVILLE 28801	NS 011 A AC 704 258-8500
TUCKER, WALTER ROBERT 1618 E. MOREHEAD ST. CHARLOTTE 28207	FP 060 AC 704 377-3610	TYSON, JAMES WILLIAM NEWLAND MEDICAL BUILDING BREVARD 28712	FP 088 A AC 704 884-9030	VAN-HOY, JOE MILTON 3735 ABINGDON ROAD CHARLOTTE 28211	GS 060 A P L/RT 704 364-5069
TUCKER, WILLIAM BEVERLY RUIN CREEK ROAD HENDERSON 27536	FP 091 A AC 919 492-3152	TYSON, WOODROW WILSON 1114 FERNDAL DRIVE HIGH POINT 27260	IM /CD 040 A L 919 882-6130	VAN-VELSOR, HARRY 1924 S. SIXTEENTH STREET WILMINGTON 28401	D 065 A AC 919 762-5207
TUCKER, WILLIAM STUART, JR. 1350 S. KINGS DR. CHARLOTTE 28207	IM /END 060 A AC 704 372-8750	UELAND, FREDERICK R. BOX 421, 1ST YEAR STUDENT 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	034 A S 919 723-0070	VANCE, SHELBY WILLIAM BOX 70 PINEOLA 28662	GP 006 A L 704 733-2788
TUCKER, WILLIAM YORK, JR. 300 S. HAWTHORNE ROAD WINSTON-SALEM 27103	CDS 034 A AC 919 748-4487	UGLAND, DAVID NELS 100 QUEENS RD. CHARLOTTE 28204	OPH 060 A P AC 704 332-1156	VANCE, THOMAS DOYLE 904 STATE FARM ROAD PO BOX 1097 BOONE 28607	DR 095 A P AC 704 264-6984
TUGGLE, ALLAN DAVIS 2335 FOREST DRIVE CHARLOTTE 28211	R 060 A L/RT 704 366-4089	UHLIN, STEPHEN RICHARD 624 QUAKER LANE, 302-B HIGH POINT 27262	D /IM 040 A P * AC 919 885-8333	VANDEMARK, ROBERT M. BOX 3808, DUMC DEPT. OF RADIOLOGY DURHAM 27710	DR 032 A AC 919 681-2711
TUMEN, JON JAY 3100 BLUE RIDGE RD., STE. 300 RALEIGH 27610	IM /PUD 092 A P AC 919 781-7500	ULLRICH, CHRISTOPHER GEORGE 2631 ROTHWOOD DR. CHARLOTTE 28211	DR 060 A AC 704 365-0343	VANDENBOSCH, GERALD C. 1704 S. TARBORO ST. WILSON 27893	ORS 098 A AC 919 291-7001

VANDER VEER, CRAIG ANDREW 1010 EDGEHILL CHARLOTTE 28207	NS 060 A AC 704 376-1605	VERNER, HUGH DAVID 212 S. TRYON ST., STE. 1500 CHARLOTTE 28281	IM 060 A L/RT 704 365-0760	VOLKMAN, ALVIN ECU, BRODY 7E, 124 GREENVILLE 27834	PTH 074 A AC 919 551-2804
VANDERBEEK, RANDALL B. 100 VICTORIA RD. ASHEVILLE 28801	U 011 A AC 704 254-8883	VERNON, CHARLES ROBERTSON 7230 WRIGHTSVILLE AVENUE WILMINGTON 28403	P 065 A P * AC 919 256-4106	VOLKMER, DONALD DURHAM OLD 29-70 SOUTH P. O. BOX 579 LEXINGTON 27292	IM 029 AC 704 249-7785
VANDERBERRY, ROBERT C., JR. PO BOX 240197 CHARLOTTE 28224	PD 060 AC 704 554-8373	VERNON, JAMES TAYLOR P. O. BOX 1139 MORGANTON 28655	P 012 A L/RT 704 437-5839	VOLLMER, DENNIS G. UNC, 148 BURNETT-WOMACK CHAPEL HILL 27514	NS 032 A AC 919 966-1374
VANDERSEA, HAROLD MARK 800 HOSPITAL DRIVE NEW BERN 28560	ORS 025 A P AC 919 638-8113	VERNON, MICHAEL STEPHEN PO BOX 1846 GREENVILLE 27834	FP 074 A AC 919 551-4614	VREELAND, WALLING D., JR. 3910 COUNTRY CLUB ROAD WINSTON-SALEM 27104	GP 034 A P AC 919 765-0170
VANDERWERF, JOSEPH NELSON 611 FIFTH AVE., WEST HENDERSONVILLE 28739	FP 045 AC 704 692-5068	VERROSS, WILLIAM EDWARD 1023 EDGEHILL ROAD, S. CHARLOTTE 28207	OBG 060 A AC 704 373-1541	VUKOSON, MATTHEW BRUCE UNC, STUDENT HEALTH SERVICE CHAPEL HILL 27514	FP 032 AC 919 966-2281
VANDIVER, THOMAS JACKSON 150 PROVIDENCE ROAD CHARLOTTE 28207	OBG 060 A AC 704 377-0461	VERSCHUYL, EVERT JAN 1232 FORSYTH ST. WINSTON-SALEM 27101	034 A S 919 722-6637	VYAS, PANKAJ K. 109 S. RAILROAD ST. PO BOX 667 BENSON 27504	IM 043 AC 919 894-5787
VANDIVIERE, H. MAC U. OF KENTUCKY, PED. MN 102 LEXINGTON, KY 40536	PUD /PD 032 A AC 606 233-5857	VESANO, JACK LEE 225 HAWTHORNE LN. #205 CHARLOTTE 28204	ORS 060 A P AC 704 334-0809	WACHTER, FRANCIS WILFRED PO BOX 33549 CHARLOTTE 28233	PTH 060 A AC 704 371-4814
VARGAS, CARLOS ABRAHAM P. O. BOX 1495 GASTONIA 28052	DR 036 A AC 704 864-4378	VEST, HOWARD RYLAND, JR. RALEIGH ANESTHESIA ASSOC. P. O. BOX 18139 RALEIGH 27619	AN 092 A AC 919 781-7420	WADE, EUGENE HENRY PETER 723 EDITH STREET BURLINGTON 27215	FP 001 AC 919 229-4791
VARIA, INDIRA MAHESH BOX 3889, DUMC DURHAM 27710	P 032 AC 919 929-6726	VETTER, JOHN STANLEY P. O. BOX 308 ROCKINGHAM 28379	FP 077 * AC 919 895-9075	WADSWORTH, GEORGE HENRY P. O. BOX 27 AHOSKIE 27910	GS 008 A L/RT 919 332-2215
VARIA, MAHESH AMRATLAL RADIATION ONCOLOGY-UNC NCMH BASEMENT CHAPEL HILL 27514	TR 032 A AC 919 966-1101	VICK, HENRY VERNELL 101 CLINIC DRIVE TARBORO 27886	FP 033 AC 919 823-2105	WADSWORTH, JOSEPH A.C. 1830 HILLDALE RD. DURHAM 27705	OPH 032 A L 919 383-5531
VARNER, D. WAYNE 346 HONEYCUTT DR. WILMINGTON 28403	PTH 065 * AC 919 395-8177	VICK, JOHN BERNARD #10 DOCTOR'S PARK GREENVILLE 27834	TS /GS 074 A AC 919 758-1747	WAGGONER, LONNIE AUSTINE, JR. 2522 SHEFFIELD DR. GASTONIA 28054	IM 036 A RT 704 865-5486
VARNY, DAVID ALLEN 2400 WAYNE MEMORIAL DR. GOLDSBORO 27530	U /GS 096 A AC 919 778-6549	VICK, WILLIAM WOODROW 214 TALLYHO TRAIL CHAPEL HILL 27514	PTH 032 A R 919 684-3300	WAGONER, DAVID KIRK 332 LILLINGTON AVENUE CHARLOTTE 28204	PD 060 AC 704 376-4493
VARTANIAN, VARTAN 23 CLOVER PL. DURHAM 27705	AN 032 A RT 919 684-6841	VIETA, PAUL ANTHONY 911 HAY ST. PO BOX 53514 FAYETTEVILLE 28305	OBG 026 A AC 919 485-1191	WAHBEH, CAMILLE JAMIL 1601-B OWEN DRIVE FAYETTEVILLE 28304	OBG 026 A AC 919 323-1152
VATZ, BENJAMIN 1904 N. CHURCH STREET GREENSBORO 27405	IM 041 A AC 919 274-3241	VIGLIONE, CHERYL ANNE 213 NORTHWOOD DR. CHAPEL HILL 27514	DR /GP 032 A AC 919 942-3196	WAINER, HOWARD SCHEYER 1904 N. CHURCH STREET GREENSBORO 27405	IM /GE 041 A AC 919 274-3241
VAUGHAN, DANIEL PATRICK UNC STUDENT HEALTH SERVICE CAMPUS BOX 7470 CHAPEL HILL 27599	IM /ADL 032 AC 919 966-2281	VIJAYA, LINGA RUIN CREEK ROAD HENDERSON 27536	U 091 AC 919 492-8711	WAIVERS, LEO EDWARD ECU SCHOOL OF MEDICINE DEPT. OF MEDICINE GREENVILLE 27834	IM 074 A AC 919 551-4633
VAUGHAN, EDWIN WARNER 2632 WALKER AVENUE GREENSBORO 27403	IM /RIP 041 A L/RT 919 299-7909	VILLANI, PETER LOUIS 33 TRINITY DRIVE LUMBERTON 28358	GS /VS 078 A AC 919 738-8556	WALDENBERG, LEOPOLD MARK 3400 EXECUTIVE DR. STE. 104 P. O. BOX 17200 RALEIGH 27619	GS 092 A AC 919 876-2732
VAUGHAN, ROBERT WILLIAM 101 BARNHILL PLACE CHAPEL HILL 27514	AN 032 A AC 919 966-5136	VISER, PAUL EDWARD 204 HARRIS LOOP WHITESBURG, KY 41858	FP 006 AC 606 633-4871	WALDMAN, GARY DAVID 1307 E. FRANKLIN ST. MONROE 28110	IM 000 A AC 704 289-9448
VAUGHN, DONALD EUGENE 120 WIND CHIME COURT RALEIGH 27615	EM /FP 092 A * AC 919 847-8821	VISER, PHILIP ALBERT 2115 E. 7TH ST., STE. 104 CHARLOTTE 28204	GS /CRS 060 A P * AC 704 333-1574	WALHA, GURMUKH SINGH 542 WHITE OAK STREET ASHEBORO 27203	OR /HS 076 A AC 919 629-4171
VAUGHN, TOM JIMISON, JR. PO BOX 1408 MOUNT AIRY 27030	OBG 086 AC 919 786-4522	VISER, VALYA ELIZABETH DEPT. OF PED., BOX 32861 CHARLOTTE MEM. HOSP. CHARLOTTE 28232	NPM /PD 060 A P AC 704 338-3156	WALKER, ANDREW WILLIAM 2215 RANDOLPH ROAD CHARLOTTE 28207	PS /HS 060 A P * AC 704 372-6846
VAUGHT, WILLIAM WAYNE, JR 1206 VAUGHN ROAD BURLINGTON 27215	OTO /HNS 001 A P AC 919 226-0660	VIVEONANTHAN, SANDEEP P. 4608 HIDDENBROOK DR. RALEIGH 27609	034 A S 919 876-8566	WALKER, ANNE ENGLISH 226 BALDWIN AVENUE CHARLOTTE 28207	PD 060 AC 704 332-8139
VEAZEY, ALEX H., JR. 1228 CHANTELOUR DR. HENDERSONVILLE 28739	FP 045 A RT 704 693-6124	VOCI, VINCENT EUGENE 902 COX RD., STE. B GASTONIA 28054	PS /HS 036 A P AC 704 867-5852	WALKER, DAVID ANTHONY TOWN/COUNTRY SHOPPING CTR ABERDEEN 28315	OPH 063 A AC 919 944-7196
VEAZEY, DANIEL BURT 611 FIFTH AVE., WEST HENDERSONVILLE 28739	FP 045 AC 704 692-7111	VOGEL, JOSEPH VINCENT ROUTE #2, BOX 197 CONOVER 28613	PTH 018 A AC 704 322-3821	WALKER, ELMER PIXLEY 20 FOREST HILLS DR. WILMINGTON 28403	GYN 065 A L/RT 919 763-8307
VELAT, CLARENCE ANTHONY 406 CASCADE CT. HIGH POINT 27260	PTH /CLP 040 L 919 884-6065	VOGLER, JAMES BREVARD, III BOX 3808, DUMC DURHAM 27710	DR 032 AC 919 684-2711	WALKER, FRANCIS O. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	N 034 AC 919 748-2069
VENTERS, GEORGE COLE 3410 EXECUTIVE DRIVE RALEIGH 27609	ORS 092 A AC 919 872-5296	VOGLER, ROBERT C. 119-C STINSON ST. CHAPEL HILL 27516	032 A S 919 933-7867	WALKER, HARRY GORDON 310 DAVIE AVENUE STATESVILLE 28677	FP 049 A AC 704 873-3269
VENTERS, WAYNE BURNETTE 200 DOCTOR'S DRIVE, SUITE J JACKSONVILLE 28540	ORS 067 A P * AC 919 353-1412	VOGT, JOEL ALAN 522 N. ELAM AVE., STE. 203 GREENSBORO 27403	P 041 AC 919 854-2391	WALKER, JAMES LYSLE 2353 QUEEN ST. #D WINSTON-SALEM 27103	034 A S 919 722-9268
VERELL, KAREN LEA 12 OFFICE PARK DR. JACKSONVILLE 28540	PD /ADL 067 A AC 919 353-6262	VOIGT, WARD LANDIS CHOWAN MEDICAL CENTER EDENTON 27932	GS 021 A AC 919 482-2116	WALKER, JOHN BARRETT, JR. MEDICAL VILLAGE BURLINGTON 27215	GP 001 AC 919 228-8333
VERHOEFF, DIRK SEASIDE SPARROW 12 HILTON HEAD, SC 29928	PUD 060 A L/RT 803 671-2665	VOLK, JAMES VICTOR 722 W. FIFTH AVE. HENDERSONVILLE 28739	PD 045 AC 704 693-3296	WALKER, JOHN BARRETT, III MEDICAL VILLAGE, SUITE K BURLINGTON 27215	IM 001 P AC 919 226-7384

WALKER, JOSEPH EDWARDS EDWARD CLINIC RT. #3, BOX 146 LAWNDALE 28090	FP /AI 023 A P AC 704 538-8616	WALLS, BERTRAM EMMANUEL 1774 METROMEDICAL DRIVE FAYETTEVILLE 28304	OBG 026 AC 919 323-4155	WARD, RICHARD M. 3 BATTS HILL RD. NEW BERN 28562	PTH 025 A P AC 919 633-8682
WALKER, LAWRENCE C., JR. 2927 LYNDBURST AVE. WINSTON-SALEM 27103	OBG 034 A AC 919 765-9350	WALSH, CARLE DOUGLAS 921 CONFEDERATE AVENUE SALISBURY 28144	D 080 A * L/RT 704 636-2466	WARD, SIMON V., III 2711 RANDOLPH RD. STE. 305 CHARLOTTE 28207	OBG 060 A AC 704 372-8020
WALKER, PAUL CREASY 510 FLEMING ST. HENDERSONVILLE 28739	FP 045 AC 704 693-7287	WALSH, EMMETT JAMES, JR. 2 DOCTOR'S PARK GREENVILLE 27834	U 074 A AC 919 752-5077	WARD, WALTER AVEREL, JR. 1411-B PLAZA WEST RD. WINSTON-SALEM 27103	OTO /A 034 A AC 919 760-0240
WALKER, PHILLIP JACKSON 928 BAXTER ST. CHARLOTTE 28204	NEP /IM 060 A AC 704 374-1321	WALSH, HARRY MARTIN 14 OAK ROAD SALISBURY 28144	GS 080 AC 704 636-2351	WARD, WILLIAM ALAN 1822 BRUNSWICK AVE. CHARLOTTE 28207	ORS 060 A AC 704 373-0544
WALKER, PRESTON ALMAND TAYLOR HALL DOROTHEA DIX HOSPITAL RALEIGH 27611	CHP /P 092 A AC 919 733-5130	WALSH, ZANE THOMAS, JR. 4801 LEONARD PARKWAY RICHMOND, VA 23226	PM 074 A R	WARD, WILLIAM GOODE 21 GORHAM PLACE DURHAM 27705	ORS 032 A R 919 383-9667
WALKER, RICHARD ISLEY N. C. MEMORIAL HOSPITAL CHAPEL HILL 27599	IM /HEM 032 AC 919 966-4546	WALSTON, ABE, II 306 S. GREGSON STREET DURHAM 27705	CD /IM 032 A AC 919 682-5561	WARDEN, CLARK GERARD 212 CEDARWOOD LANE CARRBORO 27510	GS 032 A R 919 967-9414
WALKER, THOMAS ENGLISH 226 BALDWIN AVENUE CHARLOTTE 28204	PD 060 A AC 704 332-8139	WALTER, KEITH A. 104-8 MELVILLE LOOP, CHAPEL HILL 27514	032 A S 919 684-6253	WARE, JULIE LYNNE 4704 OAK PARK RD. RALEIGH 27612	PD 092 AC 919 782-4862
WALKER, WILLIAM ALFRED 2015 RANDOLPH RD., STE. 201 CHARLOTTE 28207	CRS /GS 060 A * AC 704 333-1259	WALTERS-SCHERRER, BARBARA A. 417 COLONY WOODS DR. CHAPEL HILL 27514	P /GP 032 A R 919 968-4652	WARLICK, JOHN THOMAS, III 631 COX ROAD GASTONIA 28052	U 036 A AC 704 864-7764
WALKER, WILLIAM RAY 3109 GORDON DRIVE GREENVILLE NC 27858	P 074 A AC 919 551-2661	WALTERS, BRADFORD BLAIR UNC-NEUROSURGERY BURNETT-WOMACK BLDG 229H CHAPEL HILL 27514	NS 032 A AC 919 966-1374	WARNER, CHARLES ERNEST 1700 ABBEY PLACE CHARLOTTE 28209	PD 060 A AC 704 523-7232
WALKER, WILLIAM THOMAS 202 S. CHERRY ST. KERNERSVILLE 27284	FP 034 A L/RT 919 993-2011	WALTERS, HENRY CEPHAS, JR. 509 BROOKDALE DR. STATESVILLE 28677	IM 049 A * AC 704 872-6343	WARNER, JEANETTE PRESTON 206 W. BLACKBEARD ROAD WILMINGTON 28403	065 AC 919 343-7000
WALKER, WILLIAM THOMAS, JR. #5 MEDICAL PARK MOREHEAD CITY 28557	IM 016 A AC 919 726-9091	WALTERS, HEZEKIAH GROVER, JR. 711 N. THOMPSON STREET WHITEVILLE 28472	GS 024 A AC 919 642-3214	WARNER, MARK FRANCIS 1202 MEDICAL CENTER DR. WILMINGTON 28401	CD /IM 065 AC 919 341-3360
WALL, ANTOINETTE WILKES PO BOX 1004 SKYLAND 28776	EM 045 AC	WALTERS, PAUL ANDREW 2832 FAIRMONT ROAD WINSTON-SALEM 27106	AN 034 A AC 919 768-7680	WARREN, CASPER CARL, JR. 8349 BAR HARBOR LANE CHARLOTTE 28210	AN 060 A AC 704 664-1640
WALL, JACK GARDNER ROUTE #4, BOX 682 GRAHAM 27253	DR 001 AC 919 226-0198	WALTERS, RONALD MARTIN 220 JEFFERSON ST. WHITEVILLE 28472	GS /VS 024 A AC 919 642-3214	WARREN, JEFFERY STEVEN 274 N. MCLEAN MEMPHIS, TN 38112	EM /FP 032 A R 901 682-4027
WALL, ROSCOE LEGRAND, JR. 440 SHERWOOD FOREST RD. WINSTON-SALEM 27104	GYN /END 034 A L/RT 919 765-3383	WALTHER, PHILIP JOHN BOX 3314, DUMC DURHAM 27710	U 032 A AC 919 684-5235	WARREN, JOSEPH BENJAMIN 203 PINE ROAD NEW BERN 28560	GP 025 A * AC 919 637-5888
WALL, WILLIAM STANLEY 330 S. W. MAIN STREET ROCKY MOUNT 27801	GP 064 A P L 919 446-4952	WALTON, CAREY JAMES, JR. P. O. BOX 1020 322 MULBERRY ST., SW LENOIR 28645	IM /GE 014 L/RT 704 758-5544	WARREN, JULIAN MARION P. O. BOX 1120 SPRING HOPE 27882	FP 064 * AC 919 478-4600
WALLACE, ANDREW G. BOX 3708, DUMC DURHAM 27710	CD 032 A AC 919 684-5414	WALTON, GEORGE BRITAIN, JR. P. O. BOX 345 CHADBOURN 28431	R /NM 024 A AC 919 642-8011	WARREN, LARRY E. 503 SUNNYBROOK ROAD RALEIGH 27610	IM 092 AC 919 755-8394
WALLACE, DONALD KAI 205 PAGE ROAD PINEHURST 28374	IM /GE 063 A * AC 919 295-5511	WALTON, RICHARD FRANK 491 BILTMORE AVE. ASHEVILLE 28801	FP 011 AC 704 258-0635	WARREN, THOMAS LARRY RT. #2, BOX 195 CONOVER 28613	OBG 018 A AC 704 322-4920
WALLACE, J. W. SCOTT 2040 RANDOLPH RD. CHARLOTTE 28207	P 060 A AC 704 334-0875	WANDER, JOHN C. PO BOX 610 FAIRVIEW 28730	FP 011 AC 704 628-2225	WARREN, THOMAS LINSON 4401 COLWICK RD., STE. 702 CHARLOTTE 28211	AN 060 AC 704 379-5943
WALLACE, JOHN MORRIS P. O. BOX 1489 ALBEMARLE 28001	PTH 084 A * AC 704 982-0148	WANNAMAKER, EDWARD JONES 8919 PARK RD. #277 CHARLOTTE 28210	IM 060 A L/RT 704 588-0130	WARRINGTON, LEWIS E. 59 LEXINGTON SQUARE GREENVILLE 27858	074 A S 919 756-0393
WALLACE, KELLEY, JR. 330 N. MARKET ST. WASHINGTON 27889	PS /GS 007 A AC 919 946-2223	WARBURTON, KEELING ALFRED P. O. BOX 5128 HIGH POINT 27262	OBG 040 A AC 919 887-3011	WARSHAUER, ALBERT DAVID 1608 E. FIFTH STREET GREENVILLE 27858	AN 074 A RT 919 752-5296
WALLACE, ROBERT BRUCE 3101 ANDOVER CIRCLE GASTONIA 28054	EM 036 A P AC 704 867-2580	WARBURTON, MARK JOSEPH 624 QUAKER LANE, SUITE D-200 HIGH POINT 27262	ORS 040 AC 919 841-6262	WARSHAUER, SAMUEL EDWARD 2917 HYDRANGEA PL. WILMINGTON 28403	IM /CD 065 A L 919 762-8388
WALLENBORN, PETER A., III 28 GRIFFING BLVD. ASHEVILLE 28804	OTO 011 A AC 704 252-1853	WARBURTON, SAMUEL W., JR. 2020 W. MAIN ST. DURHAM 27705	FP 032 AC 919 471-4421	WARWICK, HIGHT CLAUDIUS 2320 KIRKPATRICK PLACE GREENSBORO 27408	AN 041 A L/RT 919 272-4220
WALLENHAUPT, STEPHEN L. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	CDS 034 A AC 919 748-2281	WARD, D. E., JR. 2604 N. ELM STREET LUMBERTON 28358	GS 078 A P * AC 919 738-4276	WASE, RAYMOND EDWARD, JR. PRESBYTERIAN HOSPITAL PO BOX 33549 CHARLOTTE 28233	EM 060 AC 704 371-4160
WALLER, LOUIS CLINTON PO BOX 6406 ASHEVILLE 28816	FP 011 L/RT 704 252-8341	WARD, DEMMING MORTON 319 MOCKSVILLE AVENUE SALISBURY 28144	IM 080 A * AC 704 637-3538	WASHBURN, HARRILL GENE P. O. BOX 815 BOILING SPRINGS 28017	FP 023 AC 704 434-2281
WALLER, ROBERT JOSEPH 200 DOCTOR'S BUILDING ASHEVILLE 28801	TR 011 A AC 704 255-4100	WARD, JOHN CHARLES 410 LAKE PINES DRIVE LAGRANGE 28551	OM 054 A RT 919 566-3119	WASHBURN, WILLARD WYAN P. O. BOX 795 BOILING SPRINGS 28017	GP /FP 023 A L/RT 704 434-7910
WALLER, TED JAMES 30 DOCTOR'S PARK BOONE 28607	ORS 095 A P AC 704 264-1100	WARD, JOHN THOMAS 3100 BLUE RIDGE RD., STE. 200 RALEIGH 27612	OPH 092 A AC 919 787-2211	WASHINGTON, EDWARD M. 6523 PENSFORD LANE CHARLOTTE 28226	AN /AN 060 A AC 704 663-1113
WALLEY, BRUCE DOUGLAS 2827 LYNDBURST AVE. STE. 205 WINSTON-SALEM 27103	CD /CDS 034 A AC 919 768-9535	WARD, JOSEPH MAJOR 121 W. POWER STREET AYDEN 28513	FP /GER 074 AC 919 746-3191	WASHINGTON, JOHN LANGTRY 316 GRAHAM-HOPEDALE RD. BURLINGTON 27215	OBG /FP 001 A AC 704 739-7445
WALLIN, ROLF BOLIN 2604 FASHION LANE FAYETTEVILLE 28304	AN 032 A R 919 966-5136	WARD, MICHAEL MUNDY 520 SHANDY LANE WILMINGTON 28403	EM 065 AC 919 256-4108	WASHINGTON, MARY KAY 503 E. TRINITY AVE. DURHAM 27701	PTH 032 R 919 684-3300

WASSEL, JOHN JOSEPH PO BOX 1606 CONCORD 28026	ORS 013 A AC 704 788-3155	WEATHERS, BAILEY GRAHAM, JR. 222 S. MAIN STREET STANLEY 28164	FP 036 A AC 704 263-8945	WEEMS, WADE SCOTT PO BOX 1272 LINVILLE 28646	U 006 AC 704 898-6617
WATANABE, TSUNEO KENT 101 S. W. CARY PARKWAY CARY 27511	OTO /HNS 092 A AC 919 467-7380	WEAVER, EDWARD HARRISON 190 CHARLOIS BLVD. WINSTON-SALEM 27103	P 034 A AC 919 768-6930	WEHRY, MARK A. 113 E. 12TH ST. GREENVILLE 27834	074 A S 919 757-3217
WATERBURY, REX G. 1054 BURRAGE RD., NE CONCORD 28025	OBG 013 A AC 704 788-4151	WEAVER, FREDERICK BROWN 1409 PLAZA DRIVE WINSTON-SALEM 27103	IM 034 AC 919 765-4301	WEIDAW, HAROLD RICHARD P. O. BOX 1835 PINEHURST 28374	AI /IM 063 A AC 919 295-6661
WATERS, DEAN GALE PO BOX 1408 MOUNT AIRY 27030	OBG 086 AC 919 786-4522	WEAVER, JAMES PHILLIP 1830 HILLANDALE ROAD DURHAM 27705	CDS /GS 032 AC 919 383-5531	WEIDMAN, ERIC ROBERT 311 S. LASALLE ST. APT. 48-0 DURHAM 27705	032 A S 919 286-2172
WATERS, ZACK JAMES, JR. 604 E. 12TH STREET WASHINGTON 27889	GS 007 A AC 919 946-9004	WEAVER, JOSEPH DUDLEY 111 N. MAPLE STREET AHOSKIE 27910	FP 008 A L/RT 919 332-2196	WEILBAECHER, JAMES EDWARD, JR. 129 MCDOWELL STREET ASHEVILLE 28801	ORS 011 A AC 704 258-8800
WATKINS, CARLTON GUNTER 8713 GAINSFORD CT. CHARLOTTE 28210	PD 060 A AC 704 372-7790	WEAVER, MICHAEL DAVID 1711 W. SIXTH STREET GREENVILLE 27834	DR 074 A * AC 919 756-7923	WEIN, ROBERT MICHAEL 408 PARKWAY GREENSBORO 27401	OBG 041 A P AC 919 378-1110
WATKINS, GLEN LEE 14206 MANIFEST WAY GAITHERSBURG, MD 20878	GP 000 A R	WEAVER, R. GREY, JR. 771 REAFORD ROAD WINSTON-SALEM 27104	PD 034 AC 919 748-4091	WEINEL, WILLIAM HARVEY 1809 GLEN MEADE ROAD WILMINGTON 28403	GYN 065 A AC 919 763-9833
WATKINS, WALTER DAVID BOX 3094, DUMC DURHAM 27710	AN /PA 032 A AC 919 681-2498	WEAVER, ROY ALBERT CAPE FEAR HOSPITAL PO BOX 2000 FAYETTEVILLE 28302	PTH 026 A P * AC 919 323-6149	WEINERTH, JOHN LOUIS DUKE, DEPT. OF SURGERY DURHAM 27710	U /GS 032 A AC 919 684-4157
WATSON, DAVID WILLIAM 1900 RANDOLPH RD., STE. 506 CHARLOTTE 28207	U 060 AC 704 375-2544	WEAVER, ZEBULON, III 80 VICTORIA ROAD ASHEVILLE 28801	HEM /ON 011 AC 704 258-0994	WEINRICH, A. ELISE 2609 N. DUKE ST. STE. 505 DURHAM 27704	D 032 A P * AC 919 477-2121
WATSON, JAMES MORRIS 1134 N. ROAD STREET ELIZABETH CITY 27909	ORS 070 A P AC 919 338-3993	WEBB, ALEXANDER, JR. 2708 FAIRVIEW ROAD DECEASED--4-2-88 RALEIGH 27608	GS 092 A 919 781-3469	WEINSTEIN, ROBERT HARVEY 2595 S. 17TH ST. WILMINGTON 28401	P 065 A P AC 919 799-2283
WATSON, JERRY FRANKLIN EIGHTH ST. PO BOX 789 N. WILKESBORO 28659	GS 097 A AC 919 667-1183	WEBB, BAILEY APT. 14, ALASTAIR COURT APTS. 300 SWIFT AVE. DURHAM 27705	PD 032 A * L 919 286-2202	WEINTRAUB, RICHARD ALAN 721 GREEN VALLEY RD. GREENSBORO 27408	CD /IM 041 A AC 919 378-1244
WATSON, JOHN WILLIAM 104 NEW COLLEGE STREET OXFORD 27565	FP 039 A AC 919 693-8126	WEBB, LAWRENCE XAVIER 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	ORS 034 A AC 919 748-3606	WEIS, WALTER FRANCIS, JR. 5305 WRIGHTSVILLE AVE. BLDG. C WILMINGTON 28403	ORS 065 AC 919 799-9417
WATSON, MELVIN E. 5305-K WRIGHTSVILLE AVE. WILMINGTON 28403	PD 065 A AC 919 392-5634	WEBB, MICHAEL STEPHEN, JR. 229-A BRIDGEFIELD PLACE DURHAM 27705	032 A S 919 383-4960	WEISENBERGER, ANTHONY J. APPALACHIAN HALL P. O. BOX 5534 ASHEVILLE 28813	P /ALD 011 A AC 704 253-3681
WATSON, NAT ERSKINE, JR. 766 OAKLAWN AVENUE WINSTON-SALEM 27104	NM /IM 034 A AC 919 748-3520	WEBB, ROBERT KENT PO BOX 42736 FAYETTEVILLE 28304	032 A AC 919 484-8114	WEISLER, RICHARD HARRY 3320 EXECUTIVE DR. STE. 216 RALEIGH 27609	P 092 A P AC 919 782-4672
WATSON, ROBERT ANDREW 803 HERMITAGE ROAD BURLINGTON 27215	FP /GER 001 * AC 919 227-3643	WEBB, WILLIAM WHITAKER, JR. P.O. BOX 2145 SALISBURY 28144	NEP /IM 026 A AC 704 636-0971	WEISNER, LARRY FELIX #12 COUNTRY MANOR APTS. GREENVILLE 27834	074 A S 919 758-9272
WATSON, SUSAN A. 115 LONG CIRCLE ROANOKE RAPIDS 27870	OPH 042 A AC 919 539-8193	WEBER, GLENDA H. P. O. BOX 809 CLEMMONS 27012	D 080 A AC 704 636-0971	WEISS, JAMES RICHARD 400 EASTOWN DR., STE. 102 CHAPEL HILL 27514	P 032 * AC 919 489-2671
WATTS, CHARLES DEWITT 510 SIMMONS STREET DURHAM 27701	GS /ABS 032 L 919 688-3391	WEBSTER, GEORGE DAVID DUMC, DIV. OF UROLOGY DURHAM 27710	PTH 034 A AC 919 768-7680	WEISS, JOSEPH WALTON 522 N. ELAM AVENUE, STE. 203 GREENSBORO 27403	032 A AC 919 854-2391
WATTS, HUGH BOYD 130 MOCKSVILLE AVE. SALISBURY 28144	ORS 080 A P AC	WEBSTER, JOEL STOOPS 2330 RANDOLPH AT LAUREL CHARLOTTE 28207	U 032 A AC 919 684-5282	WEISS, MATTHEW JAY 910 CONSTITUTION #1003 DURHAM 27705	GER 032 A R 919 383-9755
WATTS, LESTER EARL 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	CD /IM 034 A P AC 919 748-4581	WECHSLER, ANDREW STEPHEN DUKE UNIV. MED. CTR. DURHAM 27710	CD /IM 060 A P AC 704 377-0575	WEISS, RICHARD ELLIOTT 7 MCDOWELL STREET ASHEVILLE 28801	NS 011 A P AC 704 255-7776
WAUGH, WILLIAM HOWARD ECU SCHOOL OF MEDICINE GREENVILLE 27834	NEP /IM 074 A AC 919 551-2773	WEDDLE, RICHARD ANDREW 808 SCHENCK ST. SHELBY 28150	CDS /GS 032 A AC 919 684-5282	WEISSLER, MARK C. UNC, 620 BURNETT-WOMACK CB #7070 CHAPEL HILL 27599	OTO /HNS 032 A AC 919 966-3341
WAY, BRADY COLE 3 MEDICAL PARK MOREHEAD CITY 28557	GS 016 A AC 919 726-1136	WEEKS, DUKE BYRON 2615 TALLWOOD COURT WINSTON-SALEM 27106	GE /IM 023 A AC 704 482-1482	WEISSMAN, JAMES MICHAEL 1904 N. CHURCH STREET GREENSBORO 27405	041 A * AC 919 274-3241
WAY, JOHN EDWARD #3 MEDICAL PARK MOREHEAD CITY 28557	GS 016 A L 919 726-1136	WEEKS, FREDERICK M. THE VILLAGES, APT. 0-1 CARRBORO 27510	AN 034 A AC 919 748-4791	WEITZNER, HOWARD B. 608 W. KING ST. STE. 3 KINGS MOUNTAIN 28086	OBG 023 * AC 919 734-0099
WAYS, DOUGLAS KIRK 121 N. LONGMEADOW RD. GREENVILLE 27834	END 074 A AC 919 551-2571	WEEKS, JOHN WESLEY 902 COX ROAD GASTONIA 28054	032 A S 919 933-1259	WEITZNER, STANLEY WALLACE 417 LYONS ROAD CHAPEL HILL 27514	AN 032 A AC 919 684-2425
WEADON, PRESTON STENZ 475 KING WILLIAM ROAD HENDERSONVILLE 28739	NS 045 A RT 704 697-6857	WEEKS, KATHERINE P. G-2 DOCTORS PARK APTS. GREENVILLE 27834	OBG 036 A AC 704 867-6386	WELANDER, CHARLES ERIC 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	GYN /ON 034 A AC 919 748-4022
WEAR, JOHN EDMUND 401 MOCKSVILLE AVE., STE. 100 SALISBURY 28144	R 080 A AC 704 633-1022	WEEKS, KENNETH DURHAM 1400 BROOKWOOD DR. PO BOX 7828 ROCKY MOUNT 27804	074 A S 919 758-5374	WELBORN, JAMES TODD 17 E. SECOND AVENUE LEXINGTON 27292	FP 029 A AC 704 246-5625
WEARN, FRANKLIN STAFFORD P. O. BOX 1746 STATESVILLE 28677	GS /EM 049 A AS 704 872-9494	WEEKS, KENNETH DURHAM, JR. 1413 ELIZABETH AVE. CHARLOTTE 28204	IM /CD 064 A L/RT 919 977-6746	WELBORN, JULIUS WARREN, JR. 200 E. NORTHWOOD ST., STE. 310 GREENSBORO 27401	IM /OM 041 A AC 919 273-0872
WEAST, ROBERT RANDOLPH STE. 301, 445 BILTMORE CTR. ASHEVILLE 28801	DR 011 A AC 704 254-2371	WEEKS, LANDON EARL 2808 MAPLEWOOD AVENUE WINSTON-SALEM 27103	060 A AC 704 338-6300	WELCH, CARL LESTER 221 13TH AVE. PL. NW HICKORY 28601	041 A AC 704 322-5800
WEATHERLY, WILLIAM JESSE 1014 PROFESSIONAL VILLAGE GREENSBORO 27401	GS 041 AC 919 373-1078		GE /IM 034 AC 919 768-6211	WELCH, EARL PARKS, JR. 2825 LYNDBURST AVE. STE. 105 WINSTON-SALEM 27103	GS /TS 034 A AC 919 760-3112

WELCH, JACK H. PHYSICIANS QUADRANGLE GREENVILLE 27834	AN 074 A P AC 919 752-2140	WETTER, JAMES MICHAEL 1601-B OWEN DRIVE FAYETTEVILLE 28306	FP 026 A AC 919 323-1152	WHITCOMB, DAVID C. 706 WEST KNOX ST. DURHAM 27701	032 R 919 684-8111
WELFARE, CHARLES RANDALL 1113 STANDISH COURT WINSTON-SALEM 27106	IM 034 A L/RT 919 723-3856	WHALEN, ROBERT EMMET DUKE UNIV. MED. CTR. DURHAM 27710	CD /IM 032 A AC 919 684-6315	WHITE, ALAN FRASER 2418 LYNDDURST AVE. WINSTON-SALEM 27103	034 A S 919 723-1492
WELLBORN, WILLIAM REVERE, JR. PO BOX 259 LAKE LURE 28655	OBG 012 L/RT 704 437-1924	WHALEY, JAMES DAVANT 138-A S. BATTERY CHARLESTON, SC 29401	U 018 A L/RT 803 722-9998	WHITE, DOUGLAS RECTOR BOWMAN GRAY, DEPT. OF MED. WINSTON-SALEM 27103	HEM /ON 034 A AC 919 748-4380
WELLER, EDWARD BROOKS 624-D 200 QUAKER LANE HIGH POINT 27262	ORS 040 AC 919 841-6262	WHALEY, ROBERT ALLAN 748 SHADYLAWN ROAD CHAPEL HILL 27514	DR /N 032 AC 919 966-4397	WHITE, EMMETT ROYCE BOX 10 RUTHERFORD COLLEGE 28671	TR /R 012 A * AC 704 879-9541
WELLS, ANDREW HENDERSON 1715 ELIZABETH AVE. WINSTON-SALEM 27103	034 A S 919 761-0895	WHANGER, ALAN DUANE 1712 WOODBURN ROAD DURHAM 27705	P 032 AC 919 684-2545	WHITE, FRANKLIN DELANO P. O. BOX 567 SILER CITY 27344	FP 019 A AC 919 663-2761
WELLS, CHARLES LEWIS CAPE FEAR VALLEY MED. CTR. PO BOX 2000 FAYETTEVILLE 28302	PTH 026 A AC 919 323-6149	WHARTON, C. WATSON 201 W. MEADOWBROOK DRIVE SMITHFIELD 27577	GP 051 A L/RT 919 934-8257	WHITE, GROVER WATTS 631 COX ROAD GASTONIA 28054	U 036 A AC 704 864-7764
WELLS, DAVID MORELLE 802 CUMBERLAND CIRCLE ROCKINGHAM 28379	DR 077 A P AC 919 997-6311	WHATLEY, JOSEPH WILLIAM, JR. 2919 COLONY ROAD DURHAM 27705	PDA /A 032 A AC 919 489-9158	WHITE, JAMES ALFRED, JR. 2240 CLOVERDALE AVE.-#198 WINSTON-SALEM 27103	PTH 034 A AC 919 722-1154
WELLS, EDWIN JULIUS 2209 DELANEY AVENUE WILMINGTON 28403	PS 065 A AC 919 763-7617	WHEATLEY, JAMES WALTER 500 LAKE CONCORD RD., NE CONCORD 28025	OPH 013 A P AC 704 782-1127	WHITE, JAMES LEE GEORGETOWN UNIV. HOSPITAL DEPT. OF ANESTHESIA WASHINGTON, DC 20007	AN 000 A R
WELLS, HELEN LEWIS 503 PEACHTREE STREET MURPHY 28906	GP 020 AC 704 837-2515	WHEATLEY, SAMUEL NALLY BALDWIN WOODS WHITEVILLE 28472	OBG 024 AC 919 642-3294	WHITE, JOHN PAUL 2240 SUNDERLAND RD. #56-N WINSTON-SALEM 27103	IM 034 R 919 748-2011
WELLS, JAMES SHELTON, JR. ROUTE #3, BOX 456 HILLSBOROUGH 27278	P /PYM 032 A AC 919 967-6353	WHEELER, ANTHONY H. 2608 EAST 7TH ST. CHARLOTTE 28204	N 060 AC 704 377-9323	WHITE, MACK WILLIS, III 7108 MATTHEWS-PINEVILLE RD. CHARLOTTE 28226	IM 060 A AC 704 542-1952
WELLS, MARIUS HUGHEY NEWLAND MED. BLDG. 11 GALLIMORE RD. BREVARD 28712	GS 088 A AC 704 884-9030	WHEELER, CLAYTON EUGENE, JR. NCMH, DEPT. OF DERMATOLOGY CHAPEL HILL 27514	D /IM 032 A * L 919 966-4507	WHITE, MICHAEL CRAIG USAF MED. CTR. DEPT. OF DERM. SCOTT AFB, IL 62225	D 000 A AC 618 256-7572
WELLS, RHEUDOLPH JAMES 602 PASTEUR DRIVE GREENSBORO 27403	OTO /PS 041 A AC 919 292-5818	WHEELER, MICHAEL STEVENS 15 SQUIRREL DEN DRIVE RUTHERFORDTON 28139	PTH 081 A P AC 704 287-7371	WHITE, PHILIP FLETCHER P. O. BOX 1827 ROCKINGHAM 28379	GP 077 A L 919 895-5253
WELLS, ROBERT STANLEY 445 BILTMORE CTR., STE. 407 ASHEVILLE 28801	IM 011 A AC 704 258-0397	WHEELER, REBECCA RUSSELL 3310 BROOKVIEW HILLS BLVD. SUITE 204 WINSTON-SALEM 27103	IM /ID 034 AC	WHITE, RANDAL EARL 407 CEDARHURST RD. GREENVILLE 27834	RHU 074 AC 919 752-6101
WELLS, WARNER LEE 109 PARK PLACE #4 CHAPEL HILL 27514	GS 032 A L/RT 919 968-0069	WHELESS, THOMAS O. 948 N. MAIN STREET LOUISBURG 27549	FP /GER 035 A AC 919 496-3375	WHITE, RONDA SNOW PO BOX 5128 HIGH POINT 27262	OBG 049 A P AC 704 664-5134
WELTON, DAVID GOE 3535 RANDOLPH RD. STE. W101 CHARLOTTE 28211	D 060 A P * L 704 364-6110	WHELISS, JOHN ANGUS 2800 BLUE RIDGE BLVD. STE. 407 RALEIGH 27607	OPH 092 A AC 919 781-7402	WHITE, RUSSELL A. 515 E. STATESVILLE AVE. MOORESVILLE 28115	074 A * S 919 756-6352
WEN, DENNIS Y. DOCTORS PARK APTS. C-5 GREENVILLE 27834	074 A S 919 758-8125	WHETSELL, DOUGLAS WAYNE 1756 METROMEDICAL DR. FAYETTEVILLE 28304	IM /PUD 026 A AC 919 323-1322	WHITE, SEAN P. E-23 YORKTOWN SQUARE GREENVILLE 27834	074 A * S 919 756-6352
WENZEL, FREDERICK GEORGE 102 HOSPITAL DR., STE. 12 CLYDE 28721	GS 044 AC 704 456-8624	WHICKER, CHARLES FINCH BRUSHY MOUNTAIN OB-GYN MEDICAL ARTS BLDG. N. WILKESBORO 28659	OBG 097 AC 919 667-1156	WHITE, STEVEN MERLE 301 BOWMAN GRAY DR. GREENVILLE 27834	OPH 074 A P AC 919 758-5800
WERK, EMILE EUGENE, JR. 2131 S. SEVENTEENTH STREET WILMINGTON 28401	IM /END 065 AC 919 343-0161	WHICKER, JAMES HUBERT 3010 ANDERSON DRIVE P. O. BOX 18946 RALEIGH 27619	OTO 092 A AC 919 787-7171	WHITE, TERRY EDWARD PO BOX 15025 ASHEVILLE 28813	PM 011 A AC 704 274-2400
WERTMAN, DANIEL EDWARD, JR. DURHAM GEN. HOSP-RAD. DURHAM 27704	R 032 A AC 919 471-3411	WHICKER, WINFRIY EVANS P. O. BOX 595 CHINA GROVE 28023	FP 080 A AC 704 857-1108	WHITE, THOMAS HUGH 1851 E. THIRD STREET CHARLOTTE 28204	OBG 060 AC 704 332-8103
WERTMAN, MARK GRAHAM PO DRAWER 1694 TRIANGLE PLAZA NEW BERN 28560	ORS 025 A AC 919 633-4477	WHIDDON, SCOTT M. RT. #2, BOX 17-R AHOSKIE 27910	R 008 A AC 919 332-8121	WHITE, THOMAS RHYNE P.O. BOX 280 CHERRYVILLE 28021	FP 060 AC
WEST, GEORGE HARPER 109 AIRPORT ROAD KINSTON 28501	IM /CD 054 A AC 919 522-3661	WHISNANT, JOHN KEENAN, JR. ROOM 1126, BLDG. 26 EI DUPONT, BARLEY MILL PLAZA WILMINGTON, DE 19898	PD /ON 032 AC 302 992-4282	WHITE, WILLIAM ELLIOTT 2711 RANDOLPH RD., STE. 301 CHARLOTTE 28207	PD 060 A AC 704 332-6332
WEST, ROBERT LEE RTE. 38, BOX 769 GREENVILLE 27834	PTH 074 A P * AC 919 551-4496	WHISNANT, JOSEPH DURWOOD, JR. 3136 SUNSET AVE. ROCKY MOUNT 27801	U 064 A * AC 919 443-3136	WHITE, WILLIAM HENRY, JR. 109-A S. VANCE STREET SANFORD 27330	OBG 053 A AC 919 775-2304
WESTER, MILLARD WINSTON, JR. VANCE MED. ARTS BLDG. #A HENDERSON 27536	FP 091 A AC 919 492-3152	WHITAKER, DONALD NASH 2016 CAMERON STREET RALEIGH 27605	FP 092 L/RT 919 832-0343	WHITEHURST, LEE ALBERT 3515 GLENWOOD AVENUE P. O. BOX 10707 RALEIGH 27605	ORS 092 A AC 919 781-5600
WESTER, THADDEUS BRYAN 101 BRIGHTHURST DR., APT. 101 RALEIGH 27605	PD /PH 078 A * AC 919 738-7231	WHITAKER, DONALD NASH, JR. 140 LECLINE DRIVE, NE CONCORD 28025	CD 013 AC 704 788-3367	WHITEHURST, WALTER C., JR. 201 DEBORAH DRIVE JACKSONVILLE 28540	R 067 A AC 919 577-2274
WESTLY, STEPHEN K. PO BOX 1980 ASHEVILLE HAND CTR., PA ASHEVILLE 28802	ORS /HS 011 A AC 704 258-0847	WHITAKER, JAMES ALLEN 624 FALLS ROAD ROCKY MOUNT 27804	U 064 A L 919 442-3516	WHITENER, BETTY LOU P. O. BOX 220 OAK RIDGE, LA 71264	FP 039 A AC 318 647-3720
WESTON, BRENT WILLIAM 301 OLD FOX TRAIL DURHAM 27713	PD 032 R 919 489-1765	WHITAKER, JAMES ALLEN, III 1700 S. TARBORO ST. WILSON 27893	CD /IM 098 A AC 919 291-1300	WHITENER, DONALD LEONARD 2927 LYNDDURST AVENUE WINSTON-SALEM 27103	OBG 034 A AC 919 765-9350
WESTON, JONATHAN D. 495 N. CLEVELAND AVE. WINSTON-SALEM 27101	OBG 034 A AC 919 725-8874	WHITAKER, RICHARD HARPER 120 N. CHERRY ST. KERNERSVILLE 27284	GP 034 A L/RT 919 993-3838	WHITENER, ROBERT WILFONG 1024 PROFESSIONAL VILLAGE GREENSBORO 27401	P 041 AC 919 274-1250
				WHITESIDE, JOHN HARVEY 150 PROVIDENCE ROAD CHARLOTTE 28207	OBG 060 A AC 704 377-0461

WHITESIDES, EDWARD STEELE 902 COX ROAD, SUITE D GASTONIA 28054	ORS 036 A AC 704 864-6723	WILKINS, ROBERT HENRY BOX 3807, DUMC DURHAM 27710	NS 004 A AC 919 684-2549	WILLIAMS, MARK E. 5039 OLD CLINIC BLDG. 226H UNC, SCH.OF MED. CB #7110 CHAPEL HILL 27599	IM /GER 032 AC
WHITESIDES, EDWARD WM. 1108 WILLOW DR. CHAPEL HILL 27514	032 R 919 967-7440	WILKINS, STANLEY A., JR. 3100 BLUE RIDGE RD. RALEIGH 27607	OTO /HNS 092 A P AC 919 787-1374	WILLIAMS, MARTIN KEITH F-6 DOCTORS PARK APTS. GREENVILLE 27834	074 A S 919 752-8619
WHITFIELD, PETER WHITE 201 E. WENDOVER AVE. GREENSBORO 27401	ORS 041 A AC 919 274-1957	WILKINSON, CHARLES ALBERT 1501 MEDICAL CENTER DRIVE WILMINGTON 28401	GS /TS 065 AC 919 763-6289	WILLIAMS, MCCORD 3954 CHURCHILL ROAD CHARLOTTE 28211	GS 060 A L/RT 704 364-5363
WHITLEY, ROBERT RILEY P. O. BOX 1689 REIDSVILLE 27320	FP 079 AC 919 349-5040	WILKINSON, JAMES SPENCER, SR. 215 BRYAN BLDG. RALEIGH 27605	D 092 A * L 919 832-6044	WILLIAMS, PAUL FORRESTER 711 HERMITAGE ROAD BURLINGTON 27215	IM 001 A AC 919 226-9317
WHITLOCK, GARY THOMAS, III 114 S. TRYON ST. CHARLOTTE 28202	EM 060 A P AC 704 332-3664	WILKINSON, ROBERT HOLDEN, JR. BOX 3949, DUMC DURHAM 27710	NM /R 032 A AC 919 681-2711	WILLIAMS, PAUL FRANKLIN 200 MEMORIAL DRIVE JACKSONVILLE 28540	OBG 067 A AC 919 353-2115
WHITNEY, PAMELA JOYCE 3320 EXECUTIVE DR., STE. 218 RALEIGH 27609	N 092 A AC 919 872-0940	WILL, THOMAS AUGUSTINE P. O. BOX 515 DALLAS 28034	GP 036 A AC 704 922-3106	WILLIAMS, R. BERTRAM, JR. 1414 MEDICAL CENTER DRIVE WILMINGTON 28401	GS /TS 065 A P * AC 919 763-7363
WHITWORTH, CLAUDE PHILLIP RT. 3, BOX 315 BB FOREST CITY 28043	IM 081 AC 704 286-9036	WILLCOCKSON, WILLIAM S. 503 SHARON RD. CHAPEL HILL 27514	EM 001 A AC 919 228-1371	WILLIAMS, RANDAL JAMES P. O. BOX 2588 HICKORY 28603	OPH 018 A AC 704 322-2050
WHYTE, THOMAS M. 635 WINNETKA CT. ASHEBORO 27203	FP 074 A R 919 551-4611	WILLE, CARL RICHARD DOCTOR'S PK, BLDG. 1 GREENVILLE N C 27834	OPH 074 A AC 919 758-4166	WILLIAMS, RANDOLPH MEADE 117 MEDICAL DRIVE GREENVILLE 27834	ORS 074 A AC 919 758-1777
WICKER, JOSEPH BEAMAN PHYSICIANS QUAD., BLDG. F GREENVILLE 27834	AN 074 A AC 919 752-2140	WILLETT, EUGENE STANLEY 111 VICTORIA AT OAKLAND RD. ASHEVILLE 28801	ORS 011 A AC 704 252-7331	WILLIAMS, RHODERICK T., JR 114 WOODLAND ROAD ROANOKE RAPIDS 27870	DR 042 AC 919 535-2121
WIDENER, HERBERT LLOYD 1350 S. KINGS DRIVE CHARLOTTE 28207	RHU /IM 060 A AC 704 372-8750	WILLETT, ROBERT W. 2800 BLUE RIDGE BLVD. STE 503 RALEIGH 27607	IM /N 092 AC 919 782-7500	WILLIAMS, ROBERT 2305 HATHAWAY ROAD RALEIGH 27608	DR 092 A L/RT 919 833-5645
WIDNER, LARRY ALLEN 1310 KENSINGTON DR. HIGH POINT 27260	R 040 A AC 919 887-1926	WILLHIDE, MARGARET JANE P. O. BOX 1460 STATESVILLE 28677	PD /A 049 AC 704 873-0281	WILLIAMS, ROBERT CYRUS, JR. FAIRGROVE CHURCH ROAD BOX 2484 HICKORY 28603	OTO 018 A P * AC 704 322-3725
WIEGAND, STEVEN FREDERICK 10305 WHITESTONE ROAD RALEIGH 27609	EM /FP 092 A AC 919 848-9471	WILLIAMS, BARRY NEIL 1328 ASHLEY SQUARE WINSTON-SALEM 27103	P 034 A P AC 919 765-5092	WILLIAMS, ROBERT LEE 2004 CLAXTON DRIVE WINSTON-SALEM 27107	PD 034 A AC 919 785-0037
WIER, FRED EUGENE 506 WOOD ST. TROY 27371	GS /CDS 062 A AC 919 572-3737	WILLIAMS, CHARLES D. 734 LANSDOWNE RD. CHARLOTTE 28226	PUD /IM 060 A AC 704 366-6687	WILLIAMS, SAMUEL CLAY 2637 AUDUBON DR. WINSTON-SALEM 27106	IM 034 A AC 919 722-3838
WIGGINS, THOMAS BARNES 3155 MAPLEWOOD AVE. WINSTON-SALEM 27103	DR 034 A AC 919 760-5866	WILLIAMS, CHARLES EMERY 285 MCDOWELL STREET ASHEVILLE 28803	OTO /HNS 011 AC 704 252-1853	WILLIAMS, SUSAN JEAN 300 S. HAWTHORNE RD. DEPT. OF FAMILY MED. WINSTON-SALEM 27103	FP 034 A AC 919 748-4479
WIGGS, WILLIAM J., JR. 201 PINERIDGE DR. GREENVILLE 27834	074 A * S 919 757-3384	WILLIAMS, DAVID LEON 540 N. W. BROAD STREET SOUTHERN PINES 28387	IM /HEM 063 A AC 919 692-2061	WILLIAMS, WARREN HERBERT PO BOX 3864 GASTONIA 28054	U 045 A AC 704 788-8400
WILCOX, BENSON REID UNC, CB 7065 BURNETT-WOMACK 229-H CHAPEL HILL 27599	CDS 032 A AC 919 966-3381	WILLIAMS, DAVID R. 512 6TH AVE. WEST HENDERSONVILLE 28739	P 029 A AC 919 475-2348	WILLIAMS, WILLIAM M., III 2131 S 17TH STREET WILMINGTON 28402	PD 029 AC 919 343-7074
WILCOX, WILLIAM DAVID 116 CRUTCHFIELD ST. DURHAM 27704	OPH 032 A AC 919 477-8050	WILLIAMS, DAVID ROBERT 200 ARTHUR DRIVE THOMASVILLE 27360	IM /CD 032 A AC 919 682-5561	WILLIAMS, WILLIAM THOMAS, JR. MAIN ST., BOX 1570 DAVIDSON 28036	IM /PD 060 A AC 704 892-7905
WILEY, ALBERT LEE, JR. ECU SCHOOL OF MEDICINE DEPT. OF RADIATION ONCOLOGY GREENVILLE 27858	TR /NM 074 A AC 919 551-2900	WILLIAMS, EDWARD SUTHERLIN 306 S. GREGSON STREET DURHAM 27701	GS /TS 036 A RT 704 864-1417	WILLIAMSON, JOSEPH EDWARD PITT MEMORIAL HOSPITAL GREENVILLE 27834	EM /FP 074 A AC 919 355-2370
WILFERT, CATHERINE M. MINOCK BOX 2951, DUMC DURHAM 27710	PD /ID 032 AC 919 684-6610	WILLIAMS, ERNEST COUNCIL 3618 CLUB COLONY DR., W. GASTONIA 28054	OTO 023 A P AC 704 487-9088	WILLIAMSON, JOYCE M. 3535 RANDOLPH ROAD, 101-W CHARLOTTE 28211	D 060 A AC 704 364-6110
WILFONG, ROBERT FARRINGTON 2713 NEUSE BLVD. NEW BERN 28560	NS 025 A AC 919 633-6070	WILLIAMS, JACK DEAN 209-B LEE ST. PO BOX 1968 SHELBY 28150	FP 034 AC 919 748-2833	WILLIAMSON, LINDA J. PO BOX 35171 GREENSBORO 27425	000 R 919 282-2764
WILHELMSEN, BRUCE 117 MEDICAL DRIVE GREENVILLE 27834	ORS 074 A AC 919 758-1777	WILLIAMS, JAMES JOS. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	GYN 041 A L 919 272-8833	WILLIAMSON, ROSSIE MARSHALL 3004 WEDGEWOOD DR. CEDAR CREEK VILLAGE N. MYRTLE BEACH, SC 29582	GP 024 A L/RT 803 249-2126
WILHOIT, RANDALL D., III 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	AN 034 AC 919 748-4498	WILLIAMS, JOHN DUDLEY, JR. 1715-A W. MARKET ST. GREENSBORO 27403	IM 092 A AC 704 693-0797	WILLIAMSON, STEVEN G. 2033 SCOTT AVE. CHARLOTTE 28203	000 A R 704 338-2000
WILKERSON, ANNIE LOUISE 100 S. BOYLAN AVENUE RALEIGH 27603	OBG /GYN 092 A * L 919 832-5529	WILLIAMS, JOHN HOWARD 905 W. JOHNSON ST. RALEIGH 27605	R 045 AC 919 551-4822	WILLIAMSON, WARREN LIGON 295 WEST 27TH STREET LUMBERTON 28358	GS 078 AC 919 738-8556
WILKERSON, E. RANDOLPH, JR. 3535 RANDOLPH ROAD CHARLOTTE 28211	OPH 060 A * AC 704 364-8576	WILLIAMS, JOHN HOWARD PARDEE MEMORIAL HOSPITAL HENDERSONVILLE 28739	CDS 074 A AC 919 768-7030	WILLIFORD, JOHN KENNETH P. O. BOX 579 LILLINGTON 27546	FP 043 A * AC 919 893-3392
WILKERSON, LOUIS REAMS 100 S. BOYLAN AVENUE RALEIGH 27603	OBG 092 A * AC 919 832-5529	WILLIAMS, JOHN MARK ECU SCHOOL OF MED. DEPT. OF SURGERY GREENVILLE 27858	PD 034 A AC 919 735-1253	WILLIFORD, PHILLIP MABON P. O. BOX 1249 WHITEVILLE 28472	IM 024 A AC 919 642-8157
WILKINS, KENNETH WORTH P. O. BOX 1977 GOLDSBORO 27530	GYN 096 A AC 919 735-1253	WILLIAMS, KENAN BANKS 3175 MAPLEWOOD AVENUE WINSTON-SALEM 27103	AN 018 A AC 704 322-0870	WILLIFORD, ROBERT EARL 208 FOUST STREET ASHEBORO 27203	FP 076 A AC 919 625-4000
WILKINS, KENNETH WORTH, JR. 702 NEWMAN ROAD MCCARTHY SQUARE NEW BERN 28560	IM 025 AC 919 633-5333	WILLIAMS, LARRY THOMAS PO BOX 1362 HICKORY 28603	IM 054 A L/RT 919 522-3753	WILLINGHAM, SHARON J. G. 1315 S. GLENBURNIE PO BOX 2068 NEW BERN 28560	P 025 A AC 919 636-5503
WILKINS, LUCIEN SANDERS 1202 MEDICAL CENTER DRIVE WILMINGTON 28401	GE 065 AC 919 341-3346	WILLIAMS, LYNWOOD EARL 2114 HARDEE ROAD KINSTON 28501			

WILLIS, H.S.K., JR. 125 W. CENTRAL AVE. MOUNT HOLLY 28120	FP /AM 036 A AC 704 827-5876	WILSON, VIRGIL ARCHIBALD 4193 DIMHOLT COURT WINSTON-SALEM 27104	AN 034 A P AC 919 765-8452	WITTENBERG, PETER HERBERT GASTON MEM. HOSP. PO BOX 1747 GASTONIA 28053	PTH 036 AC 704 866-2851
WILLIS, LARRY FRANKLIN 335 E. PARKER ROAD MORGANTON 28655	OPH 012 AC 704 433-6220	WILSON, WILLIAM LENOIR WEDGEWOOD APT. #23 740 E. SMALLWOOD DR. RALEIGH 27605	PH 092 A L/RT 919 828-2940	WITTSTEIN, PETER BRIAN 1904 TRADD COURT WILMINGTON 28401	OPH 065 AC 919 762-0057
WILLIS, LINDA LEE 130 SHADY KNOLL GREENVILLE 27834	074 A S 919 752-9218	WILSON, WILLIAM PRESTON P. O. BOX 2347 BURLINGTON 27216	P 032 A L/RT 919 229-6049	WITWER, TIMOTHY SLAYTON 1207 N. ROAD ST. ELIZABETH CITY 27909	IM /FP 070 A P AC 919 335-4351
WILLIS, ROBERT FREDERICK 204 S. MAIN STREET HOPE MILL 28348	FP 026 A P AC 919 424-6644	WIMMER, JOHN EASTER, JR. ECU SCHOOL OF MEDICINE GREENVILLE 27834	NPM 074 AC 919 551-4787	WOLANSKI, TERRENCE PHILIP 118 MEMORIAL DRIVE JACKSONVILLE 28540	PUD /IM 067 AC 919 353-1811
WILLIS, STEPHEN EDGAR 1748 BEAUMONT DR. GREENVILLE 27834	FP 074 A AC 919 551-4611	WINFIELD, HEBER GREY, III 250 18TH ST. CIRCLE, SE HICKORY 28602	ORS 018 AC 704 322-5172	WOLFBURG, BERNARD 17 CUB DR. THOMASVILLE 27360	P 029 AC 919 475-8184
WILLITTS, BRUCE KIRBY P. O. BOX 1808 LAURINBURG 28352	OBG 083 A P AC 919 276-4432	WINFIELD, JOHN BUCKNER UNC 932 FLOB CB #7280 CHAPEL HILL 27599	RHU /IM 032 AC 919 966-4191	WOLFE, ANN FIERRO 6912 HUNTERS WAY RALEIGH 27615	PD 092 * AC 919 733-3816
WILLMOT, MICHAEL HENRY PO BOX 993 THOMASVILLE 27361	GS 029 A AC 919 472-4433	WING, RICHARD LEE PO BOX 32861 CHARLOTTE MEM. HOSPITAL CHARLOTTE 28232	OBG 060 A AC 704 338-3149	WOLFE, JOHN RICHARD 2933 MAPLEWOOD AVENUE WINSTON-SALEM 27103	IM /RHU 034 A P AC 919 765-1640
WILLSON, CHARLES FREDERICK 1800 W. FIFTH ST. GREENVILLE 27834	PD 074 A P * AC 919 752-7141	WINGERT, JOHN GEORGE 1955 RANDOLPH ROAD CHARLOTTE 28207	OBG 060 A AC 704 376-3536	WOLFE, WALTER GEORGE BOX 3507, DUMC DURHAM 27710	CDS /TS 032 A AC 919 684-4117
WILSHIRE, LARRY BRENT 825 GUM BRANCH RD., STE. 133 JACKSONVILLE 28540	OPH 067 A P AC 919 346-2444	WINGFIELD, THOMAS WHETSELL 629 TORRENCE DRIVE GASTONIA 28052	AN 036 AC 704 864-2499	WOLFF, GEORGE THOMAS 1016-A PROFESSIONAL VILLAGE GREENSBORO 27401	FP 041 AC 919 379-1156
WILSON, A. ROSS, JR. 401 N. HERMAN ST. GOLDSBORO 27530	OTO 096 A AC 919 735-9146	WINKER, JOEL EDWARD P. O. BOX 1208 RUTHERFORDTON 28139	OBG 081 A P AC 704 287-7383	WOLFMAN, NEIL TURNER BOWMAN GRAY, DEPT. OF RAD. WINSTON-SALEM 27103	R 034 AC 919 748-2471
WILSON, B. HADLEY 1960 RANDOLPH RD. CHARLOTTE 28207	CD 060 A AC 704 373-1503	WINN, BARBARA JANE PETERS 605 PEDEN STREET LAURINBURG 28352	IM 083 AC 919 276-6637	WOLICKI, KAROL T. 321 W. WENDOVER AVE. GREENSBORO 27408	OTO 041 A AC 919 379-9445
WILSON, CATHERINE MARIE 143 ASHELAND AVENUE ASHEVILLE 28801	OBG 011 A AC 704 258-9191	WINSLOW, FRANCIS EDWARD, JR. 3001 ESSEX CIRCLE RALEIGH 27608	PD 092 A AC 919 782-0021	WOLTZ, JOHN HENRY EARLY 150 PROVIDENCE ROAD CHARLOTTE 28207	GYN 060 A L 704 377-0461
WILSON, CATHY JO 138 IVY DR. 8 CHARLOTTESVILLE, VA 22901	AN 000 R 804 296-8084	WINSLOW, JAMES ELBERT 609 PROFESSIONAL DR. ROXBORO 27573	FP 073 A P AC 919 599-9258	WOOD, KENNETH ERVIN 1350 S. KINGS DRIVE CHARLOTTE 28207	ORS 060 A AC 704 372-8750
WILSON, CHARLES HARRISON 1317 N. ELM ST., STE. 1 GREENSBORO 27401	CDS /TS 041 A AC 919 373-8245	WINSLOW, JAMES WEEKS 101 CLINIC DRIVE TARBORO 27886	FP 033 A AC 919 823-2105	WOOD, SHERROD NEWBERRY 111 RAILROAD STREET ENFIELD 27823	GP 042 AC 919 445-5233
WILSON, CLARENCE L., II 1809 GLEN MEADE ROAD WILMINGTON 28403	OBG 065 A P AC 919 763-9833	WINSLOW, ROBERT BROWN 2501 NORTH ST., STE. 500 RALEIGH 27607	PS /GS 092 AC 919 782-7762	WOOD, WILLIAM BAINSTER UNC, 231 MACNIDER BLDG. CB 7000	IM /PUD 032 A * AC 919 962-2118
WILSON, EDWARD T. 32 UNIVERSITY CONDOMINIUMS GREENVILLE 27834	074 A S 919 752-3720	WINSTEAD, JOHN LINDSAY, JR. SUITE #1, MEDICAL PAVILION 1800 W. FIFTH ST. GREENVILLE 27834	GS 074 A AC 919 752-2159	WOOD, WILLIAM LUPTON, SR. P. O. BOX 367 YADKINVILLE 27055	GP 086 A L/RT 919 679-8689
WILSON, FRANK CRANE N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514	ORS 032 A AC 919 966-3359	WINTER, KENNETH HOWE 3307 WALDRON DRIVE GREENSBORO 27408	R 041 A AC 919 855-8972	WOODALL, HAL BREEN BOX 878 KENLY 27542	IM 098 A AC 919 284-5151
WILSON, FRANK ELMORE ROUTE #3, LEONA ROAD LENOIR CITY, TN 37771	PH /GPM 000 RT 615 986-6315	WINTERS, RICHARD R. WALKER 1425 GLENBURNIE RD. NEW BERN 28560	PS 025 A P AC 919 637-6800	WOODALL, LEONARD SCHMICH 711 NORTH STREET SMITHFIELD 27577	OBG 051 A AC 919 934-7696
WILSON, HENRY VANPETERS, III 3535 RANDOLPH RD., 201-W CHARLOTTE 28211	GS /TS 060 A AC 704 364-8100	WISE, DANIEL EDWIN 1413 ELIZABETH AVE. CHARLOTTE 28204	CD 060 AC 704 372-8750	WOODARD, BARNEY LELON P. O. BOX 129 KENLY 27542	GP 051 A L 919 284-3080
WILSON, JACK KENNEDY, JR. 637 S. KERR AVENUE WILMINGTON 28403	IM 065 AC 919 799-1810	WISE, FRED EUGENE, JR. 1350 S. KINGS DRIVE CHARLOTTE 28207	DR 060 A P AC 704 372-8750	WOODARD, JERRY CLEON 1700 S. TARBORO ST. WILSON 27893	GE /IM 098 A P * AC 919 291-1300
WILSON, JACK KENNEDY, SR. 1908 HAWTHORNE ROAD WILMINGTON 28403	GP 065 A RT 919 763-5536	WISE, JOHN EDNEY 1624 N. CENTER STREET HICKORY 28601	IM 018 A AC 704 328-2094	WOODARD, MARSHALL WAYNE 607 FLATIRON BUILDING ASHEVILLE 28801	OPH 011 A L 704 252-5668
WILSON, JAMES STEPHENSON 1830 HILLDALE ROAD DURHAM 27705	GS 032 A L 919 383-5531	WISSING, JOEL ALLEN 1611 E. THIRD ST. CHARLOTTE 28204	R 060 A AC 704 333-0224	WOODARD, PAMELA K. 201 ALEXANDER ST. APT. AA DURHAM 27705	032 A S 919 684-7402
WILSON, LAWRENCE STEVEN VALDESE DOCTORS' CLINIC P. O. BOX 700 VALDESE 28690	U 012 A P AC 704 874-4890	WITHERINGTON, DEXTER T. P. O. BOX 1316 KINSTON 28501	GS 054 A RT 919 522-1626	WOODARD, PAUL RICHARD 1825 ST. MARY'S ST. RALEIGH 27608	AN 092 A AC 919 755-8000
WILSON, MOSES ELLUED 140 N. ENGLEWOOD DR. ROCKY MOUNT 27801	OBG 064 AC 919 937-6611	WITHERS, ABNER CARR BOX 38 DREXEL 28619	FP 012 A AC 704 437-3694	WOODARD, SABRA ALDERMAN 1825 ST. MARY'S STREET RALEIGH 27608	R /NM 092 A AC 919 755-3023
WILSON, PATRIC ALOYSIUS RT. #3, BOX 213 CHAPEL HILL 27516	032 A S 919 967-8931	WITHERS, LARRY DALE 150 ELLERSLIE DR. FAYETTEVILLE 28303	AN 026 A P AC 919 864-5117	WOODARD, WARDEN LEWIS, III 2220 HAMILTON MILL RD. CHARLOTTE 28226	IM /ON 060 A AC 704 372-3350
WILSON, ROEBY BRYANT 1330 W. SECOND AVENUE GASTONIA 28052	GP 036 A L/RT 704 865-3940	WITHERS, SYDNOR TERRY, JR. 5305 WRIGHTSVILLE AVE. BLDG. E WILMINGTON 28403	IM /FP 065 AC 919 791-5426	WOODBURY, MARGARET H. 4-A BRIARBRIDGE LN. CHAPEL HILL 27514	032 A S 919 968-6077
WILSON, SAMUEL ALLEN 710 E. PARK DR. LINCOLNTON 28092	GP 055 A L/RT 704 735-8548	WITHERS, SYDNOR TERRY, SR. 905 N. QUEEN STREET KINSTON 28501	D 054 A P * AC 919 523-3289	WOODHOUSE, SHERRY L. PO DRAWER 680 LENOIR 28645	PTH 014 AC 704 758-2114
WILSON, STEPHEN GLENN, SR. P. O. BOX 158 ANGIER 27501	GP 043 A L/RT 919 639-2574	WITTEN, ERNEST ROBERT SIDNEY 80 WEMBLEY RD. ASHEVILLE 28804	IM 011 A L 704 253-5707	WOODLEY, DAVID TIMOTHY NCMH, DEPT. OF DERM. ROOM 137 CHAPEL HILL 27514	D /IM 032 A * AC 919 966-4506

ALPHABETICAL LIST OF MEMBERS

121

WOODRUFF, LEON FESTUS, JR. 2800 BLUE RIDGE,BLVD.,STE. 502 RALEIGH 27607	OBG 092 A * AC 919 781-5510	WRAY, RICHARD HENRY, III 15 MEDICAL PARK MOREHEAD CITY 28557	TS /GS 016 AC 919 247-2101	YAKEL, DONALD L. 1828 NORTHWINDS DR. WINSTON-SALEM 27127	034 A S 919 788-3468
WOODRUFF, RALPH DUTTON BOWMAN GRAY, DEPT. OF PATH. WINSTON-SALEM 27103	PTH 034 AC 919 748-4311	WRENN, EDWARD HOWARD 154 RIDGE TRAIL CHAPEL HILL 27514	032 S 919 929-4113	YANCY, WILLIAM SAMUEL 306 S. GREGSON STREET DURHAM 27701	PD /ADL 032 A AC 919 688-6349
WOODRUFF, WILLIAM W., III PO BOX 5007 HIGH POINT 27262	DR 040 A AC 919 884-6037	WRENN, RICHARD NICKLES PO BOX 32861 CHARLOTTE MEM. HOSP. CHARLOTTE 28232	ORS 060 A AC 704 338-4257	YAP, ELSA DUMAUG CABARRUS MEMORIAL HOSPITAL CONCORD 28025	PTH 013 A AC 704 788-5987
WOODS, JAMES WATSON, JR. UNC SCHOOL OF MEDICINE CHAPEL HILL 27514	CD /IM 032 L/RT 919 942-4627	WRIGHT, BRENT DEAN 2131 S. 17TH ST. WILMINGTON 28401	OBG 065 AC 919 343-0161	YARBOROUGH, JESSE G., JR. RT. 1, BOX 125 CATAWBA COVE RD. BELMONT 28012	AN 036 A P AC
WOODS, JON POINTON 113 PUREFOY ROAD, APT. D CHAPEL HILL 27514	032 A S 919 942-0654	WRIGHT, CHARLES NEWBOLD PO BOX 218 JARVISBURG 27947	FP 070 A P L/RT 919 491-2446	YARBOROUGH, MICHAEL F. 3400 EXECUTIVE DR. STE. 104 PO BOX 17200 RALEIGH 27619	GS /TS 092 A AC 919 876-2732
WOODS, THOMAS J. C. WOODSIDE PROF. BLDG. CLINTON 28328	OPH /EM 082 A AC 919 592-7860	WRIGHT, DAVID ORLO CHOWAN MEDICAL CENTER EDENTON 27932	FP 021 A AC 919 482-2116	YARBROUGH, JOHN WARD 2750 LAUREL STREET, STE. 305 COLUMBIA, SC 29204	TS 041 A AC 803 254-5140
WOODWARD, ROBERT WARREN 517 WOODROW ST. PO BOX 448 REIDSVILLE 27320	OBG 079 AC 919 342-6161	WRIGHT, ELIZABETH ANN 420 N. CENTER ST. HICKORY 28601	N 018 A AC 704 327-4419	YARBROUGH, WENDELL GRAY 407 MASON FARM RD. APT. D CHAPEL HILL 27514	032 A S 919 924-2447
WOODWORTH, ALFRED H. 224 SEAGULL LANE WILMINGTON 28403	FP /EM 065 AC 919 392-3216	WRIGHT, EUGENE EDWARD, JR. 1738 METROMEDICAL DR. FAYETTEVILLE 28304	IM 026 A AC 919 323-2503	YARLEY, DEWEY HOBSON 2609 N. DUKE STREET DURHAM 27704	IM 032 A AC 919 471-8481
WOODWORTH, THOMAS BELL 1657 OWEN DRIVE FAYETTEVILLE 28304	FP 026 A * AC 919 484-6540	WRIGHT, JAMES RHODES 528 WADE AVENUE RALEIGH 27605	OTO /OPH 092 A L 919 834-8251	YEATTS, ROBERT P. 300 S. HAWTHORNE RD. DEPT. OF OPH. WINSTON-SALEM 27103	OPH /PSF 034 A * AC 919 748-4091
WOODY, JOE HARRIS 4335 COLWICK RD. CHARLOTTE 28211	OPH 060 A P AC 704 364-7400	WRIGHT, JAMES THURMAN 108 FRONT STREET BELHAVEN 27810	GP 007 A L 919 943-2375	YELLIG, EDWARD BOOTH 2800 BLUE RIDGE BLVD. STE. 503 RALEIGH 27607	IM 092 P * AC 919 782-7500
WOODY, JOHN W. AUSTIN 900 LYNN ROAD TRYON 28782	FP 075 A L/RT 704 859-9483	WRIGHT, JOHN HERMAN, JR. FUQUAY-VARINA 27526 2901 MAPLEWOOD AVENUE WINSTON-SALEM 27103	GP 092 A L/RT 919 552-2728	YENNEY, MATTHEW F.J., JR. 1031 NOELL LANE PO BOX 111 ROCKY MOUNT 27802	PS /GS 034 A AC 919 443-9101
WOOLFITT, SANDRA S. 604 WALTER REED RD. GREENSBORO 27403	ON 041 A P AC 919 294-2670	WRIGHT, JOHN JOSEPH 105 LAUREL HILL CIRCLE CHAPEL HILL 27514	PH 032 A L/RT 919 942-4557	YEREX, JOYCE ALICE 908 PLANTATION DR. NEW BERN 28560	PH 032 A AC 919 633-1010
WOOLLEN, THOMAS H., JR. 2406 PARKWAY DR. WINSTON-SALEM 27103	034 A * S 919 722-6459	WRIGHT, PAUL HARLAN 1901 HILLANDALE ROAD DURHAM 27705	ORS 032 A P * AC 919 383-1511	YODER, CHARLES DEWAYNE 50 DOCTOR'S DR., STE. 304M ASHEVILLE 28801	PD /NPM 011 AC 704 253-1998
WOOTEN, CECIL WILLIAM, JR. P. O. BOX 1577 KINSTON 28501	GP 054 L/RT 919 523-3496	WRIGHT, RICHARD B., JR. 102 MOCKSVILLE AVENUE SALISBURY 28144	FP 080 L 704 633-6010	YOFFE, MARK PO BOX 30098 RALEIGH HEM/ONCOLOGY CLI. RALEIGH 27622	ON /HEM 092 AC 919 781-7070
WOOTEN, ELEANOR JANE H. 904 WILLIAMSON DRIVE RALEIGH 27608	PD /PH 092 AC 919 832-4097	†WRIGHT, ROBERT L. 409 CARTHAGE ST. DECEASED--5-16-88 SANFORD 27330	OPH 053 A * 919 776-7549	YOHAY, DANIEL ALAN 3-M POST OAK RD. DURHAM 27705	032 R
WOOTEN, JOHN LEMUEL 6 MEDICAL PAVILION GREENVILLE 27834	ORS 074 A * AC 919 752-4613	WRIGHT, WALTER LEE 1908 ELEANOR ST. KINSTON 28501	OPH 054 A * AC 919 522-1611	YONGUE, ALFRED HARRIS MEDICAL PAVILION, SUITE #9 GREENVILLE 27834	P 074 P AC 919 758-3145
WOOTEN, STEPHEN LAMONT 622 MEDICAL DR. GREENVILLE 27834	ORS /HS 074 A AC 919 752-4613	WROCZYNSKI, BRIAN F. 1524 PHILLIPS DR. SANFORD 27330	EM /FP 053 A AC 919 775-7140	YONGUE, JUDITH S. 107-C COMMERCE ST. GREENVILLE 27858	P /FP 074 A P * AC 919 355-2768
WOOTEN, WAYNE BROWN 401 MOCKSVILLE AVE., STE. 201 SALISBURY 28144	DR 080 AC 704 633-1023	WU, WALLACE CHI LI 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	GE /IM 034 AC 919 748-4603	YOPP, JAMES DENNIE, JR. 602 FORSYTH MEDICAL PARK WINSTON-SALEM 27103	CD /IM 034 A P AC 919 765-4871
WORDEN, NEIL ASHTON 116 ROWAN STREET FAYETTEVILLE 28301	FP 026 A AC 919 483-0463	WYCHE, JOSEPH THOMAS RT. #7, BOX 30 WHITEVILLE 28472	FP 024 A L/RT 919 642-2706	YORK, SHELLEY CLYDE, JR. 1300 LEXINGTON AVENUE THOMASVILLE 27360	GS 029 AC 919 475-2376
WOLF, RICHARD CHARLES 508 WOOD STREET TROY 27371	FP 062 AC 919 572-3656	WYKER, ROBERT T. PO BOX 10707 RALEIGH 27605	ORS 092 A AC 919 781-5600	YOSHINO, PAUL HARUTAKA 1315 MORRENE RD. APT. 27-J DURHAM 27705	032 A S 919 383-6059
WORKMAN, JOSEPH BERKELEY 219 COUNTRY CLUB DRIVE DURHAM 27712	NM /IM 032 A AC 919 681-2711	WYMAN, JOHN SHELDON 715 FLEMING ST. ENDERSONVILLE 28739	EM /IM 045 AC 704 693-6522	YOUNCE, LAURA L. H. 4361 JOHNSBOROUGH CT., APT 78 WINSTON-SALEM 27104	034 A S 919 768-5971
WORLAND, DAVID ERIC 1816 PEMBROKE RD., STE. #2 GREENSBORO 27408	AN 041 AC 919 272-3720	WYMAN, ROBERT WEST 110 WADDELL STREET SELMA 27576	FP 051 A AC 919 965-3055	YOUNG, CHARLES GIBSON 403 W. HARRISON STREET P. O. BOX 359 REIDSVILLE 27320	IM /OM 079 AC 919 349-5536
WORLEY, GORDON, III 307 BIRCH CIRCLE CHAPEL HILL 27514	PD 032 AC 919 683-6890	WYNIA, VIRGIL HOWARD 3020 NEW BERN AVE. #420 RALEIGH 27610	CD /IM 092 A AC 919 781-7557	YOUNG, CHARLES RICHARD 102 DAVID DR., F-2 GREENVILLE 27834	074 A S 919 752-2918
WORLEY, JAMES HARR 675 BILTMORE AVENUE ASHEVILLE 28803	GS 011 A L 704 254-2361	WYNN, ROY SPURGEON 1721 OAKLAWN AVENUE CHARLOTTE 28216	OPH 060 A L/RT 704 332-2035	YOUNG, CLINTON DRIVER 1018 N. ELM STREET GREENSBORO 27401	PUD /A 041 A AC 919 275-7238
WORTH, THOMAS CLARKSON 500 LAKE BOONE TRAIL RALEIGH 27608	R 092 A L/RT 919 787-6449	WYNN, TONJA MICHELLE 136-B PUREFOY RD. CHAPEL HILL 27514	032 A S 919 929-4216	YOUNG, DANIEL TEST UNC,338 CLINICAL SCI. 229-H CHAPEL HILL 27514	CD /IM 032 AC 919 966-4602
WORTMAN, JAMES EDWARD 715 FOREST HILLS DRIVE WILMINGTON 28403	ON /HEM 065 AC 919 763-5182	WYSOR, WILLIAM GEOFFREY, JR. 306 S. GREGSON STREET DURHAM 27701	IM /GE 032 A AC 919 682-5561	YOUNG, DAVID ALEXANDER 1546 IREDELL DR. RALEIGH 27608	P /PYA 092 A L 919 834-0821
WORTMAN, WILLIAM J., JR. 2711 RANDOLPH RD. #309 CHARLOTTE 28207	GYN /OBS 060 * AC 704 376-1580	YADAV, SANJAY SINGH BOX 3053, DUMC DURHAM 27710	N /IM 032 A R 919 286-2352	YOUNG, JOHN ADAM, II 1600 E. THIRD STREET CHARLOTTE 28204	OPH 060 A AC 704 372-3300
WOTRING, JAMES WILLIAM, JR. P. O. BOX 38 HICKORY 28601	OBG 018 A AC 704 322-4140				

YOUNG, KYLE ALLEN P. O. BOX 13005 GREENSBORO 27415	DR 041 A AC 919 379-4144	YURKO, ANTHONY ANDREW ROUTE #1, BOX 440 TRYON 28782	GS 075 A RT 704 859-5133	ZEMP, CHARLES H., JR. 226-H MORGANTON BOULEVARD LENOIR 28645	PD 014 AC 704 758-5111
YOUNG, MICHAEL HARRILL 50 DOCTOR'S DR., STE. 215 ASHEVILLE 28801	N/IM 011 A P AC 704 252-6066	YURKO, JOHN EVANS 15 MEDICAL PARK MOREHEAD CITY 28557	GS 016 AC 919 247-2101	ZEOK, JOHN VICTOR 3400 EXECUTIVE DR. STE. 102 RALEIGH 27609	CDS/TS 092 A AC 919 872-8080
YOUNG, NOEL WILLIAM, JR. 2609 N. DUKE STREET DURHAM 27704	OPH 032 A AC 919 471-8495	ZACK, PETER GEORGE 3827 SYLVAN DR. WILMINGTON 28403	PD 065 AC 919 791-7031	ZERBY, GLENN ALAN 143 NICKLAUS DR. GARNER 27529	EM/IM 092 A AC 919 783-3038
YOUNG, PETER RUSSELL 1317 N. ELM ST., STE. 5 PO BOX 10037 GREENSBORO 27404	GS 041 A AC 919 274-8444	ZAGORIA, RONALD JAY 300 S. HAWTHORNE RD. DEPT. OF RADIOLOGY WINSTON-SALEM 27103	R 034 A AC 919 748-4316	ZERVAS, JEFFREY PAUL 116 HOSPITAL DR. CLYDE 28721	OPH 044 AC 704 452-5816
YOUNG, RICHARD L. 603 BEAMAN ST. CLINTON 28328	ORS 082 A P AC 919 592-5004	ZAJAC, IRENE M. 2686 MULBERRY LANE ARLINGTON SQUARE APTS. GREENVILLE 27858	074 A S 919 355-7835	ZETTL, MATTHEW LEE 15 MEDICAL PARK MOREHEAD CITY 28557	ORS 016 AC 919 247-2101
YOUNG, ROBERT LASSITER, JR. 103 WEST 27TH STREET LUMBERTON 28358	PD 078 AC 919 739-3318	ZAMMIT, ROBERT PAUL 406 FORSYTH MEDICAL PARK WINSTON-SALEM 27103	OBG 034 A AC 919 765-2232	ZICH, MICHAEL JOHN 608 TILGHMAN DR. DUNN 28334	OBG 043 A AC 919 892-4092
YOUNG, W. P. WILTSEE STUDENT HEALTH SERVICE CB 7420 UNIVERSITY OF N.C. CHAPEL HILL 27599	ADL/PD 032 AC 919 966-6570	ZANOLLI, MICHAEL DOMINIC 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	D 034 A AC 919 748-2768	ZIMMERMAN, CAROL FRANCES 784 N. STRATFORD ROAD WINSTON-SALEM 27104	OPH/N 034 A R 919 748-3500
YOUNG, WILLIAM BEAUREGARD 1700 S. TARBORO ST. WILSON 27893	IM/CD 098 A AC 919 291-1300	ZARATE, RENATO P. O. BOX 86 DANBURY 27016	IM 034 A AC 919 593-2001	ZIMMERMAN, GERALD DAVID MERCY HOSPITAL 2001 VAIL AVE. CHARLOTTE 28207	R/NM 060 A AC 704 379-5860
YOUNG, WILLIAM GLENN, JR. DUKE UNIV. MED. CTR. DURHAM 27710	TS/CDS 032 A AC 919 684-2037	ZARITZKY, DAVID RON P. O. BOX 6146 HIGH POINT 27262	R 040 A AC 919 887-2551	ZIMMERN, SAMUEL HYAMS 1960 RANDOLPH ROAD CHARLOTTE 28207	CD/IM 060 A AC 704 373-1503
YOUNG, WILLIAM LEE, III 210 13TH AVENUE PLACE, N.W. HICKORY 28601	FP 018 A AC 704 328-2941	ZAROFF, WENDY ANNE 4800 UNIVERSITY DR. EXT. APT. 14-B DURHAM 27707	032 A S 919 383-7827	ZINKE, DAVID PO BOX 40 EDNEYVILLE 28727	FP 045 AC 704 685-7045
YOUNGBLOOD, ROBERT W. 1201 BROOKSIDE DRIVE WILSON 27893	GS/TS 098 A AC 919 291-7001	ZARZAR, NAKHLEH PACIFICO 3153 GLENWOOD PROF. VILL. BLDG. H RALEIGH 27608	P 092 A P AC 919 782-0166	ZIPF, ROBERT EUGENE, JR. NASH GENERAL HOSPITAL ROCKY MOUNT 27801	PTH/FOP 064 AC 919 443-8043
YOUNGS, FRANKLIN JAY 113 RIPLEY RD. WILSON 27893	R 098 A AC 919 399-2240	ZARZAR, NICHOLAS S. D-7 VILLAGE GREEN CONDOS CHAPEL HILL 27514	032 A R 919 967-8003	ZOLLINGER, RICHARD W., II 301 HAWTHORNE LANE CHARLOTTE 28204	TS/CDS 060 A AC 704 375-8413
YOUNT, ERNEST HARSHAW, JR. 2800 GREENWICH ROAD WINSTON-SALEM 27104	IM 034 A L/RT 919 768-5702	ZASTROW, JOSEPH F. 6606 POINT COMFORT LN. PINEVILLE 28134	A R 704 541-0970	ZOTA, RAMNIKAL JECHAND 116 CAMPUS AVENUE RAEFORD 28376	FP 047 AC 919 875-8106
YOUNT, JAMES ALVIN 3535 RANDOLPH ROAD CHARLOTTE 28211	CD/CD 060 A P AC 704 365-0760	ZEEDICK, JOHN FRANCIS IVAN P. O. BOX 1950 SMITHFIELD 27577	AN/PUD 051 A AC 919 934-5213	ZUBER, THOMAS JOHN PO BOX 699 BENSON 27504	FP 051 A * AC 919 894-2011
YOWELL, ROBERT KLUTTZ 2609 N. DUKE ST., STE. 204 DURHAM 27704	OBG 032 A AC 919 471-8402	ZEKAN, PATRICIA JOAN 300 S. HAWTHORNE ROAD WINSTON-SALEM 27103	ON/IM 034 A AC 919 748-2075	ZUCKER, JOSEPH 107 W. KING ST. KINGS MOUNTAIN 28086	ORS 023 A AC 704 739-0151
YUCHA, KIM LEIGH PEELER 4906 KELLYWOOD CIRCLE GLEN ALLEN, VA 23060	PD 000 A R 804 747-1460	ZELDIN, DARRYL C. 4800 UNIVERSITY DR. DURHAM 27707	IM 032 A R 919 490-1023	ZUGER, JAMES HERMAN 6011 BENTWAY DR. CHARLOTTE 28226	R 060 A AC 704 541-6011
YUDELL, ROBERT BENJAMIN 309 S. LAUREL AVENUE CHARLOTTE 28207	OPH 060 A P AC 704 372-4380	ZELLER, DONALD JOHN 1210 LARKHALL CT. CARY 27511	FP 092 AC 919 782-0146	ZUKOSKI, ROBERT MICHAEL 926 HOWE STREET SOUTHPORT 28461	GS/GYN 010 A P AC 919 457-5292
YUE, BYONG HAK 1810 GLEN MEADE ROAD WILMINGTON 28403	GS 065 A AC 919 762-1730	ZELLINGER, MICHAEL JAY WAKE HEART ASSOCIATES PO BOX 14427 RALEIGH 27620	CD/IM 092 AC 919 832-9253	ZURFLIEH, PATRICIA J. 260 SEVERIN ST. CHAPEL HILL 27516	032 A S 919 968-3525
YUE, CHARLES C. 109 TWISTED OAK PL. DURHAM 27705	032 A S 919 490-1969	ZELLNER, ERIC EUGENE 103 COUNTRY CLUB DR. CONCORD 28025	FP/EM 013 A AC 704 788-1140	ZWERLING, CHARLES SAMUEL GOLDSBORO EYE CLINIC 2709 MEDICAL OFFICE PL. GOLDSBORO 27530	OPH/A 096 AC 919 778-2266
YUN, PAUL TAJEN PO BOX 1284 MARION 28752	GP 059 A P AC 704 652-3351	ZELLNER, ERIC G. B. 2129 ROLLING HILLS RD. FAYETTEVILLE 28304	PM 026 A P AC 919 323-6036	ZYLANOFF, PHILLIPA LOUISE 523 UWHARRIE ST. ASHEBORO 27204	AN 076 A P AC 919 625-5151

RESIDENT/FELLOW MEMBERS

By authority of the Executive Council, this special class of membership requires no component society membership, although component society membership is encouraged.

AHLUWALIA, JASJIT S. 601 JONES FERRY RD. A-15 CARRBORO 27510	IM 032 A 919 968-6626	BROADWELL, FREEMAN E., III 306 SPLIT RAIL CIRCLE #201 NEWPORT NEWS, VA 23602	PM 044 A 804 875-0509	CUTHRELL, WILLIAM VANCE 300 S. HAWTHORNE RD. DIV. MATERNAL-FETAL MED/OBGYN WINSTON-SALEM 27103	OBG /NPM 034 A 919 748-4595
ALDRICH, HARRY RANDOLPH BOX 31264, DUMC DURHAM 27710	032 A 919 684-6761	BROOKS, CLYDE LONG, JR. 615 E. 12TH ST. WASHINGTON 27889	IM 007 A 919 946-2101	CUTSON, TONI MICHELE 9 GORHAM PL. DURHAM 27705	FP /GER 032 A 919 383-0615
ALLEN, LEE F. 5519 WESCOTT PLACE DURHAM 27712	032 A 919 383-4409	BROWN, HOWARD RICHARD 4006 WESTFIELD DR. DURHAM 27705	ORS 032 A 919 383-1617	DAVIS, OWEN KIDDER BRIGHAM AND WOMENS HOSP. 75 FRANCIS ST. BOSTON, MA 02115	OBG /END 034 A 617 732-6987
ALLF, BRYAN EWING 3120 OXFORD DR. DURHAM 27707	OPH 032 A	BROWN, TERRY MICHAEL 134 LOBLOLLY LANE CHAPEL HILL 27516	P 032 A 919 967-2590	DAVIS, THOMAS R. 7026 VALLEY HAVEN DR. CHARLOTTE 28211	OBG A 704 365-5144
ALLIGOOD, GILBERT R., JR. 1110 ARLINGTON BLVD. GREENVILLE 27834	IM /PD 074 A 919 756-8423	BURT, JOSEPH MARK BOX 3889, DUMC DURHAM 27710	032 A	DEAN, JOAN C. B. 1227 MARTIN ST. WINSTON-SALEM 27103	034 A 919 748-2382
ALSON, ROY LEE 162 HUNTER'S RIDGE RD. WINSTON-SALEM 27103	EM 034	BUTTERLY, DAVID WM. 705 CROSSTIMBERS DR. DURHAM 27713	032 919 684-8111	DEGNORE, LISA TIFFANY 432 FEARRINGTON POST PITTSBORO 27312	032 919 966-4131
ANDERSEN, SUSAN HOLLAR 1201 KENAN ST. WILSON 27893	PD 074 919 747-8189	CAMPBELL, PAUL THOMAS 3323 LASSITER ST. DURHAM 27707	032 A 919 471-9244	DEUTSCH, MARGARET ANN 605 JONES FERRY RD. #DD9 CARRBORO 27510	032 919 684-8111
ANDERSON, CARL ELVING 722 W. 168TH ST. NEW YORK, NY 10032	CHP 032 212 305-3093	CAREY, ANDREW B. 13E COURTNEY SQUARE GREENVILLE 27858	074 A 919 355-3432	DILLARD, MARGARET BLEICK 104 LISA LANE GREENVILLE 27858	IM 074 A 919 551-4100
ANTOSZYK, ANDREW NICHOLAS 3116 STANFORD DRIVE DURHAM 27707	OPH 032 A 919 489-3937	CARR, DAVID RUDDLE 5407 S.W.80TH TERRACE GAINESVILLE, FL 32608	032 A 904 392-3711	DUNN, LAWRENCE ANTHONY 600 COLGATE DURHAM 27704	P 032 A 919 688-2651
ASKAR, ABDULLAH ONSY H-STREET, #33 BUTNER 27509	P /FP 032 919 575-9005	CARR, WILLIAM C. 5394 PERSHING AVE. #2E ST. LOUIS, MO 63112	PD A	EATON, ALEXANDER M. 17 E. 89TH ST. NEW YORK, NY 10128	A 212 997-7066
BAREFOOT, JULIUS JACKSON, III 1404 CROSS RD. LOUISVILLE, KY 40204	EM 074 A	CHANDLER, MARK C. N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514	032 A 919 966-2025	EATON, LISLE A., JR. 8 WHITE OAK TR. CHAPEL HILL 27516	PTH 032 919 966-4334
BARTON, JOHN HOMER, JR. 160 SARATOGA ST. WINSTON-SALEM 27103	034 A 919 765-7946	CHAPMAN, LYNNE WAGONER 106 BERKSHIRE ROAD GREENVILLE 27858	IM 074 A 919 756-5966	EBELING, JAMES GERARD 3742 SWARTHMORE RD. DURHAM 27707	IM 032 A 919 471-2044
BECHERER, PAUL ROBERT 11 COTTAGEWOODS CT. DURHAM 27713	032 919 967-7792	CHAVIS, L. FRANCINE PO BOX 433 OXFORD 27565	PD A	EISENBERG, EDWARD F. 600 DULUTH ST. DURHAM 27705	032 A 919 966-5136
BEDROSIAN, CAMILLE LUCIA 9-A TARAWA TERRACE DURHAM 27705	IM 032 A 919 383-4972	CHIMIAK, JAMES MICHAEL 1233 GOVERNOR CIR. WILMINGTON, DE 19809	215 897-8055	ELLEDGE, EMMETT SCOTT 114 DEVONSHIRE DR. SAN ANTONIO, TX 78209	OTO 034 A
BEGGERLY, CLAY EVANS 114 E. CONCORD DR. GREENVILLE 27834	GS 074 A 919 551-4100	CLARK, THOMAS BOYLE, III P. O. BOX 2951 DURHAM 27705	PTH 032 A 919 684-3300	ELLISON, PAUL STRIBLING, JR. 101 WARREN AVE. #B BALTIMORE, MD 21230	023 A P 301 625-1654
BENNETT, LAWRENCE NORTHWOOD RT. #1, BOX 76A MORAVIAN FALLS 28654	DR 097 A 919 667-1452	CLEMENTS, DENNIS ALFRED, III 119 WISTERIA DR. CHAPEL HILL 27514	PD /ID 032 A 919 684-6610	ELLISON, THOMAS SCOTT 2401 FAIRWAY DR. WINSTON-SALEM 27103	023 A P 919 722-1807
BERG, TIMOTHY ARVID 1821 ELIZABETH AVE. WINSTON-SALEM 27103	023 A R 919 748-2011	COGGINS, DAVID ALLEN 1131-D SALEM DR. CHARLOTTE 28209	032 A 919 338-2000	FASSERO, JEFFREY J. 8 PEDESTAL ROCK LANE DURHAM 27712	032 A 919 479-0514
BERNHARDT, PETER F. RT. #1 2505 HARDWOOD LN. HILLSBOROUGH 27278	PTH 032 A 919 471-8168	COHEN, NORMAN ALLEN 1512 KIRKWOOD DR. DURHAM 27705	032 A 919 684-8111	FELDMAN, MARC DAVID 1315 MOREENE RD. APT. 21E DURHAM 27705	9 032 A 919 286-0411
BERNSTEIN, ROSLYN JULIE 4617 HOPE VALLEY RD., APT. H DURHAM 27707	IM 032 A	COLEMAN, PETER R. 207 CONNER DR., APT. 22 CHAPEL HILL 27514	FP /ALD 032 A 919 929-2067	FERRELL, WM. GREGORY 707 GALES AVE. WINSTON-SALEM 27103	034 919 748-2011
BILLICA, WILLIAM HARRY 2217 W. WINDSOR AVE. PHOENIX, AZ 85009	032 A 602 254-8052	CONTOGIANNIS, MARY ANN 3529 SPICEBUSH TRAIL GREENSBORO 27410	034 A 919 748-2011	FINN, WILLIAM FRANCIS, JR. 854 BRENT ST. WINSTON-SALEM 27103	EM 034 A 919 760-2462
BILLMIRE, KAREN LEIGH ROUTE #5, BOX 110 PITTSBORO 27312	P 032 919 966-5711	COOK, DAVID OWEN 2652 TANTELON PL. WINSTON-SALEM 27107	U 034 A 919 785-0393	FOX, JONATHAN C. BOX 3163, DUMC DURHAM 27710	IM /CD 032 A 919 684-8111
BISCARDI, FRANK H. LAUREL RIDGE APTS. #29K 54 BYPASS CHAPEL HILL 27514	032 919 966-4131	CORNISH, MARY HELD 903 GREEN ST. DURHAM 27701	032 A 919 966-5360	FULP, CHARLES J., JR. 112 GREENFIELD RD. CHAPEL HILL 27516	032 A 919 966-1461
BLOW, OSBERT 4800 UNIVERSITY DR. EXT. #20A DURHAM 27707	032 A 919 490-1943	COUNDURIOTIS, ANDREW 1408 WASHINGTON ST. DURHAM 27701	032 A 919 683-2785	FURR, WILLIAM STEPHEN 1871 WALL ST. #4 MEMPHIS, TN 38134	ORS A 901 382-7999
BOLESTA, MICHAEL JOSEPH 2074 ABINGTON RD. CASE WESTERN RESERVE UNIV. CLEVELAND, OH 44106	ORS 032 A 216 844-3046	COX, JOHN BALDWIN 4511 ROLLINGWOOD DR. DURHAM 27713	PUD /IM 032 A 919 493-4674	GALL, STANLEY ADOLPH, JR. 2907 MONROE AVE. DURHAM 27707	GS /CDS 032 A 919 684-8111
BRAVO, NORMAN DENNIS 3440 REGIMENT DR. FAYETTEVILLE 28303	000 919 867-0701	CROW, LAURA LOMAX 202 TALLYHO TRAIL CHAPEL HILL 27514	032 A 919 966-4131	GARLAND, RUSSELL TYSON 6824 SHILOH RIDGE LN. CHARLOTTE 28212	ORS 060 A 704 563-2784
BRINKMAN, LINDA EVES 10 PALMETTO PLACE GREENVILLE 27858	074 A 919 355-6121	CROYLE, TERRENCE ALAN 110 CAPISTRANO COURT WINSTON-SALEM 27103	OPH /EM 034 A 919 760-2646	GARNER, TIMOTHY B. 717 LOCKLAND AVE. WINSTON-SALEM 27103	NS 034 A 919 748-2011

GARRISON, HERBERT G., III 114 GARNER RD. GREENVILLE 27834	EM 074 A 919 758-6245	HOOTEN, JAMES PHILMON, JR. 3535 APOLLO DR. APT. J-213 METAIRE, LA 70003	ORS 032 A 504 588-5337	KIM, JEROME HAHN 202-11 PINEGATE CIRCLE CHAPEL HILL 27514	IM /ID 032 A 919 684-8111
GATES, LAWRENCE KEITH, JR. 1710 VISTA DURHAM 27701	IM 032 A 919 682-5274	HORTON, KEITH M. 5500 FORTUNES RIDGE DR. 79C DURHAM 27713	032 A	KINNEY, ROBERT BRUCE 1419 DENNBRIAR DR. CONCORD 28025	PTH 032 A 919 684-3300
GESZLER, GERIANNE 5238 N. WILLOWHAVEN DR. DURHAM 27712	OBG 032 A 919 489-6008	HOWE, HAROLD RAGAN, JR. 811 MUSEUM DR. CHARLOTTE 28207	CDS /VS A 919 761-1699	KINNEY, STEPHEN LEIGH 130 LIONHEAD COURT BALTIMORE, MD 21237	301 574-1523 A 919 493-6525
GIDUZ, THOMAS TRACY 323 BLUE RIDGE RD. CARRBORO 27510	P 032 919 967-1036	HOWELL, MARY LEE 3037 CARVER ST., APT. A-9 DURHAM 27705	OBG 032 A 919 684-2484	KIRKPATRICK, JOHN STEWART 704 W. CORNWALLIS RD. DURHAM 27707	032 A 919 493-6525
GILBERT, RICHARD LESLIE, JR. 213 W. CORNWALLIS DR. GREENSBORO 27408	A 919 758-1862	HUEHOLT, THERESA MARIE NC MEM. HOSP.-PSY. CHAPEL HILL 27514	032 919 481-1875	KRYSTAL, ANDREW DARRELL DUKE UNIV. MEDICAL CENTER DURHAM 27710	032 A 919 684-8111
GILLIAM, FRANCIS R., III 603 DUNBAR ST. DURHAM 27701	IM /CD 032 A 919 684-3901	HUGGINS, HENRY LAWSON, JR. 536 19TH AVE. DR., NW HICKORY 28601	EM 074 919 383-0278	KU, ANDREW 311 S. LASALLE ST. APT. 36-F DURHAM 27705	DR 032 A 919 681-2711
GILPIN, JOHN W. 1206 W. 4TH ST., #2 WINSTON-SALEM 27101	DR 034 A 919 748-4316	HULL, DIANA MILLER 200 WOODCROFT PARKWAY #430 DURHAM 27713	032 A 919 684-1046	LASSITER, TALLY EDWARD, JR. 2100 N. PLEASANTBURG DR. GREENVILLE SHRINER'S HOSP. GREENVILLE, SC 29609	ORS /EM 032 A 919 688-4609
GOTTSCHLICH, GREGORY M. 6705 GREENFOREST LN. PFAFFTOWN 27040	IM /A 034 919 748-2511	HUMMEL, WILLIAM P. CB #7570 MACNIDER BLDG. DEPT. OF OBG-REI CHAPEL HILL 27599	GYN /END 032 919 748-4991	LEE, K. STUART 2109 W. STRAFORD DR. CHANDLER, AZ 85224	NS 034 A 919 489-1491
GOWER, DAVID JOHN N. C. BAPTIST HOSPITAL WINSTON-SALEM 27103	NS 034 919 748-4038	HUNTER, DAVID MONTGOMERY 1828 ELIZABETH AVE. WINSTON-SALEM 27103	034 A 919 748-4991	LEE, YI-SHENG 2920 ERWIN RD. DURHAM 27705	032 919 684-8111
GRAY, PATRICK HAMPTON 302 GLASGOW LANE GREENVILLE 27834	OBG 074 A 919 551-4100	ISAACS, KIM LUISE 103 POLK'S TRAIL CHAPEL HILL 27514	IM 032 A 919 968-1597	LEFKOWITZ, JERRY BRUCE 207-10 MELVILLE LOOP CHAPEL HILL 27514	032 919 966-3311
HAAS, ALI EKREM 6 BLUEBERRY HILL PITTSBORO 27312	PS 032 919 966-4131	JAMES, ROBERT MITCHELL 1138 S. MAIN ST. GRAHAM 27353	032 A 919 768-2174	LEIDY, LUANN 4322 BEECHNUT LANE DURHAM 27707	P /CHP 032 A 919 489-1491
HAMSTEAD, STEVEN LYNN 201 N. MAIN ST. FARMVILLE 27828	IM 074 A 919 830-1512	JANEWAY, DAVID V. 3757 VANDALIA DR. WINSTON-SALEM 27104	034 919 768-2174	LEONARD, BAXTER COLUMBUS J. 510-A TURNER ST. THOMASVILLE 27360	FP 026 A 919 475-9171
HANNA, LINDA J. 706 DRUID OAKS ATLANTA, GA 30329	NR /GS 034 A 404 634-5198	JANSON, JAN ALBERT 4818 NORTHBURY CIRCLE DURHAM 27712	IM /GE 032 A 919 684-8111	LESSEY, BRUCE ARTHUR 1303 LAKEWOOD AVE. DURHAM 27707	OBG 032 919 489-8831
HARDY, JAMES JOSEPH 130 RIDGE TRAIL CHAPEL HILL 27516	032 919 942-7438	JOHNSON, JAMES C. RD-2 BOX 771 DANVILLE, PA 17821	DR A 717 275-2178	LEVIN, LAWRENCE SCOTT 4326 TALCOTT DR. DURHAM 27705	032 A 919 684-8111
HARR, CHARLES DULANEY 719 WESTVIEW DRIVE WINSTON-SALEM 27103	GS 034 A 919 748-2011	JOLLY, THOMAS LYNN 1500 W. ACADEMY ST. WINSTON-SALEM 27103	FP 034 A 919 727-0550	LIMPET, GEORGE HENRY 57 PUTNAM ST. TUNKHANNOCK, PA 18657	FP 034 A 919 489-8831
HARR, DEBRA M. B. 719 WESTVIEW DR. WINSTON-SALEM 27103	TR 034 A 919 748-4981	JONES, CONSTANCE CARPENTER 415 PRINCE CROSSING 0-5 WEST CHICAGO, IL 60185	032 A 919 968-0023	LIND, WM. M. 5668 BUCKHORN RD. LEWISVILLE 27023	034 A 919 748-4595
HARTSOCK, LANGDON ALL 610 SANDERSON DR. DURHAM 27704	032 919 684-8111	JONES, MARY MCKEEL BRANCH'S ESTATES, BOX 76 GREENVILLE 27858	FP 023 A P 919 756-6398	LUH, ALBERT HUNG-PEI 1481 ASHBORNE DR. LYNCHBURG, VA 24501	032 A 804 384-1731
HATCHER, PAUL ARTHUR BOX 2922, DEPT. OF UROLOGY DUKE MEDICAL CENTER DURHAM 27710	U /AM 617 876-1376	JONES, STEPHEN WATSON BRANCH'S ESTATES, BOX 76 GREENVILLE 27858	FP 023 A P 919 756-6398	LURIE, SCOTT NORD 1711 SHAWNEE ST. DURHAM 27701	032 A 919 682-0582
HATCHER, WALTER BENJAMIN 3225 JURA DR. FAYETTEVILLE 28303	A 919 485-2842	JORDAN, THOMAS E. 39 GEORGETOWN COURT DURHAM 27705	OTO 032 A 919 684-6968	LYNCH, SUE ANN 129 WINDSOR CIR. CHAPEL HILL 27514	N 032 A 919 942-8097
HEATH, KAREN SUE 4628 KEG COURT FAYETTEVILLE 28304	FP A 919 485-2842	JULIAN, JESSE S., JR. 614 BELLVIEW ST. WINSTON-SALEM 27103	GS 034 A 919 748-2011	LYTH, WM. MICHAEL 200 WESTMINSTER DR., APT. 132K CHAPEL HILL 27514	032 919 684-8111
HEINIG, MICHAEL FORREST 831 CLEVELAND ST., APT. 223 GREENVILLE, SC 29601	ORS A 803 242-0673	JURIVICH, DONALD ALBERT 508 FULTON ST. DURHAM 27710	IM /GER 032 A 919 286-0411	MAGEE, MICHAEL R. 11726 GRANT DR. OVERLAND PARK, KANSAS 66210	OBG 034 919 383-9730
HERSHNER, GREGORY S. 491 BILTMORE AVE. ASHEVILLE 28801	A 704 258-0670	KALLIANOS, JOHN ANDREW 4800 UNIVERSITY DR. 23M DURHAM 27707	032 919 493-4308	MANGEL, ALLEN WAYNE 534 FINLEY ST. DURHAM 27705	032 A 919 383-9730
HERZOG, WILLIAM RAYMOND, JR. 11671 FREDERICK RD. ELLICOTT CITY, MD 21043	CD /IM 032 202 994-3321	KAMMIRE, GORDON C. RT. #12, BOX 934 LEXINGTON 27292	ORS /SM 034 A 704 731-2393	MANLY, DAVID TUPPER 115 ROSEMOND DR. GREENVILLE 27834	074 A 919 758-4062
HILLERY, CHERYL ANN 1418 VALLEY RUN DURHAM 27707	032 919 489-1601	KAPLAN, ANDREW JON 14 WESTRIDGE DR. DURHAM 27713	032 A 919 490-1158	MARGOLIS, PETER ADAM UNC. CLI. SCHOLARS PROGRAM 5034 OLD CLINIC BLDG. CHAPEL HILL 27514	A 919 966-1274
HINES, MICHAEL HERBERT 723 FENIMORE ST. WINSTON-SALEM 27103	GS 034 A 919 777-0226	KELLY, JEFFREY 406 CLIFFDALE DR. WINSTON-SALEM 27104	AN /EM 034 A 919 768-8280	MARX, HERMAN BENNO APDO 227-T ZONA TONCONTIN HONDURAS C.A.	FP A 919 725-3227
HINN, ALBERT RICHARD 201 WEST BROOK DR. C-4 CHAMBERS RIDGE APTS. CARRBORO 27510	032 A 919 942-9613	KENNEDY, REBECCA S. 315-A BLUERIDGE RD. CARRBORO 27510	032 A 919 929-9861	MARX, MARILYN UTMB STATION 1, BOX 45 GALVESTON, TX 77550	GS 032 409 761-1875
HODGINS, LEWIS ROGER 33 LANGSATE COURT DURHAM 27713	AN 032 A 919 544-2781	KEYSERLING, THOMAS CHARLES 5034 OLD CLINIC BLDG. 226H UNC. CLINICAL SCHOLARS PROGRAM CHAPEL HILL 27514	IM 032 A 919 966-1274	MASSENGILL, SUSAN FOSTER 200 KING ARTHUR DR. GREENVILLE 27858	PD 074 A 919 551-4963
HONKANEN, FRANK A. BOX 3712, DUMC DURHAM 27710	032 919 684-3300	KILGORE, WM. R., III 502 THE OAKS CHAPEL HILL 27514	IM /GE 032 A 919 684-3527	MATTOX, HUITT EVERETT, III 1764 ROBINHOOD RD. WINSTON-SALEM 27104	IM 034 A P 919 725-3227

MCCANCE-KATZ, ELINORE F. 5402 MIDDLETON RD. DURHAM 27713	P 032 919 544-3291	PRICE, AMY DENISE VANN 207 SPEIGHT DR. GREENVILLE 27834	074 A 919 551-4909	SMALL, KENT WILSON 818 PROLOGUE RD. DURHAM 27712	OPH 032 A 919 684-6611
MCDONNELL, CHARLES H., III 2G RIVER BIRCH RD. DURHAM 27705	032 A 919 383-6076	PRICE, JERRY THEODORE 322 KEYWOOD DR. LYNCHBURG, VA 24501	A 804 239-4961	SMITH, HELEN ELIZABETH 3312-L CIRCLE BROOK DR. SW ROANOKE, VA 24014	032 A 703 772-3071
MEARS, GREGORY DON 953 KEARNS AVE. WINSTON-SALEM 27106	EM 034 919 723-7160	PRIVETTE, MELINDA HILL 20 FLEMINGTON RD. CHAPEL HILL 27514	032 A 919 929-8862	SMITH, MICHAEL ALSON 848 MEADOW LANE FT. WALTON BEACH, FL 32548	FP A 919 383-4326
MEDDERS, RUSSELL GLEN 221 BRANDON ROAD BALTIMORE, MD 21212	032 A 919 967-8927	PRYOR, ROBERT E. 500 WOODCROFT PKWY. #7-D DURHAM 27713	IM 032 A 919 684-8111	SMITH, MICHAEL LEE 1412 S. CHAMBERS CIRCLE AURORA, CO 80012	D /PD A 303 750-0248
MELVIN, WINSLOW BRITT 1109 BUCKLEY RD. APT. #3 LIVERPOOL, NY 13088	AN 074 A 315 451-2637	PUGH, HOLLY P. 416 RIDGEHAVEN DR. WINSTON-SALEM 27104	OPH 034 A 919 748-3504	SNEDEKER, JEFFREY DAVID BOX 31085, DUMC DURHAM 27710	PD /ID 032 A 919 684-6610
MILLER, HORACE WILLIAM, IV 405 DEVANE ST. FAYETTEVILLE 28305	PS A *	PULLIAM, THOMAS JACKSON 311 STAFFORDSHIRE RD. WINSTON-SALEM 27104	IM 034 A P 919 760-4557	SOFLEY, CARL WILSON, JR. 319 KILBOURNE RD. COLUMBIA, SC 29205	IM 032 A 803 254-5847
MILLER, MICHAEL JOHN BOX 31040, DUMC DURHAM 27710	032 A 919 684-8111	PURUT, CEMIL M. 500 N. DUKE ST. APT. 53-202 DURHAM 27701	032 A 919 684-8111	SOUTH, STEPHEN ALAN 3160-93 BERRY LANE ROANOKE, VA 24018	IM 034 A 703 981-7000
MIRAGLIA, COLLEEN P. 1057 S. HAWTHORNE RD. WINSTON-SALEM 27103	FP 034 A *	QUEEN, JEFFREY SCOTT 115 TURTLE CREEK RD. #2 CHARLOTTESVILLE, VA 22901	PD /AN A 804 295-8774	SPANGLER, JOHN GIVEN 310 RIDGEMEDE RD., APT. 105 BALTIMORE, MD 21210	A 301 955-5000
MONTY, LOUIS HAROLD 610 DOUGLAS ST., #A-104 DURHAM 27705	P 032 A 919 286-2188	REEVES, WOODROW WILSON, JR. 123 1/2 BANBERRY LANE LEXINGTON, KY 40503	U A 606 277-5344	SPANGLER, THOMAS CLAYTON 1066 ARTHUR DR. GRAHAM 27253	ORS 032 A *
MOORE, DAVID HARRY UNC, DIV. OF GYN-ONC N.C. MEMORIAL HOSP. CHAPEL HILL 27514	GYN /ON 032 A 919 966-1196	REID, STEVEN HUNTER 803 DELANEY ST. RICHMOND, VA 23229	DR 000 A 804 741-5748	SPEIGHT, KEVIN LEWIS 1825 GASTON ST. WINSTON-SALEM 27103	AN 034 A 919 748-4497
MOORE, MELISA DARA 8935 STEELBERRY DR. CHARLOTTE 28208	032 A	REISER, HARVEY J. 9TH AND WALNUT STREETS PHILADELPHIA, PA 19107	OPH 032 A	SPIRO, PHILIP MARGET 2001 DARTMOUTH DR. DURHAM 27705	GP 032 A 919 796-0689
MOORE, ROBERT ALEXANDER, III 1243 WEDGEWOOD DR. WINSTON-SALEM 27103	NEP /IM 034 A 919 765-5862	RICHARDSON, DAN N. 618 KNOLLWOOD ST. WINSTON-SALEM 27103	DR 034 A 919 748-4435	SPIVEY, DAVID EUGENE, JR. 1511 MAIN ST. SW ROANOKE, VA. 24015	034 A 703 985-0216
MORRIS, JOHN STEVEN 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	PUD 034 919 748-4325	RIESER, GEOFFREY DAVIS 2833 BIRCHWOOD DR. WINSTON-SALEM 27103	DR 034 A 919 760-3090	ST. CLAIR, STEVEN H. 101 SOUTH PEAK CARRBORO 27510	OM 032 A 919 966-4131
MOSTELLAR, HENRY CURTIS, III 2229 PARKWAY DR. WINSTON-SALEM 27103	GS 034 A 919 723-7177	RIZZUTI, RICHARD PHILIP 5908 TATTERSALL DR. #11 DURHAM 27713	A 919 756-0060	ST. CLARIE, KAREN SUE BOX 31172, DUMC DURHAM 27710	032 919 684-6575
MURCHISON, JOHN F. BOX 3802, DUMC DURHAM 27710	OPH 032 A 919 684-6611	ROBERTS, JOSEPH E., JR. 3836-L MIZELL RD. GREENSBORO 27405	FP 919 375-7127	STAFFEL, JON G. 605 JONE FERRY RD. FF-8 CARRBORO 27510	032 A 919 968-1030
MURRAY, JANE H. 3309 DIXON RD. DURHAM 27707	FP 032 919 471-2571	ROSENSTEIN, BYRON DAVID 205 NORTHWOOD DR. CHAPEL HILL 27514	ORS 032 A 919 942-4209	STEBBINS, NANCY K. G. 1729-B E. CORNWALLIS RD. DURHAM 27713	P 032 A 919 544-0087
MURRAY, MICHAEL J. 910 CONSTITUTION DR. APT. 720 DURHAM 27705	TR 032 919 684-3742	RUB, JOSE MARK 2700 COTTAGE PL. #326 GREENSBORO 27405	A 919 288-3960	STEINER, ROBERT W. P. RT. #7, BOX 69B CHAPEL HILL 27514	FP /PH 032 A 919 942-0108
NG, CHRISTOPHER C. 1233 YORK AVE. APT. 5-0 NEW YORK, NY 10021	DR 034 032	RUFFIN, MACK THOMAS, IV 3112 GEORGIA AVE. S. ST. LOUIS PARK, MN 55426	FP 034 GS A 919 343-7000	STEVENS, JAMES ROMER 3100 S. MANCHESTER #321 FALLS CHURCH, VA 22044	032 A 703 671-9348
NORINS, MICHAEL ELLIOTT 122 WINDSOR PLACE CHAPEL HILL 27514	032 919 933-0367	RUTHERFORD, EDMUND 2131 S. 17TH ST. WILMINGTON 28401	A 919 383-6548	STILES, MATTHEW A. 14F COURTNEY SQUARE GREENVILLE 27858	FP A 919 355-5181
O'DONNELL, HELEN MARY 1921 MULINER AVE. BRONX, NY 01046	FP A 919 575-4541	SALLEE, D. SKIP BOX 3808, DUMC DURHAM 27710	OPH A P 919 766-9505	STRAIN, BRIAN MCCULLOUGH ROANOKE MEMORIAL HOSPITAL ROANOKE, VA 24014	032 A P 703 951-7000
OLIVER, WILLIAM RUSSELL 114-B FIDELITY STREET CARRBORO 27510	PTH 032 919 929-7120	SAPPENFIELD, DAVID LUTHER 1332 JOSEPH ST. NEW ORLEANS, LA 70115	A 919 681-6646	STRATAS, BYRON ARISTOTLE 286 MEETING ST. #E CHARLESTON, SC 29401	032 A 803 577-6796
OMAN, TIMOTHY ROY 414 HUGO ST. DURHAM 27704	FP 067 919 684-8111	SATO, TAKAO LEWIS 6730 AMBERLEY LN. CLEMMONS 27012	IM 034 A 919 471-8562	STROHMAYER, JON F. DUKE UNIV. MEDICAL CENTER DURHAM 27710	032 919 684-8111
PARKER, PAUL EDWIN N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514	AN 032 A 919 477-2475	SAUNDERS, JAMES E. 1413 BROAD ST. DURHAM 27705	FP A 919 868-5290	SUBIN, GLEN DAVID DUMC, BOX 3000 DURHAM 27710	ORS /HS 032 A
PARLIER, REGGIE DAVID 828 HOLLY HEDGE DR. LEWISVILLE 27023	034 A 919 479-5559	SCHNEIDER, FRANK D. 1142 PADDINGTON PLACE FAYETTEVILLE 28304	AN 032 A 919 681-6646	SUGARMAN, JEREMY 28 JUSTIN CT. DURHAM 27705	IM 032 A 919 477-9435
PARRILLO, STEPHEN J. 2342 THUNDER RD. DURHAM 27712	AN 919 684-8111	SCHWINN, DEBRA ANNE BOX 3094, DUMC DURHAM 27710	032 A 919 688-1816	SUH, KENDALL HYUNSUK PO BOX 5189 152 E. 2ND ST. OCEAN ISLE BEACH 28459	EM /FP 010 A 919 579-9989
PATTERSON, JAN LOUISE PO BOX 513 N. C. MEMORIAL HOSP. CHAPEL HILL 27514	032 A 919 966-2491	SHEETS, LYNN K. 2412 FARTHING ST. DURHAM 27704	011 704 258-9635	TATE, DAVID ANDREW 407 WALNUT ST. CHAPEL HILL 27514	CD /IM 032 A 919 966-5201
PENCE, CARLA RAFFETY 1900 QUEEN ST. A-4 WINSTON-SALEM 27103	IM 034 A 919 725-7499	SIEFKER, JOSEPH DANIEL 3 VETERANS DR. ASHEVILLE 28805	OTO 032 A 919 688-1816	TENNYSON, GARY S. 720 SHADY LAWN RD. CHAPEL HILL 27514	PTH 032 919 929-8599
PITTMAN, CLYDE EDWIN 2230 MAPLEWOOD AVE. WINSTON-SALEM 27103	034 A 919 748-2011	SIMONS, WILLIAM JOHN 12897 EAGLES VIEW RD. PHOENIX, MD 21131		THOMAS, BARBARA ANNE LOWRY 2720 WINDY CROSSING WINSTON-SALEM 27127	P 034 919 785-2073

THOMASON, ROBERT BRADLEY, III N.C. BAPTIST HOSPITAL 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	GS 034 A 919 748-2011	WARREN, JEFFERY STEVEN 274 N. MCLEAN MEMPHIS, TN 38112	EM /FP 032 A 901 682-4027	WILLIAMSON, LINDA J. PO BOX 35171 GREENSBORO 27425	919 282-2764
THORNE, NORMAN ALAN 829-B EDWARDS ST. CHAPEL HILL 27516	P /R 032 A 919 968-6839	WASHINGTON, MARY KAY 503 E. TRINITY AVE. DURHAM 27701	PTH 032 919 684-3300	WILLIAMSON, STEVEN G. 2033 SCOTT AVE. CHARLOTTE 28203	A 704 338-2000
TOOTHMAN, DONALD E. 487 47TH AVE. SAN FRANCISCO, CA 94121	034 A 415 387-5140	WATKINS, GLEN LEE 14206 MANIFEST WAY GAITHERSBURG, MD 20878	GP A	WILSON, CATHY JO 138 IVY DR. APT. 8 CHARLOTTESVILLE, VA 22901	AN 804 296-8084
TUCKER, SCOTT L. 225 HARPER ST. WINSTON-SALEM 27104	034 A 919 765-9047	WEBER, ERIC D. 2 CARSON CIRCLE DURHAM 27705	NS 032 919 383-0465	YADAV, SANJAY SINGH BOX 3053, DUMC DURHAM 27710	N /IM 032 A 919 286-2352
TURPIN, JAMES WESLEY PO BOX 1335 FAIRVIEW 28730	OM /FP 011 A 704 628-4287	WEBER, STEPHEN F. 2772 ASBURY LANE WINSTON-SALEM 27103	ID /IM 034 919 760-2621	YANG, FRANK YUN-PU NC MEMORIAL HOSPITAL HOUSESTAFF MAIL ROOM, SURG. CHAPEL HILL 27514	GS 032 A 919 966-4131
VAN TASSEL, ERIC D. 104 SONDELY PARKWAY ASHEVILLE 28805	CD /IM 032 A 919 942-4810	WEISS, MATTHEW JAY 910 CONSTITUTION #1003 DURHAM 27705	GER 032 A 919 383-9755	YOHAY, DANIEL ALAN 3-M POST OAK RD. DURHAM 27705	032
VICK, WILLIAM WOODROW 214 TALLYHO TRAIL CHAPEL HILL 27514	PTH 032 A 919 684-3300	WESTON, BRENT WILLIAM 301 OLD FOX TRAIL DURHAM 27713	PD 032 919 489-1765	YUCHA, KIM LEIGH PEELER 4906 KELLYWOOD CIRCLE GLEN ALLEN, VA 23060	PD A 804 747-1460
WALKER, DANA SHERRICK RT. 1, BOX 1-D BLANCH 27212	FP 034	WHITCOMB, DAVID C. 706 WEST KNOX ST. DURHAM 27701	032 919 684-8111	ZARZAR, NICHOLAS S. D-7 VILLAGE GREEN CONDOS CHAPEL HILL 27514	P 032 A 919 967-8003
WALLIN, ROLF BOLIN 2604 FASHION LANE FAYETTEVILLE 28304	AN 032 A 919 966-5136	WHITE, JAMES LEE GEORGETOWN UNIV. HOSPITAL DEPT. OF ANESTHESIA WASHINGTON, DC 20007	AN A	ZASTROW, JOSEPH F. 6606 POINT COMFORT LN. PINEVILLE 28134	A 704 541-0970
WALSH, ZANE THOMAS, JR. 4801 LEONARD PARKWAY RICHMOND, VA 23226	PM 074 A	WHITE, JOHN PAUL 2240 SUNDERLAND RD. #56-N WINSTON-SALEM 27103	IM 034 919 748-2011	ZELDIN, DARRYL C. 4800 UNIVERSITY DR. DURHAM 27707	IM 032 A 919 490-1023
WALTERS-SCHERRER, BARBARA A. 417 COLONY WOODS DR. CHAPEL HILL 27514	P /GP 032 A 919 968-4652	WHITESIDES, EDWARD WM. 1108 WILLOW DR. CHAPEL HILL 27514	032 919 967-7440	ZIMMERMAN, CAROL FRANCES 784 N. STRATFORD ROAD WINSTON-SALEM 27104	OPH /N 034 A 919 748-3500
WARD, WILLIAM GOODE 21 GORHAM PLACE DURHAM 27705	ORS 032 A 919 383-9667	WHYTE, THOMAS M. 635 WINNETKA CT. ASHEBORO 27203	FP 074 A 919 551-4611	ZISLIS, PAUL DAVID 1002 WILLOW DR. #58 CHAPEL HILL 27514	P 032 919 933-7750
WARDEN, CLARK GERARD 212 CEDARWOOD LANE CARRBORO 27510	GS 032 A 919 967-9414	WILDE, GUSTAV C. 440 ELMHURST DR. CHARLOTTE 28209	704 523-2726		

Practice Made Perfect.

In Navy Medicine the emphasis is on patients, not paperwork.

As a Navy doctor you step into an active and challenging group practice. You work with state-of-the-art equipment and the best facilities available.

Highly trained physician's assistants, hospital corpsmen, nurses and hospital administrators not only provide medical support, they attend to almost all the paperwork. As a result, you're free to make medical decisions based solely on the needs of your patients.

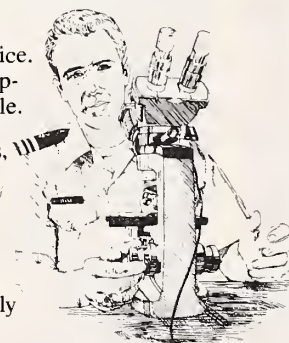
Along with your professional development, you'll enjoy the lifestyle and fringe benefits of a Navy officer. Beginning salaries are competitive with civilian practice for most specialists.

To learn more about the Navy's practice made perfect, send your curriculum vitae or call:

LIEUTENANT COMMANDER RON BOATRIGHT, Navy Medical Programs Officer
801 Oberlin Road, Suite 120
Raleigh, NC 27605-1130

1-800-662-7231

**Be The Doctor
You Want To Be. In The Navy.**



STUDENT MEMBERSHIP

By authority of the Executive Council, a medical student membership is provided. This class of membership expires immediately upon completion of training in a recognized school of medicine located in North Carolina. Residents of North Carolina enrolled in a recognized school of medicine in another state are eligible for such membership.

BOWMAN GRAY SCHOOL OF MEDICINE

OFFICERS — President: Susan D. McLendon, 2000-J Falcon Wood Ct., Winston-Salem 27107 (919 760-4458)
Secretary: Lisa D. Miller, 1715 Elizabeth Ave., Winston-Salem 27103 (919 761-0895)

ADAMS, MELANIE	034	CHASE, TIMOTHY LEE	034	DUVALL, DIANE LYNN	034
300 S. HAWTHORNE RD., BOX 447	A S	549 ARBOR HILL RD. APT. 62B	A * S	1936 HINSHAW AVE.	A S
WINSTON-SALEM 27103	919 760-2292	KERNERSVILLE 27284	919 996-8014	WINSTON-SALEM 27104	919 723-6168
ALEXANDER, BRIAN A.	034	CHEREN, ISA	034	EATON, JEFFREY GRAY	034
217-B NEW DR. APT. D	A S	1900 QUEEN ST., APT. C-8	A S	103 CAROLINA CIRCLE	A S
WINSTON-SALEM 27103	919 722-7946	WINSTON-SALEM 27103	919 724-3782	WINSTON-SALEM 27104	919 721-9163
ALLEN, JOANNE BELL	034	CHIU, ARYA YAHUA	034	ENGELSTAD, ANNE CARINE A.	034
PO BOX 448	A S	1640 NORTHWEST BLVD. APT. #4	A * S	2050 QUEEN ST.	A S
300 S. HAWTHORNE RD.		WINSTON-SALEM 27104	919 722-1616	WINSTON-SALEM 27103	919 767-8331
WINSTON-SALEM 27103	919 777-8288	CINTRON, RUBEN	034	EPSTEIN, SUSAN ELISE	034
ALLIGOOD, DAVID BLAIR	034	300 S. HAWTHORNE RD.	A S	1815 BRANTLEY ST.	A S
1821 ELIZABETH AVE.	S	MED. STUDENT, BOX 336		WINSTON-SALEM 27104	
WINSTON-SALEM 27103	919 723-6041	WINSTON-SALEM 27103	919 773-1564	FEIN, DOUGLAS A.	034
ALPHIN, ROBERT S.	034	CLARK, ALAN BOYD	034	300 S. HAWTHORNE RD.	A S
BOX 319, 300 S. HAWTHORNE RD.	S	BOWMAN GRAY, BOX 93	A S	BOX 484, BOWMAN GRAY	
WINSTON-SALEM 27103	919 722-3784	WINSTON-SALEM 27103	919 724-4572	WINSTON-SALEM 27103	919 922-4096
ANDERSON, JOSEPH R.	034	CLARK, C. SCOTT	034	FERRARI, CAROLYN JEAN	034
300 S. HAWTHORNE RD. BOX 184	A * S	3500 POWELTON AVE. C-106	A S	685 FILLGATE DR.	A S
WINSTON-SALEM 27103	919 761-8051	PHILADELPHIA, PA 19104		WINSTON-SALEM 27104	919 766-9068
ARROWOOD, JOHN P., JR.	034	CLARK, MICHAEL EMIL	034	FORAUER, ANDREW R.	034
2307-D CLOVERDALE AVE.	A S	1227 EBERT ST.	A S	1919 ACADEMY ST. APT. 19	A S
WINSTON-SALEM 27103	919 724-7794	WINSTON-SALEM 27103	919 942-1975	WINSTON-SALEM 27103	919 748-0755
ATTEBERRY, LINDA ROSE	034	CLEVELAND, JEFFREY ALLEN	034	†GALLANIS, CRAIG T.	034
300 S. HAWTHORNE RD. BOX 185	A S	2000 VIRGINIA ROAD	A S	1333 MADISON AVE.	A S
WINSTON-SALEM 27103	919 723-5736	WINSTON-SALEM 27104	919 723-8536	DECEASED-1988	
BAGWELL, ROBERTA L.	034	COLE, DEBRA WULFHORST	034	WINSTON-SALEM 27103	919 722-6835
1811 ELIZABETH AVE.	S	840 MAGNOLIA DR.	A S	GOWER, VERLIA COLE	034
WINSTON-SALEM 27103	919 722-3154	WINSTON-SALEM 27103	919 723-4036	918 MADISON AVENUE	A S
BENTIVOGLIO, GIAN P.	034	COLE, ROGER DALE	034	WINSTON-SALEM 27103	919 723-8602
809 GALES AVE.	A S	840 MAGNOLIA ST.	A S	GREVIOUS, STEPHEN SCOTT	034
WINSTON-SALEM 27103	919 725-3552	WINSTON-SALEM 27103	919 723-4036	1641-P NORTHWEST BLVD.	A S
BLACKBURN, KATHERINE S.	034	COPE, BRIAN SCOTT	034	WINSTON-SALEM 27104	919 724-4541
211-28 DALEWOOD DR.	A S	4755 COUNTRY CLUB RD.	A S	GROSSMAN, SARAH RONA	034
WINSTON-SALEM 27104	919 765-5952	APT. 109-E		2061 CRAIG ST., APT. #2	A * S
BLAINE, DAVID ALLAN	034	WINSTON-SALEM 27104	919 760-2482	WINSTON-SALEM 27103	919 723-3868
715 S. HAWTHORNE RD.	A S	COWARD, HOLLYJEAN	034	GUYTON, SCOTT PAUL	034
WINSTON-SALEM 27103	919 722-8519	305 S. HAWTHORNE RD. APT. 8	A S	2039 CRAIG ST.	A S
BLAKE, SIDNEY ALLEN	034	WINSTON-SALEM 27103	919 724-4554	WINSTON-SALEM 27103	919 777-8689
424 LOCKLAND AVE.	S	CRUM, AMY ELIZABETH	034	HACKLANDER, SHELLEY W.	034
WINSTON-SALEM 27103	919 788-5646	2017 CRAIG ST.	A S	2357-D ARDMORE TERR.	A * S
BROADBENT, BRYAN, J.H.	034	WINSTON-SALEM 27103		WINSTON-SALEM 27103	919 761-8652
300 HAWTHORNE ST. BOX 330	A S	CRUM, BRYAN GLENN	034	HADDAD, MICHEL GEORGE	034
WINSTON-SALEM 27103	919 721-9971	315 TAYLOR ST., APT. O	A S	300 S. HAWTHORNE RD. BOX 487	A S
BRODISH, PAUL HENRY	034	WINSTON-SALEM 27101	919 725-7944	WINSTON-SALEM 27103	919 723-7442
315 LOCKLAND AVE.	A S	CUNNINGHAM, JOSEPH W., JR.	034	HALL, JOHN HOWLAND, JR.	034
WINSTON-SALEM 27103	919 766-8447	381 GLENDARE DR., APT. I	A S	237 E. VINELAND RD.	A S
BROOKS, CLAUDETTE E.	034	WINSTON-SALEM 27104	919 725-7803	AUGUSTA, GA 30904	404 738-2112
1900 QUEEN ST., APT. C-4	A S	D'LUGIN, JAY JEFFREY	034	HARBOURNE, KEVIN S.	034
WINSTON-SALEM 27103	919 725-3240	3421 OLD VINEYARD RD. #C-34	A S	1641 NORTHWEST BLVD., APT. D	A S
BROWN, ANNE BARBARA	034	WINSTON-SALEM 27103	919 768-2093	WINSTON-SALEM 27104	919 724-7390
2055-A ACADEMY ST.	A * S	DARNELL, LINDA RUTH	034	HARLESS, JAMES M.	034
WINSTON-SALEM 27103	919 722-2275	2 MCCORMICK DR.	A S	307 FOXCROFT DR.	A S
BROWNING, DOUGLAS GUY	034	HACKESSIN, DE 19707	919 723-9612	WINSTON-SALEM 27103	919 768-4780
2050 CRAIG ST., APT. 23	A S	DELUCA, PAMELA S.	034	HARROLD, LAURIE J.	034
WINSTON-SALEM 27103	919 723-6603	1815 BRANTLEY ST.	A S	1606 W. FIRST ST., APT. 3	A S
BYRD, KERRY WENDELL	034	WINSTON-SALEM 27103	919 723-9695	WINSTON-SALEM 27104	919 723-5882
152 CHARLESTOWNE CIRCLE	A S	DIROCCO, JUDITH GERALYN	034	HARTMAN, MARJORIE LYNN	034
WINSTON-SALEM 27103	919 765-3033	1725-B FRANCISCAN TERR.	A S	413 YATES CT. #B	A S
CALDERONE, LISA M.	034	WINSTON-SALEM 27127	919 788-4844	CHAPEL HILL 27514	919 725-8909
3421 OLD VINEYARD RD. #C41	A * S	DOBYNS, RICHARD JOSEPH	034	HASHEMI, ZIAOLLAH	034
WINSTON-SALEM 27103	919 768-4502	2517 OLD SALISBURY RD.	A S	1439-L HUTTON ST.	A S
CALDWELL, GEORGE LEONHARD, JR.	034	WINSTON-SALEM 27127	919 785-2274	WINSTON-SALEM 27103	
2038 QUEEN ST.	A S	DORSEY, DEANNA LYNN	034	HATCH, STEPHEN J.	034
WINSTON-SALEM 27103	919 722-3629	406 LOCKLAND AVE.	A S	167 FOREST VIEW CT.	A S
CARR, JENIFER	034	WINSTON-SALEM 27103	919 723-3042	WINSTON-SALEM 27104	919 765-4179
248 S. SUNSET DR.	A S	DUBOW, DAVID ALAN	034	HEDBERG, ANN ELIZABETH	034
WINSTON-SALEM 27103	919 773-0369	1957 STONEWOOD DR.	A S	339 CRAFTON STE. #3	A S
CARTY, BRIAN CLIFFORD	034	WINSTON-SALEM 27103	919 768-2751	WINSTON-SALEM 27103	919 722-5662
120-4 RAINRIDGE DR.	A S	DUNSON, MARY E.	034	HERTZ, LINDA ELLEN	034
WINSTON-SALEM 27104	919 765-7147	BOX 344, BOWMAN GRAY	S	2513-A MILLER PARK CIRCLE	A S
CASEY, DEBORAH M.	034	300 S. HAWTHORNE RD.		WINSTON-SALEM 27103	919 724-6413
7300 CREDHEIM RD. C-17	A * S	WINSTON-SALEM 27103	919 723-0527		
PHILADELPHIA, PA 19119					

HINSON, JONATHAN C.	034	LINZ, WALTER JOSEPH	034	PICKLESIMER, FRED L., JR.	034
2841 TULLY SQUARE #F	A S	1944 HINSHAW AVE. APT. 3A	A S	1930 ELIZABETH AVE. APT. 3	A S
WINSTON-SALEM 27106	919 723-7554	WINSTON-SALEM 27104	919 773-1566	WINSTON-SALEM 27103	919 723-7547
HOFFMAN, MARY JACQUELINE	034	LIPSON, ERIC JAMES	034	PIERCE, JEFFREY N.	034
537 S. HAWTHORNE RD. #12	A S	7713 N. KENDALL DR. #A108	A S	BOX 274, 300 S. HAWTHORNE RD.	A S
WINSTON-SALEM 27103	919 761-8294	MIAMI, FL 33156		WINSTON-SALEM 27103	919 724-3509
HUBBARD, STEPHEN ADRIAN	034	LIU, AMY WEN	034	RENSNER, RICHARD WM., JR.	034
2930 CLUB PARK ROAD	A S	106 S. SUNSET DR.	A S	1304 FENIMORE ST.	A S
WINSTON-SALEM 27104	919 760-1226	WINSTON-SALEM 27101	805 964-6044	WINSTON-SALEM 27103	919 761-8933
HUFFMAN, JOHN MITCHEL, JR.	034	LODGE, JEFFREY SANDS	034	RICE, WILLIAM YATES, III	034
300 S. HAWTHORNE ROAD	A S	1911 W. ACADEMY ST.	S	706 FRIAR TUCK ROAD	A S
WINSTON-SALEM 27103	919 722-9378	WINSTON-SALEM 27103	919 721-9959	WINSTON-SALEM 27104	919 768-7293
HUGHES, DOREEN L.	034	LOMBARD, LISA L.	034	RICHTER, RICHARD LES'IER	034
664 N. SPRING ST., APT. 4	A * S	725-B GALES AVE.	A S	1640 NORTHWEST BLVD.	A S
WINSTON-SALEM 27101	919 722-5423	WINSTON-SALEM 27103	919 777-8607	WINSTON-SALEM 27104	919 722-5918
IFFT, ROBIN DAWN	034	LORD, RICHARD WILLIAM, JR.	034	RIGGAN, JASPER SIMMONS, III	034
731 LYNN DEE DR.	A S	2506 MILLER PARK CIRCLE	A S	300 S. HAWTHORNE RD.	S
WINSTON-SALEM 27106	919 765-3439	WINSTON-SALEM 27103	919 722-7649	STUDENT BOX 537	
IRELAND, PATRICK DAVID	034	MACK, YVONNE	034	WINSTON-SALEM 27103	919 760-1795
315 LOCKLAND AVE.	A S	300 S. HAWTHORNE, BOX 140	A S	ROARK, GARY LEE	034
WINSTON-SALEM 27103	919 723-2935	WINSTON-SALEM 27103	919 722-1325	1106 MELROSE ST.	A S
JACKSON, ELEANOR C. H.	034	MARLOWE, DONNA M.	034	WINSTON-SALEM 27103	919 761-1590
730 WALNUT FOREST RD. #H	A S	1208-A W. 4TH ST.	A S	ROBACZEWSKI, DAVID L.	034
WINSTON-SALEM 27103	919 722-1325	WINSTON-SALEM 27101	919 727-1866	206 OAKWOOD CT.	A S
JACOBSON, MARK DAVID	034	MARSHALL, HARVEY E., III	034	WINSTON-SALEM 27103	919 760-1643
3924 OLD VINEYARD RD., #55	A S	228 OAKWOOD CT.	A S	ROBERTS, JOSEPH E.	034
WINSTON-SALEM 27104	919 760-3389	WINSTON-SALEM 27103	919 724-1815	1333 MADISON AVE.	A S
JAMISON, JAMES P.	034	MATTHEWS, COY RANDOLPH	034	WINSTON-SALEM 27103	919 722-6835
2531-D MILLER PARK CIR.	A S	120 EDEN TERRACE #1	A S	RUCH, DAVID SIMMS	034
WINSTON-SALEM 27103	919 723-3562	WINSTON-SALEM 27103	919 723-9781	3807 PORTER ST. NW #303	A S
JENNINGS, ANGELA L.	034	MAXWELL, MICHAEL C.	034	WASHINGTON, DC 20016	
1725-B FRANCISCAN TERR.	S	418 LOCKLAND AVENUE	A S	RYDEN, JANICE BETH	034
WINSTON-SALEM 27107	919 788-4844	WINSTON-SALEM 27103	919 723-8294	300 S. HAWTHORNE RD.	A S
KASPAR, JOHN V.	034	MCLENDON, SUSAN D.	034	STUDENT BOX 543-BOWMAN GRAY	
810 GALES AVE.	A S	2000-J FALCON WOOD CT.	A * S	WINSTON-SALEM 27103	919 748-1783
WINSTON-SALEM 27103	919 725-7787	WINSTON-SALEM 27107	919 760-4458	SAVITT, JOSEPH S.	034
KAYE, DOUGLAS EVAN	034	MILLER, LISA DAWN	034	101 ECHO GLEN DR. APT. B1	A S
1900 QUEEN ST. APT. A3	A S	1715 ELIZABETH AVE.	A * S	WINSTON-SALEM 27106	919 761-0236
WINSTON-SALEM 27103	919 724-6289	WINSTON-SALEM 27103	919 761-0895	SCHNEIDER, MICHAEL J.	034
KEATING, ROBERT JOSEPH	034	MIRAGLIA, CHARLES CARMEN	034	300 S. HAWTHORNE RD. BOX 280	A S
300 S. HAWTHORNE RD.	S	1057 S. HAWTHORNE RD.	A * S	WINSTON-SALEM 27103	919 723-2935
WINSTON-SALEM 27103	919 722-0875	WINSTON-SALEM 27103	919 723-2299	SEARS, RICHARD JOHN	034
KELLAR, LISA COLLIER	034	MISHKIND, STEVEN HART	034	730-P WALNUT FOREST RD.	A S
3700 SUTHERLAND #N-1	S	2500-C MILLER PARK CIRCLE	A S	WINSTON-SALEM 27103	919 765-1396
KNOXVILLE, TN 37919		WINSTON-SALEM 27103	919 722-0477	SEARS, VICTOR W., JR.	034
KELLEY, TIMOTHY FRANCIS	034	MODEST, VICKI ELLEN	034	206 OAKWOOD CT.	A S
448 S. HAWTHORNE RD.	A S	3760 WILL SCARLET RD.	A S	WINSTON-SALEM 27103	919 722-8650
WINSTON-SALEM 27103	919 722-5371	WINSTON-SALEM 27104	919 765-6399	SEEN, NELSON DER	034
KEY, STEVEN PAUL	034	MURPHY, MICHAEL D.	034	1631 PARK AVE.	A S
300 S. HAWTHORNE RD., BOX 374	A * S	312 GRACE ST. #3	A S	NEW HYDE PARK, NY 11040	
WINSTON-SALEM 27103	919 777-0769	WINSTON-SALEM 27103	919 724-5686	SHACKELFORD, DONALD P., JR.	034
KILBY-SIMPSON, MARTHA ANN	034	MURPHY, WENDY ELAINE	034	BOX 284, BOWMAN GRAY	A S
420 BRIARLEA RD.	A S	1539 1/2 HAWTHORNE RD.	A S	300 S. HAWTHORNE RD.	
WINSTON-SALEM 27104	919 768-2403	WINSTON-SALEM 27103	919 765-1935	WINSTON-SALEM 27103	919 725-8605
KNOWLES, ROBERT C.Y.	034	NAPOLITANO, CHARLES A.	034	SHELLHORN, DOUGLAS B.	034
438 S. HAWTHORNE RD. APT. C	A S	1772 HAUSMAN DR.	A S	1715 ELIZABETH AVE.	A S
WINSTON-SALEM 27103		WINSTON-SALEM 27103	919 722-7787	WINSTON-SALEM 27103	919 761-0895
KNOWLES, SUSAN E.	034	NAPPER, CLAY H., JR.	034	SHEPARD, CLAUDIA PRICHARD	034
312 GROVE PARK AVE. #4	A S	2039 CRAIG ST.	A S	1406 JARVIS ST.	A S
WINSTON-SALEM 27103	919 721-0489	WINSTON-SALEM 27103	919 777-8689	WINSTON-SALEM 27101	919 722-8253
KOSFELD, SCOTT LEE	034	NELSEN, KAY M.	034	SMALES, WILLIAM PALMER	034
420 LOCKLAND AVE.	A S	2050 CRAIG ST. #24	A S	STUDENT BOX 411, BOWMAN GRAY A	S
WINSTON-SALEM 27103	919 722-9025	WINSTON-SALEM 27103	919 777-0975	300 S. HAWTHORNE RD.	
KOURI, DAVID LAWRENCE	034	O'BRIEN, MICHAEL K.	034	WINSTON-SALEM 27103	919 351-4144
1935 W. FIRST ST.	A S	2418 LYNTHURST AVE.	A S	SMALTO, GARY PAUL	034
WINSTON-SALEM 27104	919 723-7169	WINSTON-SALEM 27103	919 723-1492	401 S. SUNSET DR.	A S
LAMAY, EDWARD NORMAN	034	O'HALLARON, MAUREEN A.	034	WINSTON-SALEM 27103	919 724-9744
448 HAWTHORNE RD.	A S	1902 QUEEN ST. #E-6	A S	SMITH-COOK, SHARON R.	034
WINSTON-SALEM 27103	919 722-5371	WINSTON-SALEM 27104	919 724-3686	312-10 LINVILLE RIDGE CT.	A * S
LATZ, JOHN E., JR.	034	OLSEN, JEFFREY DOVE	034	WINSTON-SALEM 27101	919 722-4258
1322 MADISON AVE.	A * S	2451 BOONE AVE.	A S	SMITH, KAREN MARIE	034
WINSTON-SALEM 27103	919 723-5305	WINSTON-SALEM 27103	919 725-9812	1605-P ZUIDER ZEE DR.	A S
LATZ, TRACY J. T.	034	ORCUTT, JAMES MICHAEL	034	WINSTON-SALEM 27127	919 784-8762
1322 MADISON AVE.	A * S	1327 REVERE RD.	A S	SNOWHITE, JENNIFER CELESTE	034
WINSTON-SALEM 27103	919 723-5305	WINSTON-SALEM 27103	919 725-8866	1712 ELIZABETH AVE.	A S
LEE, BENJAMIN HOWARD	034	PAYNE, JEFFREY C.	034	WINSTON-SALEM 27103	919 722-8712
2050 CRAIG ST. APT. #8	A S	938 MADISON AVE.	A * S	SO, GERALD MENDOZA	034
WINSTON-SALEM 27103	919 454-3742	WINSTON-SALEM 27103	919 724-6286	312 GROVE PARK AVE., APT. #3	A S
LETTIERI, SALVATORE CARMINE	034	PERRY, SAMUEL JOSEPH	034	WINSTON-SALEM 27103	919 725-4912
2011 VIKING DR., N.W., APT. 17	A S	1723 VIRGINIA RD. 1/2	A S	STANDISH, MYLES	034
ROCHESTER, MN 55901		WINSTON-SALEM 27104	919 724-7680	838 BRENT	A S
LEWIS, JEFFERY DUN	034	PESANO, RICK LOUIS	034	WINSTON-SALEM 27103	919 725-6971
BOX 514, BOWMAN GRAY	A S	1407-A SENECA ST.	A S	STANFORD, EDWARD JOSEPH	034
WINSTON-SALEM 27103		WINSTON-SALEM 27103	919 748-0946	1935 GASTON ST.	S
LINS, MARK DAVID	034	PETERSEN, NICOLE M.	034	WINSTON-SALEM 27103	
1641-F NORTHWEST BLVD.	A S	520-Z PARK RIDGE CT.	A S		
WINSTON-SALEM 27104	919 725-8423	WINSTON-SALEM 27104	919 765-5023		

STERNER, DAVID CHARLES 3487 TANGLEBROOK TR. CLEMMONS 27012	034 A S 919 766-6117	TALTON, DAVID SMITH 1641 N. W. BLVD., APT. R WINSTON-SALEM 27104	034 A S	WARTOFSKY, LEORA 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	034 S
STONEROCK, GRACE JANINE 5317-B QUAILWOOD DR. WINSTON-SALEM 27104	034 S 919 724-5446	TOMLINSON, MARGARET F. 324 CRAFTON ST. WINSTON-SALEM 27103	034 A S 919 723-5882	WELLS, ANDREW HENDERSON 1715 ELIZABETH AVE. WINSTON-SALEM 27103	034 A S 919 761-0895
STOUT, ROBERT GREGROY 415 IRVING ST. WINSTON-SALEM 27103	034 A * S 919 723-9141	UELAND, FREDERICK R. BOX 421, 1ST YEAR STUDENT 300 S. HAWTHORNE RD. WINSTON-SALEM 27103	034 A S 919 723-0070	WHITE, ALAN FRASER 2418 LYNTHURST AVE. WINSTON-SALEM 27103	034 A S 919 723-1492
STRIKE, WILLIAM K. 300 S. HAWTHORNE RD. BOX 416 WINSTON-SALEM 27103	034 A S 919 723-1491	VERSCHUYL, EVERT JAN 1232 FORSYTH ST. WINSTON-SALEM 27101	034 A S 919 722-6637	WOOLLEN, THOMAS H., JR. 2406 PARKWAY DR. WINSTON-SALEM 27103	034 A * S 919 722-6459
STUBER, SUSAN MARIE 2050 CRAIG ST., APT. #12 WINSTON-SALEM 27103	034 A S 919 725-9443	VIVEONANTHAN, SANDEEP P. 4608 HIDDENBROOK DR. RALEIGH 27609	034 A S 919 876-8566	YAKEL, DONALD L. 1828 NORTHWINDS DR. WINSTON-SALEM 27127	034 A S 919 788-3468
SWATHWOOD, TODD C. 235 CORONA ST. APT. 203 WINSTON-SALEM 27103	034 A S 919 722-8981	WADDELL, BRAD EDWARD 204 PERSHING AVE., SW WINSTON-SALEM 27103	034 S 919 725-2939	YOUNCE, LAURA L. H. 4361 JOHNSBOROUGH CT., APT 78 WINSTON-SALEM 27104	034 A S 919 768-5971
TAEKMAN, JEFFREY M. 730-P WALNUT FOREST RD. WINSTON-SALEM 27103	034 A S 919 765-1396	WALKER, JAMES LYSLE 2353 QUEEN ST. #D WINSTON-SALEM 27103	034 A S 919 722-9268		

DUKE UNIVERSITY SCHOOL OF MEDICINE

OFFICERS — President: Susan Hazzard, 706 N. Buchanan Blvd., Apt. 4, Durham 27701 (919 688-7347)
Secretary: Melisa C. Corcoran, 208 N. Buchanan, Apt. 2, Durham 27701

ABRAMSON, MURRAY A. 3007 GLENDALE AVE. DURHAM 27704	032 A S 919 477-3869	CHOI, MINA NUI 805 JACKSON ST. DURHAM 27701	032 A S 919 688-7899	FEATHERSTON, MARK W. 134 LANDBURY DR. DURHAM 27707	032 A S 919 493-9264
ACKER, JEFFREY CHARLES 2209 MOREHEAD AVE., APT. #2 DURHAM 27707	032 A S 919 493-1678	CHOW, CAROLINE CHIA-LIN 501 DOWNING ST., APT. J DURHAM 27705	032 A S 919 383-2939	FEESER, SCOTT ALAN 700 MORRENE RD. B7 DURHAM 27705	032 A S 919 383-7092
ADAMSON, WM. TALBOT 3222 COACHMAN'S WAY DURHAM 27705	032 A S 919 489-7372	CHOW, GREGORY HENKUE #9 GEORGETOWN CT. DURHAM 27705	032 A S 919 383-6849	FLANAGAN, BRIAN FRANCIS 618 MOREHEAD AVE. APT. #1 DURHAM 27707	032 A S 919 383-7627
ALSPAUGH, JAMES A., II 211 MELVILLE LOOP #13 CHAPEL HILL 27514	032 A S 919 929-0152	CHU, CHARLEEN T. BOX 2715, DUMC DURHAM 27710	032 A S 919 684-6164	FLICK, CONRAD L. BOX 2734, DUMC DURHAM 27710	032 A S 919 471-4905
ALYEA, EDWIN PASCAL, III 13 PINNACLE RD. DURHAM 27705	032 A S 919 495-5608	COOK, PERRY FLETCHER 446 CENTRAL AVE. MERLO PARK, CA 94025	032 A S	FORMAN, MARK STUART 803 GREEN ST. DURHAM 27701	032 A S
AMATO, MARY THERESA 822 LANCASTER ST. APT. #2 DURHAM 27701	032 A S 919 286-4983	CORCORAN, MELISSA C. PO BOX 2716 DURHAM 27710	032 A S 919 688-7636	FRIEDBERG, R. C. 718-A IREDELL ST. DURHAM 27705	032 A S 919 286-3909
ARMSTRONG, MICHAEL, JR. 4335-B AMERICAN DR. DURHAM 27705	032 A S 919 383-6974	DALTON, JAMES D., JR. 311 S. LASALLE ST. APT. 5-E DURHAM 27705	032 A S 919 383-4817	FRUCHT, DAVID MARTIN 4138 DEEPWOOD CIRCLE DURHAM 27707	032 A S 919 493-0760
BACON, DAVID SCOTT 4138 DEEPWOOD CIR. DURHAM 27707	032 A S 919 286-7883	DAVIDSON, ROBERT CLABAUGH BOX 2718, DUMC DURHAM 27710	032 S 919 383-5047	GANCHI, PARHAM AMIR 1911 ERWIN RD. APT. B DURHAM 27705	032 A S 919 684-5680
BARBORIAK, PETER N. 2748 MIDDLETON #14B DURHAM 27705	032 A S 919 383-8849	DAVIS, CORNELIUS A., III 501-G DOWNING ST. DURHAM 27705	032 A S 919 286-7291	GANGAROSA, LISA M. 1713 JAMES ST. DURHAM 27707	032 A S 919 493-9583
BATTISTONE, MICHAEL J. 886 LOUISE CIR. APT. 26F DURHAM 27705	032 A S 919 383-7569	DEMALLIE, DIANE A. 311 S. LASALLE ST. APT. 47B DURHAM 27705	032 A S	GAULT, JANICE ANN 910 CONSTITUTION, APT. 1007 DURHAM 27705	032 A S 919 383-7712
BEATTY, PETER T. 2335 HURON CIRCLE DURHAM 27707	032 S 919 493-9131	DUDLEY, R. ADAMS 11 TARAWA TERR. #A DURHAM 27705	032 A S 919 383-6387	GEERTGENS, PAMELA A. 311 S. LASALLE ST. APT. 47B DURHAM 27705	032 A S 919 286-3921
BLAIR, JERRY RAY 14 GLEEWOOD PLACE, EAST DURHAM 27713	032 A S 919 544-5534	EARNHARDT, RICHARD CRAIG 2836 CHAPEL HILL RD. APT. 30-B DURHAM 27707	032 A S 919 493-7968	GO, JOAN MAYCHU 4 RIVER BIRCH RD., APT. K DURHAM 27705	032 A S 919 383-7019
BOND, PAMELA EATON 869 LOUISE CIRCLE DURHAM 27705	032 A S 919 383-8354	EDELBERG, JAY MARSHALL BOX 2730, DUMC DURHAM 27710	032 S 919 286-7394	GOLDBERG, MARC ANDREW BOX 2860, DUMC DURHAM 27710	032 A S 919 383-8675
BRODEUR, DAVID 4800 UNIVERSITY DR. #24B DURHAM 27707	032 A S 919 493-6718	EDWARDS, PAUL D. 311 S. LASALLE ST. #41-G DURHAM 27705	032 A S 919 286-7143	GOTTLIEB, JUSTIN L. 3222 COACHMAN'S WAY DURHAM 27705	032 A S 919 489-7372
BUCHANAN, SCOTT A. 2A CARSON CIRCLE DURHAM 27705	032 A S 919 383-8367	EVANS, AVERY J. BOX 2841, DUMC DURHAM 27710	032 A S 919 688-5730	GROSSNICKLE, MARK EARL 3603 CRYSTAL COURT DURHAM 27705	032 A S 919 477-8535
BUSER, STEVEN DONALD 534 MARSHALL WAY DURHAM 27705	032 A S 919 383-5653	EVANS, JOSEPHINE ADAMSON 1010 DEMERIUS ST. DURHAM 27701	032 A S 919 688-5730	GUPTA, AMIT GIRISH BOX 2763, DUMC DURHAM NC 27710	032 A S 919 489-5105
CAZZANIGA, STEFANO L. 1611 DUKE UNIV. RD. APT. 1-E DURHAM 27701	032 A S 919 489-5105	FAIRCHILD, KAREN DIANE 4012 HILLGRAND DR. DURHAM 27705	032 A S 919 383-5160	HALE, LAURA POPE 6512 CRAIG ROAD DURHAM 27712	032 A S 919 471-0865
CHAN, KRAMMIE M. 4408 AMERICAN DR. #B DURHAM 27705	032 S 919 477-3083	FARRIS, DAVID B. 311 S. LASALLE ST. APT. 4A DURHAM 27705	032 A S 919 383-6534	HALL, BRUCE LEE #9 GEORGETOWN CT. DURHAM 27705	032 S 919 684-6469

HALL, CHARLES DANIEL 4800 UNIVERSITY DR. 5-B BEECH LAKE APTS. DURHAM 27707	032 S 919 493-0448	MILLER, MARK F. 2752 MIDDLETON #31-J DURHAM 27705	032 A S 919 383-0025	RUSTAD, TODD J. 2220 ELMWOOD DURHAM 27707	032 S 919 383-5828
HAWKINS, SARALYN REID BOX 2793, DUMC DURHAM 27710	032 A S 919 490-5561	MOLTER, DAVID W. 2974 CAROLYN DRIVE DURHAM 27703	032 A S 919 596-4936	SAVITT, MICHAEL ANDREW 1315 MORRENE RD. #22F DURHAM 27707	032 A S 919 286-1989
HAZZARD, SUSAN L. 106 N. BUCHANAN BLVD. APT. #4 DURHAM 27701	032 A S 919 682-0819	MOSELEY, WALTON STROZIER 311 S. LASALLE ST. APT. 37-B DURHAM 27705	032 A S 919 286-3311	SCHMALTZ, ROBERT ANDREW 604 W. KNOX ST. DURHAM 27701	032 A S 919 383-5972
HEDRICK, HOLLY LEE 910 CONSTITUTION DR. APT. 804 DURHAM 27705	032 A S 919 383-1708	MULY, EMIL C., III 886 LOUISE CIRCLE, APT. 26-B DURHAM 27705	032 S 919 383-0529	SEGRETI, EILEEN MARIE 3127 N. RACINE AVE., 2ND FLOOR CHICAGO, IL 60657	032 A S
HENDRICKSON, STEVEN CRAIG BOX 2743, DUMC DURHAM 27710	032 A S 919 471-0258	NASH, S. RUSSELL 311 S. LASALLE ST. APT. 31Q DURHAM 27705	032 A S 919 286-4633	SHAH, SHAFQAT 1911 ERWIN RD. APT. L DURHAM 27705	032 A S 919 684-6035
HERLONG, JAMES RENE 618 MOREHEAD AVE. #1 DURHAM 27707	032 A S 919 688-8011	NASTALA, CHET LAWRENCE BOX 2779, DUMC DURHAM 27710	032 A S	SHIH, DEBORAH P. 1315 MORRENE RD. #17E DURHAM 27705	032 A S 919 383-2016
HOFFMAN, ERIC D. BOX 2747, DUMC DURHAM 27710	032 A S 919 383-1448	NATHAN, LAUREN 548 FINLEY ST. DURHAM 27705	032 A S 919 383-4227	SLEMP, CATHERINE C. 869 LOUISE CIRCLE DURHAM 27705	032 S 919 383-8354
HULKA, GREGORY F. BOX 2875, DUMC DURHAM 27710	032 A S 919 493-8258	NUNEZ, MICHAEL J. 311 S. LASALLE ST., APT. 14A DURHAM 27705	032 A S 919 383-1448	SMITH, BRYAN WESLEY 302 PITTSBORO ST. CHAPEL HILL 27514	032 A S 919 929-7447
IBRAHIM, GEORGE KAISSAR 11 WILLOWBRIDGE DR. #80 DURHAM 27707	032 A S 919 493-3695	O'BRIEN, JAMES W. 311 S. LASALLE ST. APT. 22K DURHAM 27705	032 A S 919 383-4871	SMITH, SPENCER MARION 10007 CRESTWOOD RD. KENSINGTON, MD 20895	032 A S 301 493-8395
INGE, WELLFORD W., III 311 S. LASALLE ST. APT. 37B DURHAM 27705	032 A S 919 286-3311	OTLEY, CLARK C. 223-A W. WOODRIDGE DR. DURHAM 27707	032 A S 919 490-0199	SOTO, PABLO F. 6D RIVER BIRCH RD. DURHAM 27705	032 A S 919 383-4367
JOHNSON, CHERYL 4800 UNIVERSITY DR., APT. 3M DURHAM 27707	032 A S 919 286-1760	PANZA, WILLIAM SEBASTIAN 1800 WILLIAMSBURG RD. APT. 8-E DURHAM 27707	032 A S 919 489-4104	STEVENS, WILLIAM ROSS 534 MARSHALL WAY DURHAM 27705	032 A S 919 383-5653
KAPLAN, TODD M. 1702 WOODBURN RD. DURHAM 27705	032 A S 919 493-5007	PAOLINI, JOHN FRANK BOX 2832, DUMC DURHAM 27710	032 A S	STONE, LISA MARIE 21 PRESTWICK PLACE DURHAM 27705	032 A S 919 286-2377
KAUFMAN, JEFFREY 311 S. LASALLE ST. APT. 50B DURHAM 27705	032 A S 919 286-3719	PAPADOPOULOS, SPYRIDON G. 3700-205 CHIMNEY RIDGE PL. DURHAM 27713	032 A S 919 493-0718	SURYANARAYAN, KAVERI BOX 2800, DUMC DURHAM 27710	032 A S 401 789-0710
KEITHAHN, STEPHEN TIMOTHY BOX 2760, DUMC DURHAM 27710	032 A S 919 493-1678	PARANKA, JULIA ANNE BOX 2833, DUMC DURHAM 27710	032 S 919 493-7736	TARRY, WALLACE CLEMENTS 208 1/2 E. KNOX ST. DURHAM 27702	032 A S 919 693-3223
KHAWLY, JOSEPH A. 311 S. LASALLE ST. APT. 44L DURHAM 27705	032 A S 919 286-4491	PARKER, JENNIFER L. 4800 UNIVERSITY DR. APT. 6-O DURHAM 27707	032 A S 919 490-1576	TERRELL, GRACE EMERSON 111 BRENROSE CIR. DURHAM 27705	032 S
KOOPERSMITH, TINA BETH BOX 2764, DUMC DURHAM 27710	032 A S	PATTON, SUZANNE ELIZABETH 2808 ERWIN RD., APT. 6A DURHAM 27705	032 A S 919 383-0446	THIELMAN, NATHAN M. 813 LOUISE CIRCLE DURHAM 27705	032 A S 919 383-7118
LASKOWITZ, DANIEL 2A CARSON CIRCLE DURHAM 27705	032 A S 919 383-8367	PERNO, JOSEPH R. BOX 2809, DUMC DURHAM 27710	032 A S 919 684-1306	THIERJUNG, CHRISTINA 95 CRESCENT AVE. RYE, NY 10580	032 A S
LECROY, CHARLES M., JR. 4600 UNIVERSITY DR., APT. 602 DURHAM 27707	032 A S 919 490-5345	PERONA, BARBARA PIEZ 1022 GREEN ST. DURHAM 27701	032 A S 919 682-3942	TRACHMAN, JAYNE FELICIA 2413 DELLWOOD DR. DURHAM 27705	032 A S 919 383-1341
LILLY, R. ERIC PO BOX 2761, DUMC DURHAM 27710	032 A S 919 286-2716	PORTER, LISA ELLEN 2681 HITCHCOCK DR. DURHAM 27705	032 A S 919 471-9289	TWEED, JOHN LINDSEY 1311 GLENDALE AVE. DURHAM 27701	032 A S 919 688-0527
LYERLY, MARK ANDREW 645 BALFOUR RD. WINSTON-SALEM 27104	032 A S 919 760-0865	POWELL, ALLEN ORLO 2325 ENGLEWOOD AVE. DURHAM 27705	032 A S 919 286-5436	WALTER, KEITH A. 1911 ERWIN RD. APT. E DURHAM 27705	032 A S 919 684-6253
MAVROS, SHARON 411-I DOWNING ST. DURHAM 27705	032 A S 919 286-4617	PRACYK, JOHN BRADFORD 610 DOUGLAS ST., APT. 312-B DURHAM 27705	032 A S 919 286-7365	WEBB, MICHAEL STEPHEN, JR. 229-A BRIDGEFIELD PLACE DURHAM 27705	032 A S 919 383-4960
MAXFIELD, STEVEN RONALD 2908 ERWIN RD. DURHAM 27705	032 A S	PRATT, REBECCA ANN 209 ALEXANDER ST. APT. D DURHAM 27705	032 A S 919 684-7590	WEIDMAN, ERIC ROBERT 311 S. LASALLE ST. APT. 48-O DURHAM 27705	032 A S 919 286-2172
MAYNOR, CAROLYN CHANG BEECHWOOD APTS. 24-A 4800 UNIVERSITY DR. EX. DURHAM 27707	032 A S 919 286-1409	PRUTHI, ASIT SOM 2752 MIDDLETON AVE. 31-I DURHAM 27705	032 A S 919 286-2615	WOODARD, PAMELA K. 201 ALEXANDER ST. APT. AA DURHAM 27705	032 A S 919 684-7402
MCDERMOTT, T. PAUL, JR. 104 #8 MELVILLE LOOP CHAPEL HILL 27514	032 A S 919 942-2334	RISKA, PAUL FRANK NATL. INST. MEDICAL RESEARCH THE RIDGEWAY MILL HILL, LONDON	032 A S 919 383-5620	WU, JUSTIN JA-LI BOX 2826, DUMC DURHAM 27710	032 S 919 781-7251
MCDONNELL, KENNETH PAUL 1411 ANDERSON ST. DURHAM 27707	032 A S	RITCH, KARL ANDREW 2907 SHAFTSBURY ST. DURHAM 27704	032 A S 919 477-2977	YEH, FLORA MEI-CHING 4408-B AMERICAN DR. DURHAM 27705	032 S 919 383-7360
MCKEE, SCOTT 2220 ELMWOOD DURHAM 27707	032 S 919 383-5828	RODABAUGH, KERRY J. 2211 MOREHEAD AVE. #2 DURHAM 27707	032 S 919 847-9614	YOSHINO, PAUL HARUTAKA 1315 MORRENE RD. APT. 27-J DURHAM 27705	032 A S 919 383-6059
MENNILLO, ROGER NILES 1610 GLENDALE DURHAM 27701	032 A S 919 688-0527	ROSENBERG, MARK ROBERT BOX 3837, DUMC DURHAM 27710	032 A S 919 493-2846	YUE, CHARLES C. 109 TWISTED OAK PL. DURHAM 27705	032 A S 919 490-1969
		ROTH, NEIL S. BOX 2817, DUMC DURHAM 27705	032 A S 919 383-8278	ZAROFF, WENDY ANNE 4800 UNIVERSITY DR. EXT. APT. 14-B DURHAM 27707	032 A S 919 383-7827

EAST CAROLINA UNIVERSITY SCHOOL OF MEDICINE

OFFICERS — **President:** Jim Ebert, 4 Carriage House Apts., Greenville 27834 (919 756-5093)**Secretary:** Sean White, E-23 Yorktown Sq., Greenville 27834 (919 756-6352)

AVERY, ELEANOR ELIZABETH RT. #2, BOX 305 GREENVILLE 27834	074 A S 919 752-0569	COTTEN, AARON R. 108-B CEDAR COURT GREENVILLE 27858	074 S 919 551-0571	HEATH, STACEY MAURICE 202-A LINDBETH DR. GREENVILLE 27834	074 A S 919 355-2402
BARNES, VICTOR RUSSELL 108 SARA LANE #B GREENVILLE 27834	074 A S 919 758-1547	CRAWLEY, GEORGE EDWARD, III 1113 HILLSIDE DR. GREENVILLE 27834	074 A S 919 830-0748	HENDERSON, CATHY LYNN 217 E. WOODSTOCK DR. GREENVILLE 27834	074 A S 919 756-8735
BARNETT, STEWART D. R-4 DOCTORS PARK APTS. GREENVILLE 27834	074 A S 919 752-6717	DAGENHART, TIMOTHY LEE 322 SPRINGHILL RD. GREENVILLE 27834	074 A S 919 830-1242	HENSON, DONALD LENTZ, JR. 24 SCOTT ST. GREENVILLE 27834	074 A S 919 756-7639
BARROW, ROY DOUGLAS 1711 TREEMONT DR. GREENVILLE 27858	074 A S 919 756-3746	DUKES, ROBERT RAYMOND 1301-A DICKINSON AVE. GREENVILLE 27834	074 A S 919 756-9928	HESTER, T. OMA 106 SCALES PL., L-6 GREENVILLE 27834	074 A S 919 752-5113
BASKIN, JAYNE FRANCES 3326 LANDMARK ST. D-1 GREENVILLE 27834	074 A S 919 756-5256	EBERT, JAMES B., JR. #4 CARRIAGE HOUSE GREENVILLE 27834	074 A S 919 756-5093	HINSON, TONY RAY RT. #1, BOX 434 GREENVILLE 27834	074 A S 919 758-5643
BATTS, MARK BURREL RT. #8, BOX 269 GREENVILLE 27834	074 A S 919 752-3648	EDWARDS, WILSON BARTON, JR. 108 SARA LANE #B GREENVILLE 27834	074 A S 919 758-1547	HODGES, JOSEPH AL, JR. RT. #8, BOX 330-C GREENVILLE 27834	074 S 919 758-7626
BEAMER, MARK EDWARD 119 FLETCHER PL. GREENVILLE 27834	074 A S 919 758-2290	EVANS, JAMES HARVEY E-6 DOCTOR'S PARK GREENVILLE 27834	074 S 919 758-2577	HOLLAND-ZIGLAR, AMY J. 111 RODNEY RD. GREENVILLE 27834	074 A S 919 758-9933
BEANE, SCOTT DOUGLAS 3-I COURTNEY SQUARE APTS. GREENVILLE 27858	074 A S 919 758-5617	EVATT, W. CHRISTOPHER ECU SCHOOL OF MEDICINE MEDICAL STUDENT GREENVILLE 27858	074 S 919 758-2059	HOWARD, T. CURRIN R-9 DOCTOR'S PARK APTS. GREENVILLE 27834	074 A S 919 758-8812
BEEKER, THADDEUS ARLEN APT. 16-F, COURTNEY SQUARE GREENVILLE 27834	074 A S 919 737-8170	FAGUNDUS, DUNCAN MCLEOD 210 N. EASTERN ST. GREENVILLE 27858	074 A S 919 758-3395	HUGHES, C. ANTHONY 120-A HUNTINGRIDGE RD. GREENVILLE 27834	074 A S 919 752-6434
BINION, MARK LEE 106 SCALES PL., APT. A-7 GREENVILLE 27834	074 A S 919 758-9438	FOWLER, WILLIAM EDWARD 106 SCALES PL., B-1 GREENVILLE 27834	074 A S 919 758-2908	IMBODEN, LEY INEZ 217 E. WOODSTOCK DR. GREENVILLE 27834	074 A S 919 756-8735
BLACKWELL, MICHAEL A. RT. #2, BOX 372 WINTERVILLE 28590	074 A S 919 758-7303	FREEL, PAUL DUANE 404 HILLCREST DRIVE GREENVILLE 27834	074 A S 919 355-7807	JOHNSON, SAMUEL ANDREW APT. #4, CARRIAGE HOUSE GREENVILLE 27834	074 A * S 919 756-5093
BOTWRIGHT, GENE ROBERT, JR. R-10 DOCTOR'S PARK APTS. GREENVILLE 27834	074 A S 919 830-1710	FREEMAN, SANDRA 411 E. FOURTH ST. GREENVILLE 27834	074 S 919 752-4337	JOHNSON, THOMAS DUANE DOCTORS PARK APTS. U-4 GREENVILLE 27834	074 A S 919 758-4458
BOWMAN, CHRIS RICHARDS PO BOX 607 AURORA 27806	074 A S 919 758-6437	FURR, SARA MARCELLA 2521 MEMORIAL DR. GREENVILLE 27834	074 A S 919 756-9596	JOHNSTONE, WILLIAM MILLER, JR. 1608 BEAUMONT DR. GREENVILLE 27858	074 A S 919 758-7213
BOYETTE, DEANNA MARIE 424 BROOKSIDE DR. CHAPEL HILL 27514	074 A S	GIBLIN, JOHN MARTIN F-2 DOCTOR'S PARK APTS. GREENVILLE 27834	074 S 919 752-8619	JONES, CHRISTOPHER 408 ROTARY AVE. GREENVILLE 27858	074 A * S 919 752-5110
BROWN, MICHAEL ASHLEY 114 FLETCHER PLACE GREENVILLE 27834	074 A S 919 758-3315	GODWIN, GWENDOLYN R. Q-2 DOCTORS PARK APTS. GREENVILLE 27834	074 A S 919 752-5092	JONES, DAVID RAY 425 W. LONG MEADOW RD. GREENVILLE 27858	074 A S 919 758-1841
BROWNE, GEOFFREY H. 1600 LONGWOOD DR. GREENVILLE 27858	074 A S 919 355-7607	GOODMAN, DAVID K. 321 GENTRY ST. JEFFERSON 28640	074 A S 919 355-5287	JONES, JANE C. 202 RODNEY RD. GREENVILLE 27834	074 A S 919 758-1065
BRYANT, LYNETTE PO BOX 7069 GREENVILLE 27835	074 S	GORDON, SHELLEY G. RT. #3, BOX 103 WINTERVILLE 28590	074 A S 919 355-5963	KANNON, GEORGIA ANN 114-A HUNTING RIDGE RD. GREENVILLE 27834	074 S 919 758-2940
BUNDY, STEPHANIE A. 103 SHILOH, APT. #9 GREENVILLE 27834	074 A S 919 756-0664	GOUGH, JOHN E. E-1 100 DAVID DR. GREENVILLE 27858	074 A S 919 758-6279	KINARD, JAMES DONALD 33 WEST HILLS TOWNHOMES GREENVILLE 27834	074 A S 919 852-6384
BURCHETTE, BRUCE WILSON G-6 DOCTOR'S PARK APTS. GREENVILLE 27834	074 A S 919 758-6981	GRANT, TERRY ALAN 2905-A CEDAR CREEK RD. GREENVILLE 27834	074 A S 919 758-6820	KREMER, WM. ALFRED 2675 MULBERRY LN. GREENVILLE 27858	074 A S 919 355-3130
BYRD, VERNON DALE 2643 MULBERRY LANE. ARLINGTON SQUARE APTS. GREENVILLE 27858	074 A S 919 551-1812	GRAVELLE-CAMELO, SHERYL RT. #2, BOX 304 ROCKY MOUNT 27801	074 A S 919 442-7752	KURTZ, KEVIN JOHN PO BOX 396 JEFFERSON 28640	074 A S 919 551-1653
CALL, KENNETH D. 602-A W. CHURCH ST. FARMVILLE 27828	074 A S 919 753-5687	GREASON, FRANCES CRAWFORD 106 SCALES PL. M-2 GREENVILLE 27834	074 A S	LANE, CHARLES JENKINS 2905-H CEDAR CREEK RD. GREENVILLE 27834	074 A S 919 758-2884
CHAMBERLAIN, MATTHEW P. 136 FOREST ACRES DR. GREENVILLE 27834	074 A S 919 551-3267	GREGORY, GLADYS REGINA L-13 DOCTORS PARK APTS. GREENVILLE 27834	074 S 919 758-5954	LAVIGNE, MARK KINO DOCTOR'S PARK APTS. C-5 GREENVILLE 27834	074 A * S 919 758-1822
CLARKE, DONALD KEITH 1530-0 BRIDLE CIR. GREENVILLE 27834	074 A S 919 756-2072	GRIFFIN, STEPHANIE D. RT. 1, BOX 260 MACCLESFIELD 27852	074 A S 919 827-5567	LEE, MARTHA HOPE 2636 MULBERRY LN. GREENVILLE 27858	074 S 919 578-3190
COLEMAN, NANCY LOU 403 HILLTOP ST. GREENVILLE 27858	074 A S 919 752-3394	GRIGGS, JAMES PHILIP, JR. P. O. BOX 172 WINTERVILLE 28590	074 A S 919 756-9608	LEE, MITCHELL D. RT. #8, BOX 330-A GREENVILLE 27834	074 S 919 551-0532
COOK, BRIAN DOCTORS PARK APTS. U-1 GREENVILLE 27834	074 A S 919 758-3689	HALL, BRENT DWAYNE DOCTOR'S PARK APTS, #P-7 GREENVILLE 27834	074 A S 919 752-7222	LENNON, BARBARA M. 44 COLINDALE COURT GREENVILLE 27858	074 A S 919 756-2646
COSTNER, JAMES M. 113 E. 12TH ST. GREENVILLE 27834	074 A S 919 757-3217	HATCH, ALLAN BRAZIEL 127 AVERY ST. APT. #3 GREENVILLE 27834	074 S	LENNON, YATES ALTON 44 COLINDALE COURT GREENVILLE 27834	074 A S 919 648-4158

LEONARD, MARILYN JEAN #18 GLENWOOD APTS. GREENVILLE 27858	074 A S 919 758-0713	PATEL, VIJESH K. 109 STEWARD LANE GREENVILLE 27834	074 A S 919 756-8948	SUPIK, LAWRENCE FRANCIS 207 N. JARVIS ST. GREENVILLE 27834	074 A S 919 752-7289
LEONHARDT, GARY GENE RT. #13, BOX 434 GREENVILLE 27858	074 A S 919 756-0150	PEARCE, RICHARD EDWARD 202-B LINDBETH DR. GREENVILLE 27834	074 A S 919 756-8447	SUTTON, STEVEN GLENN N-2 DOCTORS PARK APTS. GREENVILLE 27834	074 A S 919 752-2322
LJUNG, TOR MARTIN 2707 MULBERRY LANE GREENVILLE 27858	074 A S 919 355-6674	PEARLMAN, WM. GLENN RT. #1, BOX 54-A GREENVILLE 27834	074 A S	SWANGER, CYNTHIA Y. K. RT. #1, BOX 38-B GREENVILLE 27834	074 A S 919 758-1284
LONDON, DEBORAH LOUISE RT. #2, BOX 561-D AYDEN 28513	074 A S 919 752-0109	PEREZ-NAVARRO, PAUL A. RT. #8, BOX 330-A GREENVILLE 27834	074 A S 919 757-0532	SWANGER, STEPHEN JAMES RT. #1, BOX 38-B GREENVILLE 27834	074 A S 919 758-1284
LUCYK, MARYANN 13 UPTON COURT GREENVILLE 27858	074 A S	PHILLIPS, STAN DALE 2683 MULBERRY LN. ARLINGTON SQUARE APTS. GREENVILLE 27858	074 A S 919 355-5145	SWING, DONALD CRAVER, JR. 107 PAUL CIRCLE GREENVILLE 27834	074 A S 919 756-6912
MACDONALD, MARK EDWARD 107 DUPONT CIRCLE GREENVILLE 27858	074 A S 919 756-6502	PHIPPS, ERVIN LAMAR 2652 MULBERRY LN. GREENVILLE 27834	074 A S 919 551-3379	TANNEHILL, W. BRUCE 213 PINERIDGE DR. GREENVILLE 27834	074 A S 919 758-6973
MAHAFFEY, WILLIAM M. RT. #8, BOX 330-D GREENVILLE 27834	074 S 919 758-6102	PICTON, DOUGLAS WM. 31 COURTNEY SQUARE GREENVILLE 27858	074 A S 919 756-9538	TAYLOR, JERRY JURGEN 2402-B E. THIRD ST. GREENVILLE 27834	074 A S 919 562-5174
MANGUM, SARAH ROSE 319-N ST. ANDREWS DR. GREENVILLE 27834	074 A S 919 756-8709	POULOS, JOHN E. 1306-B E. 14TH ST. GREENVILLE 27834	074 A S 919 758-3751	TEACHEY, HERMAN MCKINLEY 404 LAUREL ST. GREENVILLE 27834	074 A S 919 758-4139
MASIUS, WILLIAM GLENN 1801 GREENVILLE BLVD. APT. 19 GREENVILLE 27858	074 A S 919 752-5867	PRICE, BILLY LEE, JR. 3260 LANDMARK ST. C-6 GREENVILLE 27834	074 A S 919 756-5425	THOMAS, JERRY D. 2903-D CEDAR CREEK DR. GREENVILLE 27834	074 A S 919 757-1653
MAY, ALFRED T., III 25-G COURTNEY SQUARE GREENVILLE 27858	074 A * S 919 355-5287	PULKINGHAM, NATHAN CARR 28 LEXINGTON SQUARE APTS. GREENVILLE 27858	074 A S 919 756-4752	THOMAS, MILLARD BRADY, III PO BOX 113 NEWELL 28126	074 A S 919 756-2373
MAYO, KATHY DIANE T-5 DOCTORS PARK APTS. GREENVILLE 27834	074 A S 919 752-2656	PURCELL, PETER NELSON 220 LORAIN AVE. APT. #3 CINCINNATI, OH 45220	074 A S	TIMMONS, PHILLIP ZACHARY 2402-B E. THIRD ST. GREENVILLE 27834	074 A S 919 488-8162
MCCARTY, GREGORY S. 2683 MULBERRY LANE ARLINGTON SQUARE APTS. GREENVILLE 27858	074 A S 919 355-5145	RABON, THOMAS R. RT. #3, BOX 3, RUSTIC RIDGE GREENVILLE 27858	074 A S 919 758-0645	TOLSON, TIMOTHY ALEXANDER 200 W. 8TH ST., APT. 5-D GREENVILLE 27858	074 A S 919 752-2099
MCDONALD, PENELOPE JANE 104 STUART CIR. #B GREENVILLE 27834	074 S 919 752-7557	ROUNDS, JOHN CARSON 970 BLACKBERRY CIR. CHARLOTTE 28209	074 A S	TRANT, CHARLES AMON, JR. 106 SCALES PL., A-8 GREENVILLE 27834	074 A S 919 830-1244
MELTON, BARRY CLINE 1095-K CHEYENNE COURT GREENVILLE 27834	074 A S 919 756-2917	RUDD, STEPHEN MILES 2462 STANTONSBURG RD. STE. 140 GREENVILLE 27834	074 A * S 919 753-3321	TWISLTON, LOUISE A R-9 DOCTORS PARK APTS. GREENVILLE 27834	074 A S 919 758-8812
MITCHELL, CHARLES K., JR. 1400 HOOKER RD., APT. E GREENVILLE 27834	074 A S 919 756-9098	SAWYER, BARBARA ANN BIRCHWOOD SANDS MOBILE HOME ESTATES, LOT #28 GREENVILLE 27834	074 A * S 919 758-3155	WARRINGTON, LEWIS E. 59 LEXINGTON SQUARE GREENVILLE 27858	074 A S 919 756-0393
MONTEITH, LINDA GAIL DOCTORS PARK APTS. N3 GREENVILLE 27834	074 A S 919 758-2124	SEITTER, DELLMER B., III 201 PINERIDGE DR. GREENVILLE 27834	074 S 919 551-3384	WEEKS, KATHERINE P. G-2 DOCTORS PARK APTS. GREENVILLE 27834	074 A S 919 758-5374
MONTGOMERY, EMMETT FULCHER 804 FORBES ST. GREENVILLE 27834	074 S 919 752-1490	SESSOMS, RODNEY KEVIN 1016-B WESTOVER DR. GREENVILLE 27834	074 S 919 830-1453	WEHRY, MARK A. 113 E. 12TH ST. GREENVILLE 27834	074 A S 919 757-3217
MOORE, CAROL ANN 110 S. CONTENTNEA ST., APT. C FARMVILLE 27828	074 A S 919 753-2015	SHELTON, STEPHEN LEE 3320 LANDMARK ST. C-8 GREENVILLE 27834	074 A S 919 355-5027	WEISNER, LARRY FELIX #12 COUNTRY MANOR APTS. GREENVILLE 27834	074 A S 919 758-9272
NARRON, GREGORY RT. #8, BOX 201 GREENVILLE 27834	074 A S 919 758-3672	SIDES, STEPHEN N., II 104 GATES DR. WINTERVILLE 28590	074 A S 919 355-5185	WEN, DENNIS Y. DOCTORS PARK APTS. C-5 GREENVILLE 27834	074 A S 919 758-8125
NASHOLD, JAMES REUBEN B. 704 WILLOW ST. GREENVILLE 27858	074 A S 919 758-1793	SLATER, PATRICK W., II ROUTE #1, BOX 379 PRINCETON 27569	074 A S 919 965-6864	WHITE, SEAN P. E-23 YORKTOWN SQUARE GREENVILLE 27834	074 A * S 919 756-6352
NIFONG, LESLIE WILEY 310 HIDDEN BRANCHES CLOSE WINTERVILLE 28590	074 S 919 355-7477	SMITH, JAMES DAVID P-2 DOCTORS PARK GREENVILLE 27834	074 A S 919 758-7116	WIGGS, WILLIAM J., JR. 201 PINERIDGE DR. GREENVILLE 27834	074 A * S 919 757-3384
NOTRICA, MARC ALAN D-3 DOCTORS PARK GREENVILLE 27834	074 A S 919 758-7359	SMITH, MICHAEL EARL ROUTE #2, BOX 93 WINTERVILLE 28590	074 A S 919 756-3960	WILLIAMS, MARTIN KEITH F-6 DOCTORS PARK APTS. GREENVILLE 27834	074 A S 919 752-8619
NUTT, SUZANNE HAMILTON 717 SNOW HILL ST. AYDEN 28513	074 A S 919 746-4695	SPENCER, GEORGE MICHAEL 3000 GOLDEN RD., CONDO #7 GREENVILLE 27834	074 A S 919 758-5617	WILLIS, LINDA LEE 130 SHADY KNOLL GREENVILLE 27834	074 A S 919 752-9218
O'NEAL, EVA MANN 1924 WHITE HOLLOW DR. GREENVILLE 27858	074 A S 919 756-9049	STANLEY, FRANKIE EDWARD 2410-B E. THIRD ST. GREENVILLE 27858	074 A S 919 752-6172	WILSON, EDWARD T. 32 UNIVERSITY CONDOMINIUMS GREENVILLE 27834	074 A S 919 752-3720
OWENS, MICHAEL C. 2907-A CEDAR CREEK RD. GREENVILLE 27834	074 A S 919 752-7479	STARLING, SUZANNE P. RT. #14, BOX 47-A GREENVILLE 27834	074 A * S 919 758-0928	YOUNG, CHARLES RICHARD 102 DAVID DR., F-2 GREENVILLE 27834	074 A S 919 752-2918
PARKS, WILLIAM B., III 205-B LINDBETH DR. GREENVILLE 27834	074 A S 919 355-5744	STEVENSON, PAUL L. 103 BELMONT DR. GREENVILLE 27858	074 A S 919 758-9950	YOUNG, GARRET PINKNEY 711 WASHINGTON AVE. AYDEN 28513	074 S 919 830-1915
PARSONS, RICKEY 1612 OAKLAWN AVE. GREENVILLE 27834	074 A S 919 756-5478	STOCKS, ROSE MARY SUTTON 406 S. HARDING ST. #B GREENVILLE 27858	074 A S 919 758-3686	ZAJAC, IRENE M. 2686 MULBERRY LANE ARLINGTON SQUARE APTS. GREENVILLE 27858	074 A S 919 355-7835
PATE, DORIS CATHERINE MEDICAL OAKS APTS. #C-2 GREENVILLE 27834	074 A S 919 757-3513	STOUT, THOMAS F. 2673 MULBERRY LN. GREENVILLE 27858	074 A S 919 355-5168		

UNIVERSITY OF NORTH CAROLINA SCHOOL OF MEDICINE

OFFICERS — **President:** Robert J. Noecker, Box 884, Chapel Hill 27514 (919 781-0707)**Co-President:** Michelle Cherry, 38-C Laurel Ridge, Chapel Hill 27514**Secretary:** Shelley J. Chapman, 38-C Laurel Ridge, Hwy. 54 Bypass, Chapel Hill 27514 (919 722-7006)

AITKEN, MARY ELIZABETH 308 BRIARBRIDGE VALLEY RD. CHAPEL HILL 27514	A S 919 929-7833	032	CHURCHILL, CAROL ANN 100-A TALL OAKS RD. CHAPEL HILL 27514	S 919 967-0763	032	GURLEY, JUDITH M. 5002 MCCORMICK RD. DURHAM 27713	A S 919 967-0440	032
ALLEN, RODNEY H. 14736 VALIANT TERR. BURTONSVILLE, MD 20866	A P * S 919 967-8574	032	CODY, RICHARD F., JR. 321 W. UNIVERSITY DR. CHAPEL HILL 27516	A S 919 933-2056	032	HABEL, DAVID CHRISTOPHER 3 LANDOVER COURT DURHAM 27713	A S 919 489-8161	032
ALVERSON, LISA KAY 101 HOMESTEAD RD. APT. 1107 CHAPEL HILL 27514	A S 919 967-8574	032	COLES, DEBRA LYNN 212 MCCAULEY ST. 1-B CHAPEL HILL 27514	A S 919 968-1909	032	HALPERN, EMILY ALYSSA 304 CEDARWOOD LN. CARRBORO 27510	A S 919 933-9037	032
ANDERSON, TERESA T. 104 SILO COURT CARY 27511	A S 919 481-1752	032	COOK, DAVID MARTIN 117-D HUNT CLUB LN. RALEIGH 27606	S 919 851-8871	032	HAMILTON, BRIAN HUGH LAUREL RIDGE APTS. #32 HIGHWAY 54 BYPASS CHAPEL HILL 27516	A S 919 967-9462	032
ANTLEY, CATHERINE M. 1007-B S. COLUMBIA CHAPEL HILL 27514	S 919 968-1172	032	COVINGTON, DONALD SCOTT RT. #11, BOX 94 CHAPEL HILL 27514	A S	032	HART, ROBERT ERIC C-5 211 CHURCH ST. CHAPEL HILL 27514	A S 919 967-0370	032
ATSTUPENAS, ELIOT ANTHONY STRATFORD HILLS APTS. 12-D CHAPEL HILL 27514	A S 919 929-9907	032	CRISCO, LARRY V. 1210 ROOSEVELT DR. CHAPEL HILL 27514	A S 919 968-1964	032	HEBERT, MARY ELIZABETH 311 S. LASALLE ST. APT. 8-I DURHAM 27705	A S 919 383-8780	032
AYSCUE, LANIER HASTY 813 EMORY DR. CHAPEL HILL 27514	A S 919 968-0516	032	DAVIS, KEITH ALAN 102 RAINBOW DR. CARRBORO 27510	A S 919 968-1728	032	HEINDEL, STEPHANIE W. SPRING GARDEN APT. #22 HOLLAND DR. CHAPEL HILL 27514	A S 919 968-9494	032
BAKER, KRISTIN D. 516 CHATEAU APTS. CARRBORO 27510	A S 919 968-1260	032	DOWNS, THOMAS WM. 1202 N. GREENSBORO ST. CARRBORO 27510	S 919 942-2780	032	HOFFMAN, JEFFREY DALE 214 HAMLIN PARK CHAPEL HILL 27514	A S 919 968-7604	032
BARBEE, JOYCE E. 407 HILLSBOROUGH ST. CHAPEL HILL 27514	A S 919 872-3793	032	EASON, MARGIE B. 2729 SAWGRASS COURT WINSTON-SALEM 27103	A S 919 942-2779	032	HOLLAND, GEORGE THOMAS 1511 ROBINHOOD ROAD DURHAM 27701	A S 919 682-8733	032
BEITZ, LAURIE OWEN 413 PRITCHARD AVE. CHAPEL HILL 27514	S 919 942-6137	032	EASON, PAUL RICHARD 2729 SAWGRASS COURT WINSTON-SALEM 27103	A S 919 942-2779	032	HOOTEN, MARK TAYLOR 205-D BOLINWOOD APTS 500 UMSTEAD CHAPEL HILL 27514	S 919 967-2941	032
BELL, ELIZABETH ANNE 423 WHITEHEAD CIRCLE CHAPEL HILL 27514	A S 919 967-1928	032	ELKORDY, MAHA ABDUL-HAFEZ 3144 MERRIANNE DR. RALEIGH 27607	A S 919 942-7699	032	HORNSBY, RAE LYNNE C-9 CAROLINA APTS. CARRBORO 27510	A S 919 942-2517	032
BERGLUND, LAURA H. 5605 HIDEAWAY DR. CHAPEL HILL 27516	A S 919 942-9519	032	ESPOSITO, SHARON M. 404 MELANIE CT. CHAPEL HILL 27514	S 919 929-4131	032	HOYLE, DAVID EMORY 5331 YARDLEY TERRACE DURHAM 27707	A S 919 493-9279	032
BIEHLER, DARREN FOSTER 816 E. 24TH ST. NEWTON 28658	A S 919 929-3323	032	ETZOLD, VALERIE JEAN RT. #3, BOX 338 PITTSBORO 27312	A S 919 929-6442	032	HUBBERT, LEROY KARL 3253-G CALUMET DR. RALEIGH 27610	A S 919 755-0348	032
BOWES, WATSON ALLEN, III 211 HUNTINGTON DR. CHAPEL HILL 27514	A S 919 968-0106	032	FEREBEE, ANGELA 101 HOMESTEAD RD. #916 CHAPEL HILL 27516	A S 919 942-2723	032	IRANI, WALEED NABIL 12-D STRATFORD HILLS APTS. CHAPEL HILL 27514	A S 919 929-9907	032
BOYD, WILLIAM MONROE, V #1 SPRING GARDEN APTS. CHAPEL HILL 27514	A S 919 968-1961	032	FILLIPO, DREW CRAIG 311 E. PATTERSON PLACE CHAPEL HILL 27514	A S 919 967-4626	032	IVES, DONALD LELAND 303-B MASON FARM RD. CHAPEL HILL 27514	A S 919 933-6766	032
BRECHTELSBAUER, P. BRADLEY #6 HOLLAND DR. CHAPEL HILL 27514	A S 919 968-6403	032	FRANKLIN, SAMUEL C., JR. 4026 CHAPRA DR. WILMINGTON 28403	A S 919 791-0484	032	JABLONOVER, ROBERT STEPHAN 136-A PUREFOY RD. CHAPEL HILL 27514	A S 919 968-0098	032
BRIGHT, ROBERT PAUL 2000 CONNECTICUT AVE., NW #716 WASHINGTON, DC 20008	S 919 966-0615	032	FROBOSE, FREDERICK ALEXANDER RT. #1, BOX 93-E CHAPEL HILL 27514	A S 919 929-3592	032	JOHNSON, ANN RHAMY 44 LAUREL RIDGE APTS. NC 54 BYPASS CHAPEL HILL 27516	A S 919 968-8850	032
BROSKE, NANCY ELAINE K-12 THE VILLAGES APTS. CARRBORO 27510	A S 919 968-8231	032	FUNCIK, THOMAS 237-D JACKSON CIRCLE ODUM VILLAGE CHAPEL HILL 27514	A S 919 933-6737	032	JOHNSON, MICHAEL DONALD 428 TOWN COLONY MIDDLETOWN, CT 06457	A S 919 929-9775	032
CAMPBELL, JEFFREY PAUL 201 WESTBROOK DR. #D-9 CARROBORO 27510	A S 919 968-6403	032	GANDHI, BRETT R. PO BOX 672 CARRBORO 27510	S 919 563-4588	032	KATZ, SETH EVAN 136 LONG SHADOW PL. DURHAM 27713	A S 919 493-0782	032
CARSON, SHANNON STEWART 42-A STRATFORD HILLS APTS. CHAPEL HILL 27514	A S 919 942-4799	032	GARRETT, CATHERINE GAELYN 42-J STRATFORD HILLS APTS. CHAPEL HILL 27514	A S 919 968-8124	032	KOEHLER, LISA ANN 1521 E. FRANKLIN ST. B-211 FRANKLIN WOODS CHAPEL HILL 27514	A S 919 933-7515	032
CARVER, DONALD D. 4A COLLINS PARK APTS. 1212 COLLINS DR. BURLINGTON 27215	A S 919 929-7786	032	GARSHIDE, WM. B., JR. D-8 VILLAGE GREEN CHAPEL HILL 27514	A S 919 942-5531	032	LAMM, KENNETH RAND 105 FIDELITY ST. A-4 CARRBORO 27510	A S	032
CASEY, MARY FRANCES 210 CEDARWOOD LANE CARRBORO 27510	A S	032	GELOT, DEEPAK R. E-20 RIDGEWOOD APTS. 404 JONES FERRY RD. CARRBORO 27510	A S 919 929-3248	032	LATIMER, HARRISON A. 501 ROSEMARY ST. CHAPEL HILL 27514	S 919 968-1927	032
CAVALLO, MARTYN J. 235 MCCAULEY ST. APT. C-6 CHAPEL HILL 27516	A S	032	GIFFORD, ALLEN LOTHROP 615-A HIBBARD DR. CHAPEL HILL 27514	A S 919 933-5893	032	LEE, EDWARD I. 702 N. COLUMBIA ST. CHAPEL HILL 27514	A S 919 942-8828	032
CHANG, YONG DAE ROYAL PARK - 2F CARRBORO 27510	A S	032	GOULSON, DAN T. 20-B DAVIE CIRCLE CHAPEL HILL 27514	A S 919 920-2128	032	LEE, ESTHER JOO 705-B W. MAIN ST. CARRBORO 27510	A S 919 967-7722	032
CHAPMAN, SHELLEY J. 805-A W. MAIN ST. CARRBORO 27510	A S 919 945-4928	032						
CHERRY, JEAN MICHELE 805-A W. MAIN ST. CARRBORO 27510	A * S	032						

LEVIN, STUART JEFFREY 441 CAHABA, FOREST COVE BIRMINGHAM, AL 35292	A	S	032	NYCUM, LAWRENCE ROSS 43 LAUREL RIDGE APTS. CHAPEL HILL 27516	A	P * S	032	SHEPARD, ARTHUR JAMES, III 233 MCCAULEY ST., APT. C6 CHAPEL HILL 27514	919 929-7786	S	032
LITCHFIELD, JAY ROBERT 212 MCCAULEY ST. APT. 1-B CHAPEL HILL 27516	A	S	032	OLATIDOYE, BABATLINDE A. PO BOX 187 CHAPEL HILL 27514	A	S	032	SHERRILL, GARY BRADLEY 3630 GRAMERCY RD. GREENSBORO 27410	919 288-2972	A	032
LLOYD, KERMIT ALVIN 2217 OLD GREENSBORO RD. CHAPEL HILL 27516	A	S	032	OVERCASH, WILLIAM TODD PO BOX 1694 ALBEMARLE 28002	A	S	032	SINGER, JAMES DANIEL DD6 OLD WELL CONDOS CARRBORO 27510	919 968-4482	A	032
LODEN, GARY B. 114-A HIGH ST. CARRBORO 27510	A	S	032	PADGETT, RICHARD CAMERON 411 MCCAULEY ST. CHAPEL HILL 27514	A	S	032	SMITH, SCOTT VICTOR 4639 HOPE VALLEY RD. APT. J DURHAM 27707	A	S	032
MACDONALD, JOEL DOUGLAS 308 CAROL ST. CARRBORO 27510	A	S	032	PARKE, CHARLES EDWARD 614 CASWELL RD. CHAPEL HILL 27514	A	S	032	SOMKUTI, STEPHEN GEORGE 2601 STUART DR. DURHAM 27707	919 489-9434	A	032
MARSDEN, MARGARET E. FERRITER 200 WOODCROFT PARKWAY, #40-B DURHAM 27713	A	S	032	PARKER, MARY LOU 1214 HILLVIEW RD. CHAPEL HILL 27514	A	S	032	SOOD, ANIL KUMAR 7E, ESTES PARK APTS. CARRBORO 27510	919 929-9240	A	032
MARTIN, HAROLD LUTHER, JR. 1200 N. GREENSBORO ST. CARRBORO 27510	A	S	032	PAYNE, LOEL ZACHARY RT. #11, BOX 94 CHAPEL HILL 27514	A	S	032	STEPHENSON, JOHN HADDON 130 HOMESTEAD RD. CHAPEL HILL 27514	919 968-6454	A	032
MARTIN, TERRI REGINA 331 W. ROSEMARY ST. #21 CHAPEL HILL 27514	A	S	032	PAYNE, THOMAS ARTHUR 405-A COOLRIDGE ST. CHAPEL HILL 27514	A	S	032	STROUP, T. SCOTT 108 STINSON ST. CHAPEL HILL 27514	A	S	032
MASON, THOMAS LEE 20-H UNIVERSITY LAKE APTS. CARRBORO 27510	A	* S	032	PETERSON, JEFFREY MCBRAYER 2 SPRING GARDEN, HOLLAND DR. CHAPEL HILL 27514	A	S	032	SUITS, GREGORY WM. B-39 WHITE OAK APTS. CARRBORO 27510	919 967-4356	A	032
MAXWELL, GEORGE L. 601 BROOKSTONE APTS. 101 HOMESTEAD RD. CHAPEL HILL 27514	A	S	032	PHILLIPS, KATHRYN ELIZABETH 200 BLUERIDGE RD. CARRBORO 27510	A	S	032	SUMNER, BRIAN MONTGOMERY 218 CEDARWOOD LANE CARRBORO 27510	919 967-6473	A	032
MAY, DAVID ALAN 100-D BERNARD ST. CHAPEL HILL 27514	A	S	032	PLESCIA, MARCUS 106 STINSON ST. CHAPEL HILL 27516	A	S	032	SUTTON, SYLVIA PO BOX 3574 CHAPEL HILL 27515	919 967-7288	A	032
MCCARTHY, JAMES J. 118 ESTES DR. EXT. CARRBORO 27510	A	S	032	POLLARD, RICHARD J. 124 FIDELITY ST., #20 CARRBORO 27510	A	S	032	SYKES, KASSELL EUGENE, JR. 215 VANCE ST. CHAPEL HILL 27514	919 942-8492	A	032
MCCULLEN, BOBBY K.,JR. 207 CONNER DR. APT. 17 CHAPEL HILL 27514	A	S	032	PONDER, PHILIP WADE 405-A COOLIDGE ST. CHAPEL HILL 27516	A	S	032	SYKES, LISA CAROL 204-A HOWELL ST. CHAPEL HILL 27514	919 968-4727	A	032
MCDAVID, JOSHUA DENT 711-C HIBBARD DR. CHAPEL HILL 27514	A	S	032	PORTER, DEAN PRIEST 250 S. ESTES DR. #34 CHAPEL HILL 27514	A	* S	032	TANNER, TODD F. 105-A ISLEY ST. CHAPEL HILL 27514	919 967-2682	A	032
MCLEOD, MELISSA MYTYLE 27 SPRING GARDEN APTS. HOLLAND DR. CHAPEL HILL 27514	A	S	032	RICHMOND, GLENN HICKAM, JR. CAMELOT VILLAGE, J-4 CHAPEL HILL 27514	A	S	032	TERRY, ROY CLARENCE 300-D MASON FARM RD. CHAPEL HILL 27514	919 933-6747	A	032
MCQUEEN, CHAPMAN T. APT. BB5 OLD WELL APTS. CARRBORO 27510	A	S	032	RIRIE, DOUGLAS G. 130 #M E. LONGVIEW CHAPEL HILL 27514	A	S	032	TRASK, TODD WILSON BOX 1241, RT. #5, HWY. 70 HILLSBOROUGH 27278	919 942-2319	A	032
MICHAEL, JAY BENJAMIN TAR HEEL MANOR APTS. E-7 HIGHWAY 54 BYPASS CARRBORO 27510	A	S	032	RODDEY, J. GARDINER R., JR. 109 ISLEY ST. CHAPEL HILL 27514	A	S	032	UPCHURCH, GILBERT R., JR. 103 GOLDSTON DR. CARRBORO 27510	919 942-8105	A	032
MUNDAY, TONA LEIGH D-6 GRAHAM CONDOS. MC CAULEY ST. CHAPEL HILL 27514	A	S	032	ROGERS, RONALD GRAY 405-B COOLIDGE ST. CHAPEL HILL 27514	A	S	032	VOGLER, ROBERT C. 119-C STINSON ST. CHAPEL HILL 27516	919 933-7867	A	032
NAHSER, PHILIP JOSEPH, JR. 712 GOLDEN CREST CIR. HOMEWOOD, AL 35209	A	S	032	ROYAL, PHILIP WAYNE RT. #1, BOX 323-E CHAPEL HILL 27514	A	S	032	WEEKS, FREDERICK M. THE VILLAGES, APT. 0-1 CARRBORO 27510	919 933-1259	A	032
NEAL, STACEY LYNN 1302 THE OAKS CHAPEL HILL 27514	A	* S	032	SANDERS, GEO. HERBERT SUMNER 119 F-4 FIDELITY ST. CARRBORO 27510	A	S	032	WILLIAMS, DAVID R., JR. 1108 S. COLUMBIA ST. CHAPEL HILL 27514	A	S	032
NICHOLSON, WANDA KAY 647 CRAIGE DORM, UNC CHAPEL HILL 27514	A	S	032	SAWHNEY, DEEPAK 4 GOOSENECK CIRCLE CHAPEL HILL 27514	A	S	032	WILSON, PATRIC ALOYSIUS RT. #3, BOX 213 CHAPEL HILL 27516	919 967-8931	A	032
NIX, JERRY DALE B-5 TAR HEEL MANOR CARRBORO 27510	A	S	032	SCHEIL, CHARLES DAVID 24-F STRATFORD HILLS CHAPEL HILL 27514	A	S	032	WOODBURY, MARGARET H. 4-A BRIARBRIDGE LN. CHAPEL HILL 27514	919 968-6077	A	032
NOECKER, ROBERT J. PO BOX 884 CHAPEL HILL 27514	A	* S	032	SCOTT, EDWIN HUGHES 99 MAXWELL ROAD CHAPEL HILL 27514	A	S	032	WOODS, JON POINTON 113 PUREFOY ROAD, APT. D CHAPEL HILL 27514	919 942-0654	A	032
NOEL, ROBERT F., JR. RT. #11, BOX 94 CHAPEL HILL 27516	A	S	032	SEATON, KAREN GIPSON 59 POLKS LANDING CHAPEL HILL 27516	A	S	032	WRENN, EDWARD HOWARD 154 RIDGE TRAIL CHAPEL HILL 27514	919 929-4113	A	032
NOVEK, STEVEN JAI STRATFORD HILLS 36-E CHAPEL HILL 27514	A	S	032	SESSIONS, RICK PAUL 210 WESTBROOK DR. CARRBORO 27510	A	S	032	WYNN, TONJA MICHELLE 136-B PUREFOY RD. CHAPEL HILL 27514	919 929-4216	A	032
				SHAHADY, GERTRUDE KOCH 112-A W. POPLAR AVE. CARRBORO 27510	A	S	032	YARBROUGH, WENDELL GRAY 407 MASON FARM RD. APT. D CHAPEL HILL 27514	919 924-2447	A	032
				SHARPLESS, ELIZABETH P. 207 CONNER DR. APT. 23 CHAPEL HILL 27514	A	S	032	ZURFLIEH, PATRICIA J. 260 SEVERIN ST. CHAPEL HILL 27516	919 968-3525	A	032

Alphabetical List of Members

Fifty Year Club

The House of Delegates of the North Carolina Medical in May of 1953, authorized the Executive Council of the Society to establish a special recognition for those physicians residing in the State of North Carolina who were members currently of the State Medical Society, who had established legal practice of medicine and who had actively practiced medicine during their life time for a period of fifty years.

Listed below in alphabetical order are the names and addresses of those physicians who resided in North Carolina and whom the North Carolina Medical Society has recognized as members of the FIFTY YEAR CLUB of the State Medical Society. This list will be added to from year to year and likewise subtracted from as losses to this club group are sustained and reckoned.

The listing for 1988 only may include Fifty Year Club members who have passed away since their recognition. The list for other years will include only those members surviving.

1968—Smith, Claiborne Thweat, M.D., Rocky Mount

1969—Marsh, Frank Baker, M.D., Salisbury

1970—Lovelace, Thomas Claude, M.D., Henrietta
Lyday, Russell Osborne, M.D., Greensboro

1971—Caviness, Verne Strudwick, M.D., Raleigh
Geddie, Kenneth Baxter, M.D., High Point
Norburn, Charles S., M.D., Biltmore

1973—Griffin, Harold Walker, M.D., Hickory
Prather, Fonzo Goff, M.D., Asheville

1974—Bowles, Francis Norman, M.D., Durham
Monroe, Clement R., M.D., Pinehurst
Sloan, Allen Barry, M.D., Charlotte

1975—Ader, Ottis Ladeau, M.D., Durham
Dale, Grover Cleveland, M.D., Goldsboro
Hart, Oliver James, Sr., M.D., Winston-Salem
Little, Lonnie Marcus, M.D., Statesville
Norburn, Russell Lee, M.D., Asheville
Whaley, James Davant, M.D., Hickory

1976—Bennett, Ernest Claxton, M.D., Elizabethtown
Combs, Joseph John, M.D., Raleigh
Davis, Philip Bibb, M.D., High Point
Nowlin, George Preston, M.D., Charlotte
Royal, Donnie Martin, M.D., Salemburg
Tuggle, Allan Davis, M.D., Charlotte

1977—Battle, Newsome P., M.D., Rocky Mount
Brown, Kermit English, M.D., Asheville
Easom, Herman Franklin, M.D., Wilson
Felton, Robert Lee, Jr., M.D., Carthage
Kempner, Walter, M.D., Durham
MacRae, John Donald, M.D., Dunedin, FL
Moss, George Oren, M.D., Forest City

1978—Houser, Forest Melville, M.D., Cherryville
Hunter, John Baldwin, M.D., Shelby
Leonard, Jacob Calvin, Jr., M.D., Lexington
Newland, Charles Logan, M.D., Brevard
Ogburn, Lundie Calvin, M.D., Winston-Salem

1979—Baldwin, Marie, M.D., Asheville
Covington, John M. C., M.D., Roanoke Rapids
Floyd, William Russel, M.D., Concord
Kneedler, William Harding, M.D., Concord
McDowell, Roy Hendrix, M.D., Belmont
Morris, Rae Henderson, M.D., Concord

1980—Beavers, James Wallace, M.D., Greensboro
Bird, Ignacio, M.D., Greensboro
Bonner, Merle Dumont, M.D., Greensboro
Cathell, Edwin Jennings, M.D., Lexington
Cook, William Eugene, M.D., Fayetteville
Crowell, Lester Avant, Jr., M.D., Lincolnton
Crumpler, James Fulton, M.D., Rocky Mount
Duffy, Charles, M.D., New Bern
Hare, Ransom Bryant, Jr., M.D., Black Mountain
Jaynes, Grace S., M.D., Tryon
LeBauer, Maurice Leon, M.D., Greensboro
LeBauer, Sidney Ferring, M.D., Greensboro
Lewis, Clifford Whitfield, M.D., High Point
Orgain, Edward Stewart, M.D., Durham
Owens, Zack Doxey, M.D., Camden
Roberson, Robert Stuart, M.D., Hazelwood
Robinson, Charles Wilson, M.D., Charlotte
Seay, Hillis Ledbetter, M.D., Huntersville
Wilson, Stephen Glenn, Sr., M.D., Angier

1981—Cranz, Oscar William, M.D., Kinston
Field, Bob Lewis, M.D., Salisbury
Fleming, Laurence Edwin, M.D., Charlotte
Green, Harold D., M.D., Punta Gorda, FL
Helsabeck, Belmont Augustus, M.D., Winston-Salem
Holmes, George Washington, M.D., Winston-Salem
McLeod, Vida Canaday, M.D., Southern Pines
Owen, Robert Harrison, M.D., Canton
Papineau, Alban, M.D., Plymouth
Paschal, George Washington, Jr., M.D., Raleigh
Prefontaine, J. Edouard, M.D., Greensboro
Redwine, James Daniel, M.D., Lexington
Register, John Francis, M.D., Greensboro
Ruark, Robert James, M.D., Raleigh
Sargent, Winston Arthur Y., M.D., Burnsville
Slate, Marvin Longworth, M.D., High Point
Stroupe, Albertus Ula, Jr., M.D., Mount Holly
Walsh, C. Douglas, M.D., Salisbury
Williams, John Dudley, Jr., M.D., Greensboro
Wilson, Roeby Bryant, M.D., Gastonia
Young, David Alexander, M.D., Raleigh

1982—Arena, Jay Morris, M.D., Durham
Ayers, James Salisbury, M.D., Clinton
Blackerby, James, M.D., New Bern
Bradley, Harold John, Sr., M.D., Greensboro
Brinkhous, Kenneth Merle, M.D., Chapel Hill
Caldwell, Lawrence McClure, Sr., M.D., Newton
Callaway, Jasper Lamar, M.D., Durham
Cox, Alexander McNeil, M.D., Madison
Fales, Robert Martin, M.D., Wilmington
Ferguson, George Burton, M.D., Durham
Fleming, William Leroy, M.D., Chapel Hill

Gerrard, Robert Lemley, M.D., Greensboro
 Graham, Charles Pattison, M.D., Wilmington
 Graham, William Alexander, M.D., Durham
 Haar, Frederick Behrend, M.D., Greenville
 Holbrook, J. Sam, M.D., Statesville
 Lund, Herbert Zachareus, M.D., Greensboro
 Lupton, Carroll Crescent, M.D., Greensboro
 Mayer, Walter Brem, M.D., Charlotte
 Printz, Don Ralph, M.D., Asheville
 Robertson, James Mebane, M.D., Harmony
 Sox, Carl Caughman, M.D., Kenly
 Worley, James Harr, M.D., Asheville

1983—Baker, Lenox Dial, Sr., M.D., Durham
 Barnhardt, Albert Earl, M.D., Kannapolis
 Battle, Margaret E. White, M.D., Rocky Mount
 Bellows, Rowland Thompson, M.D., Charlotte
 Black, Paul Adrian L., M.D., Wilmington
 Boyce, Oren Douglas, M.D., Gastonia
 Brown, Walter John, M.D., Pittsboro
 Cardwell, Willard, M.D., Greensboro
 Conard-Corkey, Elizabeth M., M.D., Charlotte
 Dalton, Bennie Booker, M.D., Wrightsville Beach
 Dees, John Essary, M.D., Durham
 Donnelly, Grant L., M.D., Salisbury
 Dunn, Richard Berry, M.D., Climax
 Flythe, William Henry, M.D., High Point
 Garrison, Ralph Bernard, M.D., Hamlet
 Gay, Charles Houston, M.D., Charlotte
 Glenn, Channing, M.D., Elizabethtown
 Harris, Isaac Emeron, Jr., M.D., Durham
 Hawes, Charles Forest, M.D., Rose Hill
 Hedgpeth, William Carey, M.D., Lumberton
 Hightower, Felda, M.D., Winston-Salem
 Jones, O. Hunter, M.D., Charlotte
 Jones, Thomas Thweatt, M.D., Durham
 Justa, Samuel Harry, M.D., Palm Beach, FL
 Kamp, Maurice Arthur, M.D., Charlotte
 Leiby, George Martin, M.D., Albermarle
 Lore, Ralph Eli, M.D., Lenoir
 McKee, Lewis Middleton, M.D., Durham
 Monroe, Lance Truman, M.D., Concord
 Odom, Guy Leary, M.D., Durham
 Olson, Robert Mortimer, M.D., Kenly
 Outland, Robert Boone, M.D., Rich Square
 Pitts, William Reid, M.D., Charlotte
 Raney, Richard Beverly, Sr., M.D., Chapel Hill
 Roberts, Roy Foster, M.D., Asheville
 Salle, George Frederic, M.D., Greenville
 Scheibel, H. Max, M.D., Durham
 Shinn, George Clyde, M.D., China Grove
 Sinclair, L. Gordon, M.D., Raleigh
 Smith, O. Norris, M.D., Greensboro
 Stead, Eugene Anson, Jr., M.D., Bullock
 Vance, Shelby William, M.D., Pineola
 Verhoeff, Dirk, M.D., Hilton Head Island, SC
 Wall, William Stanley, M.D., Rocky Mount
 Wearn, Franklin Stafford, M.D., Statesville
 Whitaker, James Allen, M.D., Rocky Mount
 Wilson, Frank Elmore, M.D., Lenoir City, TN
 Wilson, William Lenoir, M.D., Pensacola, FL
 Woodard, Barney Lelon, M.D., Kenly
 Yurko, Anthony Andrew, M.D., Tryon

1984—Alexander, James Moses, M.D., Charlotte
 Barefoot, William Frederick, M.D., Whiteville
 Carter, Warren Dallas, M.D., San Jose, CA
 Croom, Robert DeVane, Jr., M.D., Maxton
 Dees, Susan Coons, M.D., Durham

Hammond, Alfred Franklin, Jr., M.D., New Bern
 Jamison, Edgar Lamont, M.D., Asheboro
 Lohr, Dermot, M.D., Lexington
 Meadows, Joseph Herman, M.D., Wilson
 Miller, Malcolm Elmore, M.D., Burlington
 Oliver, Joseph Andrew, M.D., Rockwell
 Quigless, Milton Douglas, Sr., M.D., Tarboro
 Sain, Fletcher Dover, M.D., Rocky Mount
 Schnee, Charles Frederick, M.D., New Bern
 Simmons, James Slater, M.D., Sanford
 Taylor, Andrew Duval, M.D., Charlotte
 Taylor, Thomas Jefferson, M.D., Roanoke Rapids
 Umphlet, Thomas Leonard, M.D., Raleigh
 Warwick, Hight Claudius, M.D., Greensboro
 Whitaker, Richard Harper, M.D., Kernersville
 Wynn, Roy Spurgeon, M.D., Charlotte

1985—Bacon, Harold Lyle, M.D., Bryson City
 Bertling, Marion Henry, M.D., Greensboro
 Byerly, James Hampton, M.D., Sanford
 Campbell, Joseph Lester, M.D., Wilson
 Craig, Robert Lawrence, M.D., Asheville
 Eyerma, Melvin Frederic, M.D., Winston-Salem
 Fisher, Marshali Louis, M.D., New York, NY
 Hamrick, John Carl, M.D., Shelby
 Kendall, John Harold, M.D., Clinton
 Knoefel, Arthur Eugene, Jr., M.D., Black Mountain
 McKenzie, Wayland Nash, M.D., Albemarle
 McLeod, Mary Margaret, M.D., Sanford
 Pope, Samuel A., M.D., Beulaville
 Powell, E. Charles, M.D., Goldsboro
 Reynolds, Ernest Harold, M.D., Reidsville
 Roberts, Louis Carroll, M.D., Durham
 Rollins, Charles Dick, M.D., Henderson
 Royster, Chauncey Lake, M.D., Raleigh
 Stephenson, Bennett Edward, M.D., Rich Square
 Stevens, Joseph Blackburn, M.D., Greensboro
 Stewart, John Reagan, M.D., Statesville
 Tyson, Woodrow Wilson, M.D., High Point
 Williams, Robert, M.D., Raleigh
 Wood, Everet Hardenbergh, M.D., Brevard
 Wright, John Joseph, M.D., Chapel Hill

1986—Bethel, Millard Baimbridge, M.D., Chapel Hill
 Bundy, William Lumsden, M.D., North Wilkesboro
 Caldwell, Robert Manfred, M.D., Dobson
 Etherington, John Lawrence, M.D., Goldsboro
 Fabian, Denis, M.D., Fayetteville
 Gunter, June U., M.D., Durham
 Harmon, Raymond Harris, M.D., Boone
 Hinman, Havilah Edward, M.D., Skyland
 Jones, Craig S., M.D., Naples, FL
 Massengill, G. K., M.D., Raleigh
 Miller, Milton Leonard, M.D., Chapel Hill
 Morehead, Robert Page, M.D., Winston-Salem
 Newell, Robert Bartholomew, M.D., Morehead City
 Rogers, Seymour Shulman, M.D., Greensboro
 Sealy, Will Camp, M.D., Macon, GA
 Troutman, Baxter Suttles, M.D., Lenoir
 Verhoeff, Dirk, M.D., Hilton Head, SC
 Wadsworth, George Henry, M.D., Ahoskie
 Walker, Elmer Pixley, M.D., Wilmington
 Warshauer, Samuel Edward, M.D., Wilmington
 Welton, David Goe, M.D., Charlotte
 Worth, Thomas Clarkson, M.D., Raleigh
 Wyman, John Sheldon, M.D., Hendersonville

1987—Anderson, Elbert Carl, M.D., Wilmington
 Barringer, Archibald L., M.D., Mt. Pleasant

Burroughs, Ruth Reuben, M.D., Raleigh
 Cannon, Eugene Bolivia, M.D., Asheboro
 Clapp, Hubert Lee, M.D., Swannanoa
 Corcoran, Edwin Emmons, M.D., Asheville
 Cromartie, William James, M.D., Chapel Hill
 Durr, Walter Jacob, M.D., Sylva
 Edmondson, Frank, Jr., M.D., Asheboro
 Elliott, Hardie Bishop, M.D., Southern Pines
 Feezor, Charles Noel, M.D., Salisbury
 Floyd, Anderson Gayle, M.D., Whiteville
 Fresca, Victor Attilio, M.D., Morehead City
 Gray, Cyrus Leighton, M.D., High Point
 Grim, Kenneth Boyd, M.D., Long Beach
 Howell, Charles Maitland, Jr., M.D., Winston-Salem
 Matthews, William Camp, M.D., Chester, SC
 Norfleet, Charles Millner, Jr., M.D., Winston-Salem
 Owen, Charles Fletcher, Jr., M.D., Asheboro
 Pishko, Michael T., M.D., Pinehurst
 Smith, Allen Dale, M.D., Durham
 Street, Murdo Eugene, Jr., M.D., Glendon
 Vaughan, Edwin Warner, M.D., Greensboro
 Wharton, C. Watson, M.D., Smithfield
 Williams, McChord, M.D., Charlotte
 Williamson, Rossie Marshall, M.D., N. Myrtle Beach, SC
 Wilson, Jack Kennedy, Sr., M.D., Wilmington
 Wilson, Samuel Allen, M.D., Lincolnton
 Wright, John Everett, M.D., Fuquay-Varina

Davis, Edward, Langston, M.D., Winston-Salem
 Doffermyre, Luther Randolph, M.D., Dunn
 Fink, Emma Sloop, M.D., Crossnore
 Fitzgerald, John Hill, M.D., Lincolnton
 Ford, Blanchard Fred, Jr., M.D., Shallotte
 Gilbert, George Gaylord, M.D., Greensboro
 Glenn, Dorothy Norman, M.D., Gastonia
 Hardman, Edward Francis, M.D., Charlotte
 Hartness, William Rufus, Jr., M.D., Sanford
 Herring, Theodore Tilghman, M.D., Wilson
 Holt, Thomas, M.D., Warrenton
 Kossove, Albert Anthony, M.D., Charlotte
 Lassiter, Will Hardee, Jr., M.D., Four Oaks
 Lupton, Emmett Stevenson, M.D., Alamance
 Manning, Isaac Hall, Jr., M.D., Durham
 Mathiesen, Kenneth Marlin, M.D., Bryson City
 McCall, William Herbert, M.D., Asheville
 McLeod, William Louis, M.D., Oakboro
 McManus, Hugh Forrest, M.D., Raleigh
 McMillan, Robert Monroe, M.D., Pinehurst
 McRae, Marvin Everett, M.D., Greensboro
 Mitchell, Landis Patterson, M.D., Spindale
 Parks, William Craig, M.D., High Point
 Pickard, Henry Mack, M.D., Wilmington
 Powell, William Flynn, M.D., Asheville
 Sinclair, Robey Thomas, Jr., M.D., Wilmington
 Sluder, Fletcher Sumpter, M.D., Asheville
 Stratton, James David, M.D., Charlotte
 Sykes, Charles Louis, M.D., Mount Airy
 Taylor, Vernon Williams, Jr., M.D., Elkin
 Thompson, Winfield Lynn, M.D., Goldsboro
 Tuttle, Marler Slate, Sr., M.D., Kannapolis
 Van-Hoy, Joe Milton, M.D., Charlotte
 Way, John Edward, M.D., Morehead City
 Weaver, Joseph Dudley, M.D., Ahoskie
 Wilkerson, Annie Louise, M.D., Raleigh
 Wilkinson, James Spencer, Sr., M.D., Raleigh

1988—Adair, William Edward, Jr., M.D., Erwin
 Allgood, John William, Jr., M.D., Greensboro
 Beavers, Charles Lee, M.D., Greensboro
 Blowe, Ralph Boyd, Sr., M.D., Weldon
 Brown, Frank Reid, M.D., Greensboro
 Bugg, Everett Irving, Jr., M.D., Pittsboro
 Chamblee, John Sigma, M.D., Nashville
 Craven, Frederick Thorns, M.D., Concord

NAVAL RESERVE PHYSICIAN

- Monthly Stipend for Physicians in training leading to qualifying as General/Orthopedic/Neurosurgeon or anesthesiologist.
- Loan repayment of up to \$20,000 for Board eligible General/Orthopedic surgeons and anesthesiologists.
- CME opportunities.
- Flexible drilling options.

*Promotion Opportunities

*Prestige

*For graduates of AMA approved
Medical Schools*

**CALL YOUR
NAVAL RESERVE FORCE
REPRESENTATIVE TODAY.**

1-800-443-6419

Med-Care

The Office Management System

6512 Six Forks Road, P.O. Box 19701
Raleigh, North Carolina 27615
NC 1-800-634-8016; USA 1-800-247-6094
919-847-5110

Med-Care's Software

Our software has been in development for over 11 years. It has been in use by private practice and community health centers for over 8 years.

Over these years, we have received a tremendous amount of suggestions from administrators, physicians, office staff, and accountants. The result? A system that is extremely flexible with a wide comprehensive data base.

Yet, it is efficient and simple enough to be used by staff without prior computer education or experience.

Med-Care reduces paperwork:

- automatic insurance processing includes refiles, aged claims, and C.O.B.
- alternate fee and coding schedules
- **paperless claims to Medicare and major carriers**
- family or patient billing option
- **clinical tracking with mailing labels**
- on-line help messages and scroll/file maintenance from any entry screen
- on demand patient statements, cycle billing, year-end statements, reminders
- appointment scheduling, encounter form printing, chart pull list, daily patient list
- general ledger, payroll, accounts payable, and word processing

- referral utilization reporting
- **HMO processing and management made easy**

Starting with the encounter form, the appropriate plan will be identified by patient. The proper information from that point on will be handled automatically. By tracking patients on each plan and doing the cross-referencing **Med-Care** can help evaluate the efficiency of your health care plans.

Med-Care is developing a new fourth generation cobol that allows more flexibility, such as windowing, etc.

Med-Care's Support

At **Med-Care** we understand, first and foremost, that support is critical to the successful installation and



IBM Personal System/2™

operation of a computer system. This was confirmed recently in a **Computer World** article which surveyed 350 computer users.

Supporting over 100 private and CHC offices, as a **single-source** vendor, **Med-Care** provides installation, training, hardware and software maintenance, updates and enhancements, and on-going technical assistance and consultation.

Med-Care's Hardware

We feature T.I. and I.B.M. computers. This gives us and our customers a complete range of compatible, upgradeable computers for growth — 1 to 128 terminals. The **Med-Care System** is also available on Unix or Xenix based systems.

At Med-Care

Our Customers Are Important!

*"In my opinion, **Med-Care** has everything I would want in a company — excellent products, a well-trained staff, professional sales and service and good response time."*

Loraine McCaskill
Business Manager
Raleigh Ear, Nose & Throat,
Head & Neck Surgery, Inc.

*"I would highly recommend **Med-Care** and their system to any practice considering automation. Their continued commitment to customer satisfaction has earned for them a reputation matched by none."*

Donald B. Campbell, M.D.
Wake Internal Medicine Consultants, Inc.

Roster of Members for 1988-1989 by Component Societies

NOTE: We have endeavored to secure correct information in regard to every physician whose name is listed. Anyone finding an error should report it immediately to the North Carolina Medical Society, 222 N. Person Street, P.O. Box 27167, Raleigh, North Carolina 27611.

(See Page 31 for Key to Specialties)

1. ALAMANCE-CASWELL COMPONENT SOCIETY

OFFICERS—President: Edward L. Hines, M.D., 723 Edith St., Burlington 27215 (919 227-4256)

Secretary: Edward J. Duszlak, Jr., M.D., 3029 S. Fairway Dr., Burlington 27215 (919 228-1371)

ABERNETHY, PAUL MCBEE 1214 VAUGHN ROAD BURLINGTON 27215 BOWMAN GRAY	OPH AC 43 43 47 919 228-0254	CHAPLIN, DON CLARENCE KERNODLE CLINIC, INC. BURLINGTON 27215 U OF NC	IM /CD AC 69 69 73 919 227-3621	GWYNN, THOMAS LEA P. O. BOX 340 YANCEYVILLE 27379 BOWMAN GRAY	GP AC 51 51 55 919 694-6311
AMEEN, WILLIAM OTIS, JR. P. O. BOX 9925 2304 CANNONBALL ROAD GREENSBORO 27408 BOWMAN GRAY	FP /EM AC 73 73 81 919 282-1164	CHEEK, GEO. W., JR. 317 ENGLEMAN BURLINGTON 27215 U OF PENN	GS RT 53 62 62 919 584-6551	HANCOCK, WILLIAM F., JR. 1303 W. DAVIS ST. BURLINGTON 27215 U OF NC	PTH AC 68 68 73 919 226-0196
AU, VICTOR K. 1214 VAUGHN RD., STE. B BURLINGTON 27215 JEFFERSON	PS AC 79 80 86 919 227-5440	CHOKSI, JANAK KANTILAL 405 RUDD ST. B BURLINGTON 27215 BARODA U	ON /IM AC 72 74 85 919 226-0276	HARMAN, JOHN SIMON 1610 VAUGHN ROAD BURLINGTON 27215 MED COLL OF VA	U AC 61 68 68 919 227-2761
AYCOCK, WILLIAM GLENN 202 S. FIFTH STREET MEBANE 27302 DUKE	FP AC 54 54 56 919 563-9341	CRAWFORD, LARRY CLARKE 316 N. GRAHAM-HOPEDALE RD. BURLINGTON 27215 BOWMAN GRAY	GS /TS AC 71 71 77 919 227-3621	HARPER, LARRY OLEN KERNODLE CLINIC, INC. BURLINGTON 27215 WEST VA U	IM /END AC 67 67 73 919 227-3621
BAIRD, JAMES HAMILTON 1624 MEMORIAL DRIVE BURLINGTON 27215 MED COLL OF VA	OBG AC 63 68 68 919 226-7386	CRISSMAN, CLINTON SAMUEL 219 E. ELM STREET GRAHAM 27253 TEMPLE U	FP L 42 42 47 919 226-2448	HAWKINS, JAMES HUBERT, JR. 316 1/2 S. MAIN STREET GRAHAM 27253 U OF NC	FP AC 78 79 82 919 228-9759
BATES, HAROLD BASCOM 1610 VAUGHN ROAD BURLINGTON 27215 BOWMAN GRAY	U AC 54 54 59 919 227-2761	CRISSMAN, MARK ANDERS 219 E. ELM ST. GRAHAM 27253 TEMPLE U	FP AC 80 81 83 919 226-2448	HAWKINS, JAMES HUBERT, SR. P. O. BOX 476 GRAHAM 27253 JEFFERSON	GP AC 46 46 49 919 227-7496
BECK, J. MONTGOMERY 820 FOREST OAKS LANE MEBANE 27302 CASE WESTERN RES	FP /U L/RT 44 52 53 919 563-2450	CYKERT, SAMUEL 711 HERMITAGE ROAD BURLINGTON 27215 INDIANA U	IM AC 83 83 86 919 226-9317	HAYES, JAMES WILLIAM KERNODLE CLINIC BURLINGTON 27215 U OF NC	ORS AC 55 55 63 919 227-3621
BHATTI, MOHAMMAD AMJAD 719 HERMITAGE RD. BURLINGTON 27215 KING EDWARD COLL	GS /TS AC 61 71 86 919 226-5191	DAVIS, JACK BEASON 1946 MARTIN STREET BURLINGTON 27215 HARVARD	P AC 48 52 77 919 228-0581	HENDERSON, RICHARD ROBERT 1522 VAUGHN ROAD BURLINGTON 27215 INDIANA U	D AC 61 61 69 919 227-0496
BLAIR, GEORGE WALKER, JR. 711 HERMITAGE ROAD BURLINGTON 27215 U OF PENN	IM AC 47 47 53 919 226-9317	DIMEO, MICHAEL JOSEPH 1604 MEMORIAL DR. BURLINGTON 27215 TUFTS U	PUD /IM AC 73 74 84 919 226-7300	HINES, EDWARD LLOYD 723 EDITH STREET BURLINGTON 27215 GEO WASHINGTON U	ORS /HS AC 70 72 76 919 227-4256
BLAKE, JOHN PAUL 723 EDITH STREET BURLINGTON 27215 BOWMAN GRAY	P AC 60 60 68 919 227-9818	DUSZLAK, EDWARD J., JR. 3029 S. FAIRWAY DR. BURLINGTON 27215 U OF MASS	DR AC 78 79 83 919 228-1371	HODGES, JAMES THOMAS GRAHAM-HOPEDALE ROAD BURLINGTON 27215 BOWMAN GRAY	ORS AC 63 63 64 919 227-3621
BOWMAN, ZEBULON LYNN 914 S. FIFTH ST. MEBANE 27320 DUKE	OPH AC 77 79 84 919 563-1900	EASON, ERNEST BERNARD 1522 VAUGHN RD. BURLINGTON 27215 U OF NC	IM AC 80 80 77 919 226-1658	JOHNSON, DAVID SANDER 530 W. WEBB AVENUE BURLINGTON 27215 U OF TENNESSEE	PD AC 77 08 81 919 228-8316
BRAXTON, DORIS BLACKWELL 711 HERMITAGE ROAD BURLINGTON 27215 U OF NC	PD /ADL AC 59 59 62 919 229-5341	ELLINGTON, AMZI JEFFERSON, JR. 291 N. GRAHAM-HOPEDALE RD. BURLINGTON 27215 TEMPLE U	GYN AC 52 53 56 919 226-2423	JOHNSON, LESLIE DONALD 319 N. GRAHAM-HOPEDALE RD. BURLINGTON 27215 BOWMAN GRAY	DR AC 69 69 81 919 227-8111
BRENNAN, MICHAEL W. 1214 VAUGHN RD. BURLINGTON 27215 U TX-SAN ANTONIO	OPH AC 78 78 87 919 228-0254	ELLINGTON, ROBERT NORWOOD 291 N. GRAHAM-HOPEDALE ROAD BURLINGTON 27215 DUKE	GYN AC 57 57 63 919 226-2423	JOHNSTON, JAMES WILLIAM KERNODLE CLINIC BURLINGTON 27215 MED COLL OF VA	OBG L/RT 46 46 52 919 227-3621
BULLA, JEFFERSON DAVIS, II 780 WOODY DRIVE GRAHAM 27253 U OF NC	FP AC 60 60 64 919 228-1354	FULBRIGHT, DEBORAH KAY 327 N. GRAHAM-HOPEDALE RD. BURLINGTON 27215 U OF ARKANSAS	PTH AC 79 79 84 919 334-5161	JONES, CLARA ISELEY 815 S. FIFTH ST. MEBANE 27302 MED COLL OF VA	GP L/RT 45 55 56 919 563-1080
BYRNETT, JEFFREY WILLIAM 1624 MEMORIAL DR. BURLINGTON 27215 OHIO STATE U	GS /VS AC 79 80 86 919 229-6428	GOLEY, ALEXANDER FAIRLEY 1509 VAUGHN ROAD BURLINGTON 27215 U OF NC	IM AC 56 56 62 919 228-6000	JONES, DAVID CRAVEN 202 S. FIFTH STREET MEBANE 27302 DUKE	FP AC 79 82 83 919 563-9341
CARTER, ROBERT WILSON KERNODLE CLINIC BURLINGTON 27215 BOWMAN GRAY	IM /CD AC 63 63 69 919 227-3621	GRIFFITHS, MARIAN FOLSOM 316 N. GRAHAM-HOPEDALE RD. BURLINGTON 27215 TUFTS U	N AC 82 84 85 919 227-3621	JUENGEL, PAUL H., III 1206 VAUGHN RD. BURLINGTON 27215 WAYNE STATE U	OTO /PSF AC 81 82 87 919 226-4598
		GROBEN, PAMELA ANNE 327 GRAHAM-HOPEDALE RD. BURLINGTON 27215 TULANE U	PTH AC 77 78 85 919 228-1371	KERNODLE, CHARLES E., JR. 603 ISLEY PLACE, APT. D BURLINGTON 27215 DUKE	GS L/RT 42 44 49 919 226-4598

1. ALAMANCE-CASWELL COMPONENT SOCIETY (Continued)

KERNODLE, DONALD REED	OPH /OTO AC		MORRIS, GEORGE T. ARNOLD	IM AC	SAWYER, TIMOTHY T.	D AC
KERNODLE CLINIC	53 53 59		711 HERMITAGE ROAD	59 59 66	1522 VAUGHN RD.	80 83 86
BURLINGTON 27215			BURLINGTON 27215		BURLINGTON 27215	
DUKE	919 227-3621		BOWMAN GRAY	919 226-9317	U OF OKLAHOMA	919 226-9393
KERNODLE, DWIGHT TALMADGE	IM AC		MORRIS, MARY LIDE	R /NM AC	SCOTT, CHARLES KIMREY	PD /ADL AC
KERNODLE CLINIC	47 47 54		440 CEDARWOOD DRIVE	57 57 66	530 W. WEBB AVENUE	66 66 71
BURLINGTON 27215			BURLINGTON 27215		BURLINGTON 27215	
DUKE	919 227-3621		BOWMAN GRAY	919 584-9872	U OF NC	919 228-8316
KERNODLE, GEO. WALLACE, SR.	PD AC		MORRISEY, LEMONT	FP AC	SCOTT, SAMUEL EDWIN	FP AC
MEDICAL CTR PHARMACY BLDG	45 45 48		723 EDITH STREET	81 82 84	ROUTE #2, BOX 159	63 63 67
BURLINGTON 27215			BURLINGTON 27215		BURLINGTON 27215	
DUKE	919 226-7608		BOWMAN GRAY	919 229-4791	U OF NC	919 421-3247
KERNODLE, GEORGE W., JR.	RHU /IM AC		MUNDY, DONALD ASHFORD	AN AC	SMITH, CHRISTOPHER EDMUND	ORS AC
316 N. GRAHAM-HOPEDALE RD.	81 81 79		212 MEADOWOOD DRIVE	67 68 82	723 EDITH ST.	76 84 87
BURLINGTON 27215			BURLINGTON 27215		BURLINGTON 27215	
U OF NC	919 227-3621		U OF ALBERTA	919 584-5352	DUKE	919 229-4256
KERNODLE, HAROLD BARKER, JR.	ORS AC		NARINS, JOSEPH PAUL	OBG AC	SMITH, JARVIS WILTON	GS AC
316 N. GRAHAM-HOPEDALE RD.	69 69 77		316 N. GRAHAM-HOPEDALE RD.	83 84 87	316 GRAHAM-HOPEDALE RD.	80 80 85
BURLINGTON 27215			BURLINGTON 27215		BURLINGTON 27215	
DUKE	919 227-3621		WAYNE STATE U	919 227-3621	BOWMAN GRAY	919 227-3621
KERNODLE, JOHN ROBERT	GYN L/RT		OSTROWSKI, EDWARD S.	DR AC	STONEBURNER, RICHARD G.	GS L
2465 EDGEWOOD AVE.	41 47 49		831 WARWICK COURT	78 80 86	MEDICAL VILLAGE	42 53 54
BURLINGTON 27215			BURLINGTON 27215		BURLINGTON 27215	
DUKE	919 584-7075		U OF MASS	919 227-1147	MED COLL OF VA	919 226-0400
KING, JOHN TALBERT	PD /CD RT		PATTERSON, JAMES BENSON	D AC	STRICKLAND, JAMES DONALD	EM AC
404 EDINBURGH DR.	45 51 52		1638 MEMORIAL DR.	76 77 81	RT. #7, BOX 36	78 78 83
BURLINGTON 27215			BURLINGTON 27215		BURLINGTON 27215	
MED COLL OF VA	919 226-5197		U OF NC	919 226-8000	TULANE U	919 228-0768
LEE, DAE HEE	FP AC		PEACE, ROBERT JOSEPH	PTH AC	SUTTON, EDWARD COLMERY	GYN AC
2142 N. CHURCH STREET	70 70 79		1447 YORK COURT	48 48 83	1616 MEMORIAL DRIVE	51 51 53
BURLINGTON 27215			BURLINGTON 27215		BURLINGTON 27215	
YONSEI U	919 227-7456		TULANE U	919 584-5171	U OF PENN	919 227-7446
LINDLEY, JOSEPH J.	GS L/RT		PHILLIPS, CHARLES W., JR.	FP AC	SYDNOR, CHARLES FORD	OPH AC
RT. #1, BOX 230-C	51 52 52		108 E. MINNEOLA STREET	58 58 70	1214 VAUGHN ROAD	69 69 74
GRAHAM 27253			GIBSONVILLE 27249		BURLINGTON 27215	
MED COLL OF VA	919 227-3621		U OF NC	919 449-4132	U OF VIRGINIA	919 228-0254
LITTLE, ROBERT WINFIELD	PD AC		POWELL, JAMES BOBBITT	PTH AC	TATE, ALLEN DENNY, JR.	FP AC
2505 S. MEBANE ST.	72 72 86		1447 YORK COURT	64 64 74	1610 VAUGHN ROAD	48 48 50
BURLINGTON 27215			BURLINGTON 27215		BURLINGTON 27215	
U OF NC	919 227-9750		DUKE	919 584-5171	U OF MARYLAND	919 226-4471
LONG, EUGENE MONROE, II	OBG /OBS AC		POWELL, THOMAS EDWARD, III	PTH AC	TATE, DENNY COOK	IM AC
KERNODLE CLINIC	63 63 71		P. O. BOX 2536	61 61 77	316 N. GRAHAM-HOPEDALE RD.	84 85 87
BURLINGTON 27215			BURLINGTON 27215		BURLINGTON 27215	
DUKE	919 226-2423		DUKE	919 227-1235	U OF NC	919 227-3621
MANESS, PAUL FRANKLIN	PD L		PRINGLE, JOSEPH ROSS, JR.	PD AC	VAUGHT, WILLIAM WAYNE, JR	OTO /HNS AC
328 W. DAVIS STREET	39 46 49		711 HERMITAGE RD.	75 77 88	1206 VAUGHN ROAD	68 69 75
BURLINGTON 27215			BURLINGTON 27215		BURLINGTON 27215	
DUKE	919 228-8341		U OF NC	919 229-5341	U OF ILLINOIS	919 226-0660
MANN, PHILIP ROGERS	FP /IM AC		PRUITT, RONALD ANTHONY	ORS AC	WADE, EUGENE HENRY PETER	FP AC
803 HERMITAGE ROAD	60 62 62		316 N. GRAHAM-HOPEDALE RD.	59 60 64	723 EDITH STREET	81 82 84
BURLINGTON 27215			BURLINGTON 27215		BURLINGTON 27215	
U OF VIRGINIA	919 227-3643		MED COLL OF VA	919 227-3621	HOWARD U	919 229-4791
MASOUD, JAVED	CD /IM AC		RINKER, GEORGE ERNEST	PTH /IM AC	WALKER, JOHN BARRETT, JR.	GP AC
723 EDITH STREET	68 68 83		817 COLONIAL DRIVE	65 65 71	MEDICAL VILLAGE	44 48 48
BURLINGTON 27215			BURLINGTON 27215		BURLINGTON 27215	
LIAQUAT MED COLL	919 229-6486		BOWMAN GRAY	919 584-5171	MED COLL OF VA	919 228-8333
MATTHEWS, ROLAND D.	FP AC		RIPPY, WILLIAM DENNIS	FP AC	WALKER, JOHN BARRETT, III	IM AC
1610 VAUGHN ROAD	48 48 53		1610 VAUGHN ROAD	50 51 52	MEDICAL VILLAGE, SUITE K	75 75 74
BURLINGTON 27215			BURLINGTON 27215		BURLINGTON 27215	
U OF MARYLAND	919 228-8333		DUKE	919 226-4471	BOWMAN GRAY	919 226-7384
MCCASLIN, ROBERT IAN	PD AC		ROSENOW, PHILIP JOHN	OBG AC	WALL, JACK GARDNER	DR AC
530 W. WEBB AVE.	83 84 86		1616 MEMORIAL DR.	70 79 86	ROUTE #4, BOX 682	68 68 74
BURLINGTON 27215			BURLINGTON 27215		GRAHAM 27253	
UNIV. OF S.C.	919 228-8316		EMORY U	919 226-8817	U OF NC	919 226-0198
MCNIEL, JESSE NEAL	P AC		ROSS, DONALD MACCONNELL	GS L/RT	WASHINGTON, JOHN LANGTRY	OBG /FP AC
1602 MEMORIAL DRIVE	60 60 74		510 FOUNTAIN PL.	41 50 50	316 GRAHAM-HOPEDALE RD.	75 75 83
BURLINGTON 27215			BURLINGTON 27215		BURLINGTON 27215	
U OF ARKANSAS	919 227-1123		TUFTS U	919 227-3381	U OF ALABAMA	704 739-7445
MCQUEEN, ROBERT BRUCE, JR.	FP AC		RUTH, WAYNE KIMBERLY	PUD /IM AC	WATSON, ROBERT ANDREW	FP /GER AC
780 WOODY DRIVE	59 60 61		1214 VAUGHN RD. STE. A	78 79 85	803 HERMITAGE ROAD	53 53 58
GRAHAM 27253			BURLINGTON 27215		BURLINGTON 27215	
MED COLL OF VA	919 228-1354		DUKE	919 229-4441	U OF ROCHESTER	919 227-3643
MEBANE, GILES YANCEY	FP AC		RYAN, W. JAMES, II	P AC	WILLCOCKSON, WILLIAM S.	EM AC
202 S. FIFTH STREET	54 54 56		723 EDITH STREET	72 73 76	503 SHARON RD.	85 86 86
MEBANE 27302			BURLINGTON 27215		CHAPEL HILL 27514	
DUKE	919 563-9341		LA STATE U	919 227-0126	U OF TEXAS	919 228-1371
MILLER, HOWARD EDWARD	ORS AC		SANKAR, SEEPLAPUTHUR G.	GS /VS AC	WILLIAMS, PAUL FORRESTER	IM AC
723 EDITH STREET	74 75 84		2118 COY ST.	74 81 82	711 HERMITAGE ROAD	55 55 62
BURLINGTON 27215			BURLINGTON 27215		BURLINGTON 27215	
SUNY-SYRACUSE	919 227-4256		PRINCE OF WALES	919 226-3417	U OF PENN	919 226-9317
MOORE, FREDERICK E.	FP AC		SAUNDERS, CHARLES L., JR.	GYN L/RT		
PO DRAWER K	83 84 87		523 WILDWOOD LN.	50 50 56		
CASWELL FAMILY MED. CTR.			BURLINGTON 27215			
YANCEYVILLE 27379			JEFFERSON			
WEST VA U	919 694-9331					

2. ALEXANDER COMPONENT SOCIETY

OFFICERS—President: Russell W. Faulkenberry, M.D., 505 Third Ave., S.W., Taylorsville 28681 (704 632-9736)
Secretary: Walter N. Long, M.D., 505 Third Ave., S.W., Taylorsville 28681 (704 632-9736)

CHOONG, HAN PYO P. O. BOX 548 503 THIRD STREET, SW TAYLORSVILLE 28681 KOREA U	GS AC 61 72 78 704 632-7467	LONG, WALTER NATHANIEL, JR. 505 THIRD AVENUE, SW TAYLORSVILLE 28681 U OF NC	FP AC 58 58 63 704 632-9736	MOFFETT, ALEXANDER STUART 70 W. LUCERNE CIR., APT. 409 ORLANDO, FL 32801 VANDERBILT U	GS L/RT 32 32 43 407 841-1310
GIVENS, GEORGE HOWARD, JR. P. O. BOX 308 TAYLORSVILLE 28681 BOWMAN GRAY	FP AC 47 48 50 704 632-2270				

3. ALLEGHANY COMPONENT SOCIETY

ASHLEY, GALE JACKSON DOCTOR'S OFFICE BUILDING SPARTA 28675 U OF NC	FP AC 56 56 58 919 372-4644	HERAVI, CYRUS 302 HOSPITAL ROAD SPARTA 28675 U OF TEHRAN	GS AC 62 62 72 919 372-4343	LYON-SMITH, MARY E. 616 DOCTOR'S STREET SPARTA 28675 BOWMAN GRAY	FP AC 77 78 81 919 372-5606
CAHN, JACK RICHARD ROUTE #1, BOX 439 SPARTA 28675 PENN STATE U	FP AC 72 75 79 919 372-5606				

4. ANSON COMPONENT SOCIETY

OFFICERS—President: Frederick A. Burney, M.D., 402 Morven Rd., Wadesboro 28170 (704 694-2129)
Secretary: Floyd W. Deen, Jr., M.D., 508 Morven Rd., Wadesboro 28170

BURNEY, FREDRIC ARLEN 402 MORVEN ROAD WADESBO RO 28170 U OF NC	FP AC 62 62 64 704 694-2129	HAHNER, MATTHEW 407 S. GREENE ST. WADESBO RO 28170 CENTRAL DEL ESTE	GS AC 80 81 86 704 694-4193	SMETHIE, WILLIAM MASSIE, SR. P. O. BOX 309 WADESBO RO 28170 MED COLL OF VA	GS L/RT 39 46 46 704 694-2657
DAVIS, DANIEL WHITAKER 402 MORVEN ROAD WADESBO RO 28170 U OF NC	FP AC 59 59 60 704 694-2129	MCKINNON, WILLIAM JAMES 407 S. GREENE ST. PO BOX 309 WADESBO RO 28170 U OF MARYLAND	GS L/RT 40 46 46	SMITH, DAVID TILLERSON GENERAL DELIVERY PAWLEYS ISLAND, S. C. 29585 JOHNS HOPKINS	PUD L 22 31 31
DAVIS, ROBERT LEE 515 CAMDEN ROAD WADESBO RO 28170 BOWMAN GRAY	DR /NM AC 61 61 71 704 694-3597	NAIAI-SAI, ABDOLHAKIM 208 HALL STREET WADESBO RO 28170 U OF TEHRAN	IM /HEM AC 66 74 78 704 694-5159	WILKINS, ROBERT HENRY BOX 3807, DUMC DURHAM 27710 U OF PITTSBURGH	NS AC 59 59 68 919 684-2549

5. ASHE COMPONENT SOCIETY

CHAPIN, JOHN HARMON ROUTE #2, BOX 130 LANSING 28643 U OF ALABAMA	FP AC 52 52 54 919 982-2158	KOVACICH, JOHN JOSEPH 303 HOSPITAL RD. SPARTA 28675 EMORY U	IM AC 76 77 80 919 372-2481
--	--	---	--

6. AVERY COMPONENT SOCIETY

OFFICERS—President: Neal L. Shealy, M.D., PO Box 380, Crossnore 28616 (704 733-0085)
Secretary: Daniel Vinson, M.D., PO Box 837, Banner Elk 28604 (704 898-5026)

CHAPMAN, ROBERT AMASA P. O. BOX 728 BANNER ELK 28604 OHIO STATE U	FP AC 55 55 66 704 898-4828	RAMBO, V. BIRCH 1200 AURORA BLVD. BRADENTON, FL 34202 U OF PENN	GS H 52 53 58	VANCE, SHELBY WILLIAM BOX 70 PINEOLA 28662 EMORY U	GP L 33 33 47 704 733-2788
DICKSON, ALBERT PICKETT, III P. O. BOX 217 NEWLAND 28657 MED COLL OF VA	FP AC 52 61 62 704 733-9276	SMITH, EUSTACE HENRY BOX 190 CROSSNORE 28616 MED COLL OF VA	FP AC 50 51 52 704 733-9297	VINSON, DANIEL CASTILE 2604 HILLSHIRE COLUMBIA, MO 65203 U OF NC	FP AC 74 74 78
FINK, EMMA SLOOP BOX 160 CROSSNORE 28616 VANDERBILT U	FP L 36 38 38 704 733-4367	SMITH, ROBERT CLEMENT BOX 248 BANNER ELK 28604 U OF PITTSBURGH	IM AC 53 59 59 704 898-5588	WEEMS, WADE SCOTT PO BOX 1272 LINVILLE 28646 DUKE	U AC 62 62 88 704 898-6617
LITTLEJOHN, MARK HAYS CANNON MEMORIAL HOSPITAL BANNER ELK 28604 NORTHWESTERN U	R /NM AC 61 62 81 704 898-5823	TATE, WILLIAM CUMMINGS, II P. O. BOX 68 BANNER ELK 28604 U OF NC	GS AC 72 72 77 704 898-4221		

7. BEAUFORT-HYDE-MARTIN-WASHINGTON-TYRRELL COMPONENT SOCIETY

OFFICERS—**President:** David A. Desrochers, M.D., 608 E. 12th St., Washington 27889 (919 946-2137)**Secretary:** Daniel J. Constein, M.D., Aurora Medical Ctr., Box 40, Aurora 27806 (919 322-4021)

AGEE, ROBERT NELSON 302 S. MCCASKEY RD. WILLIAMSTON 27892 OHIO STATE U	GS AC 66 66 86 919 792-1055	HILL, EDWARD FELDIN 501 W. 15TH ST. WASHINGTON 27889 WASHINGTON U	FP AC 73 74 85 919 975-2667	PUGH, RAEFORD THEODORE 619 E. 12TH STREET WASHINGTON 27889 U OF NC	FP AC 57 57 61 919 946-6486
ALLIGOOD, TOBY RAY 1110 HIGHLAND DRIVE WASHINGTON 27889 BOWMAN GRAY	D/IM AC 76 76 81 919 946-4176	HINDSLEY, J. PACK, JR. 604 E. 12TH STREET WASHINGTON 27889 U OF VIRGINIA	U AC 70 70 81 919 946-0136	RHODES, JAMES SLADE, JR. 407 N. SMITHWICK ST. WILLIAMSTON 27892 MED COLL OF VA	GP L/RT 41 41 46 919 792-2036
AUSTIN, FREDERICK DA COSTA, III 615 E. 12TH STREET WASHINGTON 27889 U OF NC	IM/ID AC 67 67 86 919 946-2101	JENKINS, JOSEPH MCKENDRIE 604 E. 12TH STREET WASHINGTON 27889 U OF NC	U AC 74 74 79 919 946-0136	RILEY, PATRICK MICHAEL 504 ALDERSON WASHINGTON 27889 MICHIGAN ST U	AN AC 79 81 83 919 946-5846
BALTIMORE, CHAS. L., JR 211 N. MARKET STREET WASHINGTON 27889 U OF VIRGINIA	OPH AC 69 69 77 919 946-2171	JEON, MYUNG KIL MEDICAL ARTS CENTER PLYMOUTH 27962 SEOUL NATL U	GP AC 70 70 76 919 793-5073	RODMAN, CLARK 615 E. 12TH STREET WASHINGTON 27889 JEFFERSON	IM L/RT 43 43 47 919 946-2101
BOYETTE, CHARLES OTIS P. O. BOX 310 BELHAVEN 27810 U OF NC	FP AC 61 61 65 919 943-2651	JOHNSON, DONALD CARL P. O. BOX 699 WASHINGTON 27889 BOWMAN GRAY	OPH AC 58 58 64 919 946-3111	SANDY, ROBERT EUGENE 608 E. 12TH STREET WASHINGTON 27889 U OF PITTSBURGH	R AC 53 59 60 919 946-2137
BRANTLEY, JULIAN CHISOLM, III 701 SHOREWOOD DRIVE WASHINGTON 27889 U OF NC	OBG AC 75 77 79 919 946-6544	JONES, ALBERT MCCRAY ROUTE #5, BOX 14 WASHINGTON 27889 U OF VIRGINIA	OBG RT 51 60 61 919 946-6544	SHELDON, FRANK CHADWICK BEAUFORT COUNTY HOSPITAL EAST 12TH STREET WASHINGTON 27889 GEO WASHINGTON U	EM/GS AC 62 62 74 919 946-1911
BROOKS, CLYDE LONG, JR. 615 E. 12TH ST. WASHINGTON 27889 U OF NC	IM R 85 86 82 919 946-2101	KIM, KYUNG-HWAE P. O. BOX 190 PLYMOUTH 27962 YONSEI U	OBG AC 60 60 77 919 793-1194	SILVERTHORNE, RAY GUILFORD RT. #2, BOX 35 WASHINGTON 27889 BOWMAN GRAY	OBG L/RT 51 51 55 919 946-5168
CHUNG, WAN SOO 320 MCCASKEY ROAD WILLIAMSTON 27892 KOREA U	GP AC 71 76 78 919 792-1071	LARKIN, ERNEST WADDILL, JR. 211 N. MARKET STREET WASHINGTON 27889 MED COLL OF VA	OPH AC 45 45 51 919 946-2171	SPEROS, THOMAS LEE 501 WEST 15TH STREET WASHINGTON 27889 U OF NC	FP AC 76 76 79 919 975-2667
COLEMAN, JAMES BARR 604 W. MAIN STREET WASHINGTON 27889 U OF NC	GS AC 73 73 79 919 946-0181	LIVERMAN, HENRY JOSEPH P. O. BOX 218, LAZY LANE ENGELHARD 27824 U OF LOUISVILLE	FP AC 50 50 52 919 925-3271	STALLINGS, THOMAS FRANKLIN 608 E. 12TH STREET WASHINGTON 27889 HARVARD	PD AC 54 54 58 919 946-4134
COLEMAN, PHILIP DIVOLL 625 E. 12TH ST. WASHINGTON 27889 U OF NC	GS/TS AC 68 68 83 919 946-0181	MILLER, GEORGE JOHN, JR. 1207 HIGHLAND DRIVE WASHINGTON 27889 U OF ROCHESTER	ORS AC 67 69 79 919 946-6513	STANTON, ALLIE MCLEOD DRAWER 925 PLYMOUTH 27962 U OF TENNESSEE	GS L/RT 43 51 53 919 793-4125
CONSTIEN, DANIEL JOHN 304 MCCASKEY RD. WILLIAMSTON 27892 U OF MISSOURI	FP AC 81 83 84 919 322-4021	MOORE, PAUL MILTON, JR. 619 E. 12TH STREET WASHINGTON 27889 U OF NC	FP AC 59 59 63 919 946-1146	STEPHENSON, HENRY LOUIS, JR. 615 E. 12TH STREET WASHINGTON 27889 U OF NC	IM/CD AC 55 55 62 919 946-2101
COOK, RUSSEL CLIFFORD 608 E. 12TH STREET WASHINGTON 27889 BOWMAN GRAY	PD AC 76 76 80 919 946-4134	NG, VICTOR WANG TA PO BOX 999 ROBERSONVILLE 27871 BOWMAN GRAY	FP AC 59 60 62 919 795-3018	TAYLOE, DAVID THOMAS 608 E. 12TH STREET WASHINGTON 27889 U OF PENN	PD AC 50 50 55 919 946-4134
DESROCHERS, DAVID ALAN 608 E. 12TH STREET WASHINGTON 27889 CORNELL U	DR AC 76 77 84 919 946-2137	NICHOLSON, JAMES EVANS, III 304 MCCASKEY ROAD WILLIAMSTON 27892 U OF NC	FP AC 78 79 84 919 792-8193	TAYLOE, JOSHUA 614 E. 12TH STREET WASHINGTON 27889 U OF NC	OBG AC 61 61 69 919 946-6544
DOVER, CARL THOMAS, JR. 312 S. MCCASKEY RD. PO BOX 845 WILLIAMSTON 27892 BOWMAN GRAY	PD AC 77 77 87 919 792-8101	NICHOLSON, THOMAS WESTRAY 615 E. 12TH STREET WASHINGTON 27889 U OF NC	CD/IM AC 70 70 77 919 946-2101	TAYLOR, MARSHALL CARNEY 608 E. 12TH STREET WASHINGTON 27889 U OF VIRGINIA	DR AC 70 70 79 919 946-2137
FIELDS, THOMAS DUDLEY 604 E. 12TH ST. WASHINGTON 27889 U OF TENNESSEE	U AC 78 79 86 919 946-0136	OAK, CHANG YOON HIGHWAY 64 EAST PO BOX 987 PLYMOUTH 27962 YONSEI U	IM AC 70 70 84 919 793-9051	UM, KI-BONG P. O. BOX 625 ROBERSONVILLE 27871 KOREA U	GP AC 71 76 83 919 795-4192
GALUSZKA, ALBIN ADOLPH 604 E. 12TH STREET WASHINGTON 27889 TUFTS U	U AC 42 42 71 919 946-0136	PAPINEAU, ALBAN PO BOX 686 PLYMOUTH 27962 U OF PENN	FP L 31 33 34 919 793-4155	WALLACE, KELLEY, JR. 330 N. MARKET ST. WASHINGTON 27889 U OF NC	PS/GS AC 63 63 74 919 946-2223
HADLEY, ROBERT PURCELL P. O. BOX 1328 WASHINGTON 27889 U OF VIRGINIA	PTH AC 61 67 68 919 946-9074	PARTRICK, CORNELIUS T. 615 E. 12TH STREET WASHINGTON 27889 U OF NC	IM/CD AC 54 54 61 919 946-2101	WATERS, ZACK JAMES, JR. 604 E. 12TH STREET WASHINGTON 27889 U OF MARYLAND	GS AC 61 61 70 919 946-9004
†HARRIS, CHARLES I., JR. PO BOX 1088 DECEASED-5-13-88 WILLIAMSTON 27893 U OF MARYLAND	GP L 39 39 46 919 792-7026	POTTS, FREDERICK LATHAM, III 403 BLOUNT PLACE WASHINGTON 27889 EAST CAROLINA U	EM AC 84 85 81 919 975-1066	WRIGHT, JAMES THURMAN 108 FRONT STREET BELHAVEN 27810 JEFFERSON	GP L 43 43 47 919 943-2375
HERBERT, PHILIP SIDNEY, JR. 1308 HIGHLAND DRIVE WASHINGTON 27889 CORNELL U	P AC 51 53 77 919 946-8061				

8. BERTIE-GATES-HERTFORD COMPONENT SOCIETY

OFFICERS—**President:** Robert Kahn, M.D., 312 S. Academy St., Ahoskie 27910 (919 332-2244)**Secretary:** Greg Gelburd, D.O., Roanoke Chowan Hospital, Ahoskie 27910

ALMARIO, JOSELITO 500 N. ACADEMY ST. AHOSKIE 27910 U OF SANTO TOMAS	U AC 67 67 82 919 332-6444	FREI, TIMOTHY EDWARD AHOSKIE MEDICAL ASSOC., INC. PO BOX 340 AHOSKIE 27910 JEFFERSON	IM AC 79 80 83 919 332-4155	POMERANS, MARK ROANOKE-CHOWAN HOSPITAL AHOSKIE 27910 U OF URUGUAY	EM /FP AC 64 65 81 919 332-8121
ALSTON, MICHAEL CURTIS 405 HOLLY HILL RD. MURFREESBORO 27855 U OF NC	FP AC 78 79 82 919 398-5167	GELBURD, GREGORY STUART 401 STERLING ST. WINDSOR 27983 PHIL OSTEO MC	FP AC 82 83 87 919 794-3043	PRINCE, JAMES WILLIAM RT. #1, BOX 15Y HARRELLSVILLE 27942 EMORY U	P AC 81 81 85 919 332-4137
BRADSHAW, ARTHUR BROWN BERTIE COUNTY MEM. HOSPITAL PO BOX 158 WINDSOR 27983 MCGILL U	GS L 41 51 51 919 794-4539	GELOT, RAGHUVIR BAXIRAM RT. #1, BOX 6-B AHOSKIE 27910 BARODA U	OTO AC 67 71 78 919 332-5917	QURESHI, AFTAB AHMAD 226 S. ACADEMY ST. AHOSKIE 27910 KING EDWARD COLL	GS /OBG AC 62 62 81 919 332-2244
CLAYTON, MELVIN LOUIS PO BOX 788 AHOSKIE 27910 U OF NC	IM /FP AC 73 73 76 919 332-2993	JENKINS, STANLEIGH EDWARD, JR. 501 HAYES STREET AHOSKIE 27910 U OF NC	FP AC 66 66 70 919 357-1226	QURESHI, FAIQA AFTAB 222 S. ACADEMY ST. AHOSKIE 27910 KING EDWARD COLL	PD AC 73 78 83 919 332-3403
DARDEN, JAMES LEE, JR. ACADEMY ST., MED. ARTS BLDG. AHOSKIE 27910 BOWMAN GRAY	FP AC 47 48 50 919 332-3548	JONES, COLIN DOUGLAS ACADEMY STREET AHOSKIE 27910 U OF NC	FP AC 73 73 75 919 332-6138	REVELLE, BONNIE CAULKINS 222 S. ACADEMY ST. AHOSKIE 27910 EAST CAROLINA U	PD AC 81 83 85 919 332-3403
DAUGHTRIDGE, TRUMAN GIFFIN 706 WOODLAWN DRIVE AHOSKIE 27910 TEMPLE U	R AC 55 56 81 919 332-8121	KAHN, ROBERT CHARLES 416 CIRCLE DRIVE AHOSKIE 27910 U OF PENN	GS AC 77 79 82 919 332-2244	SAUNDERS, JAY FRED BOX 309 AULANDER 27805 U OF NC	FP AC 54 54 64 919 345-3791
DAVIS, ROBERT ALDEN BERTIE MEMORIAL HOSPITAL WINDSOR 27983 BOWMAN GRAY	GS AC 81 86 79 919 794-4865	KING, DANA EDWIN PO BOX 297 GATESVILLE 27938 U OF KENTUCKY	FP AC 81 82 84 919 357-1226	SAWYER, CHARLES JUDSON, III MED. ARTS CTR., ACADEMY ST. AHOSKIE 27910 U OF NC	FP AC 63 63 67 919 332-3548
EAGLES, ARCHIE YELVERTON RT. #2, BOX 25 AHOSKIE 27910 DUKE	IM L 39 46 47 919 332-4155	LANG, DELANO ROOSEVELT, JR. ROANOKE CHOWAN HOSPITAL AHOSKIE 27910 HOWARD U	FP AC 57 57 74 919 332-3560	TAYLOR, JULIAN RALEIGH MEDICAL ARTS CENTER AHOSKIE 27910 BOWMAN GRAY	FP AC 69 69 74 919 332-3548
FLOOD, ROY DEVONNE BOX #7, SPRING BRANCH ROAD MURFREESBORO 27855 HOWARD U	FP AC 65 66 73 919 398-3323	MCLEAN, AUGUSTUS A., JR P. O. BOX 98 MURFREESBORO 27855 MED COLL OF VA	GP L/RT 45 45 48 919 398-3789	WADSWORTH, GEORGE HENRY P. O. BOX 27 AHOSKIE 27910 U OF CINCINNATI	GS L/RT 36 36 48 919 332-2215
FRANK, JOE LEE, JR. 515 S. PEMBROKE AVENUE AHOSKIE 27910 COLUMBIA U	R AC 43 55 55 919 332-2390	PETERSON, ROBERT L., JR. 400 S. CURTIS ST. AHOSKIE 27910 U OF NC	OBG AC 82 83 86 919 332-8109	WEAVER, JOSEPH DUDLEY 111 N. MAPLE STREET AHOSKIE 27910 HOWARD U	FP L/RT 38 38 66 919 332-2196
		PIERCE, CHARLES GRAINGER 201 S. COLONY AVENUE AHOSKIE 27910 U OF NC	PD /PDA AC 75 77 73 919 332-5041	WHIDDON, SCOTT M. RT. #2, BOX 17-R AHOSKIE 27910 U OF MIAMI	R AC 78 82 87 919 332-8121

9. BLADEN COMPONENT SOCIETY

OFFICERS—**President:** Otha A. Barnhill, M.D., Box 488, Elizabethtown 28337 (919 862-3150)**Secretary:** Robert L. Summerlin, M.D., Box 10, Dublin Clinic, Dublin 28332 (919 862-3528)

BENNETT, ERNEST CLAXTON P. O. BOX 667 ELIZABETHTOWN 28337 MED COLL OF VA	GP L 26 26 27 919 866-4319	GLENN, CHANNING P. O. BOX 278 ELIZABETHTOWN 28337 MED COLL OF VA	GP L/RT 33 33 39 919 862-3721	SHIEH, RICHARD CHEN HAI HOSPITAL DR. PO BOX 398 ELIZABETHTOWN 28337	R AC 54 71 81 919 862-4043
BRADLEY, BETTY BRUTON P. O. BOX 998 BLADENBORO 28320 DUKE	FP AC 79 80 85 919 863-3138	LOPES, C. DEJESUS P. O. BOX 1358 ELIZABETHTOWN 28337 U OF PARANA	GS /GP AC 61 61 74 919 862-3112	SUMMERLIN, ROBERT LEE DUBLIN MEDICAL CLINIC PO BOX 10 DUBLIN 28332	FP AC 55 55 58 919 862-3528
ENOJADO, SILVERIO CASTRO, JR. P. O. BOX 308 CLARKTON 28433 U OF SANTO TOMAS	FP AC 61 61 77 919 647-4311	PHILLIPS, BRUCE ALTON, JR. P. O. BOX 86 ELIZABETHTOWN 28337 U OF NC	IM /GE AC 67 67 74 919 862-3212		

10. BRUNSWICK COMPONENT SOCIETY

OFFICERS—**President:** John A. Azzato, M.D., 112 N. Howe St., Southport 28461 (919 457-4789)**Secretary:** Peter D. Almirall, M.D., 307 Yaupon Dr., Yaupon Beach 28461 (919 278-3316)

ALMIRALL, PETER DAVID OAK ISLAND MEDICAL CTR. 307 YAUPON DR. YAUPON BEACH 28461 U OF TORONTO	FP /OM AC 78 79 83 919 278-3316	AZZATO, JOHN ANTHONY 112 N. HOWE STREET SOUTHPORT 28461 JEFFERSON	ORS AC 70 71 77 919 457-4789	CANDELA, STEPHEN JOSEPH PO BOX 260 SUPPLY 28462 AUTONOMA UNIV	ORS AC 77 79 85 919 754-4355
---	--	---	---	---	---

10. BRUNSWICK COMPONENT SOCIETY (Continued)

CORBETT, JOHN RICHARD 924 HOWE ST. SOUTHPORT 28461 BOWMAN GRAY	R AC 57 57 66 919 457-5271	HORNSTEIN, NORMAN MARK P. O. BOX 10968 SOUTHPORT 28461 LONDON U	FP L 41 41 49 919 457-6744	PHILLIPS, WILLIAM ALLAN 3208 OLEANDER DRIVE WILMINGTON 28403 JEFFERSON	D RT 47 53 53 919 763-7333
FORD, BLANCHARD FRED, JR. P. O. BOX 336 SHALLOTTE 28459 MED U OF SC	FP L 38 38 46 919 754-6474	HSU, NORA BEAMAN ROUTE #1, BOX 8-B SUPPLY 28462 PEKING U	OBG AC 52 52 77 919 754-8113	SAVARESE, CHARLES J., JR. P. O. BOX 1948 SHALLOTTE 28459 GEO WASHINGTON U	FP/CD AC 50 51 78 919 754-8105
FORSTNER, JAMES ROBERT 250 E. 11TH ST. SOUTHPORT 28461 U OF NC	FP AC 73 74 77 919 457-9564	KHAN, MUSHTAQ HUSSAIN ROUTE #3, BOX 23 SUPPLY 28462 KAKATIYA MED COL	GS/GP AC 67 73 78 919 754-8115	SAVIDGE, THOMAS OLIVER 906 N. ATLANTIC AVE. SOUTHPORT 28461 HAHNEMANN	IM/CD AC 60 60 79 919 457-5292
GRIMMETT, MATTHEW HILL 829 SHORELINE DRIVE, WEST SUNSET BEACH 28459 DUKE	R/PD L/RT 43 49 50 919 579-2091	LANGSTON, BERNARD LEROY, III P. O. BOX 1934 SHALLOTTE 28459 MED U OF SC	GP AC 72 73 85 919 754-8731	ZUKOSKI, ROBERT MICHAEL 926 HOWE STREET SOUTHPORT 28461 JEFFERSON	GS/GYN AC 77 82 85
HASSLER, ROBERT EMIEL DOCTORS COMPLEX, #4 SUPPLY 28462 NEW YORK MED COL	OBG AC 60 61 85 919 754-9166	MULHOLLAND, JAMES VINCENT PO BOX 1208 SHALLOTTE 28459 DOWNSTATE ME CTR	PD/PD AC 57 58 79 919 754-8117		

11. BUNCOMBE COMPONENT SOCIETY

OFFICERS—President: J. Spencer Atwater, M.D., 390 S. French Broad Ave., Asheville 28801 (704 254-5366)

Secretary: Charles F. O'Cain, M.D., 30 Choctaw St., Asheville 28801 (704 255-7733)

Executive Secretary: Susan Young, P.O. Box 15053, 7 Beechwood Rd., Asheville 28813 (704 298-7221)

ANIXTER, WILLIAM L. PO BOX 1101 HIGHLAND HOSPITAL ASHEVILLE 28802 GEO WASHINGTON U	P AC 77 78 88 704 254-3201	BERKEY, WILLIAM SALDERUS, JR PO BOX 696 SKYLAND 28776 LOMA LINDA U	FP AC 73 75 75 704 684-7801	BROSNAN, DENNIS WILLIAM, III 2 DOCTOR'S PARK ASHEVILLE 28801 EMORY U	OPH RT 56 61 61 704 254-9693
AREDALE, STEPHEN SYDNES STE. 301, 445 BILTMORE CTR. ASHEVILLE 28801 BAYLOR	DR/NM AC 67 67 77 704 254-2371	BERNER, THOMAS 23 PARK ROAD ASHEVILLE 28803 JOHNS HOPKINS	EM AC 68 68 75 704 274-3592	BROWN, DAVID ALLEN 390 S. FRENCH BROAD AVE. ASHEVILLE 28801 MED COLL OF GA	AI AC 82 86 88 704 254-5366
ARIAIL, JERRY NOLAN 390 S. FRENCH BROAD AVE. ASHEVILLE 28801 MED COLL OF GA	D AC 71 72 77 704 252-3576	BIGGERS, DAVID CARL MEMORIAL MISSION HOSPITAL ASHEVILLE 28801 U OF NC	PTH AC 58 58 78 704 255-4270	BROWN, KERMIT ENGLISH 398 CHUNNS COVE ROAD ASHEVILLE 28805 JEFFERSON	OBG L/RT 27 27 30 704 252-5117
ARMSTRONG, BRUCE GRIFFEY 1 DOCTOR'S PARK ASHEVILLE 28801 BOWMAN GRAY	U AC 75 75 83	BILBREY, GEORGE MARVIN, JR 257 MCDOWELL STREET ASHEVILLE 28803 U OF ALABAMA	CDS/TS AC 62 62 72 704 258-1121	BRYAN, WILLIAM ALEXANDER, III ASTON PARK CENTER 53 S. FRENCH BROAD AVENUE ASHEVILLE 28801 LOMA LINDA U	PD AC 68 68 75 704 258-0969
ATWATER, JOHN SPENCER, JR. 390 S. FRENCH BROAD AVE. ASHEVILLE 28801 MED COLL OF GA	A/PD AC 70 71 77 704 254-5366	BISSELL, LEWIS F. 12 ROUND OAK ROAD ASHEVILLE 28804 U OF ARKANSAS	IM AC 49 49 86 704 254-0663	BUIE, STEPHEN E. HIGHLAND HOSPITAL PO BOX 1101 ASHEVILLE 28802 U OF NC	P AC 81 82 87 704 254-3201
BAGLEY, CARTER SNOW 131 MCDOWELL STREET ASHEVILLE 28801 U OF VIRGINIA	OTO/HNS AC 59 59 69 704 254-3517	BITTER, KARL FFOLLIOTT 1 DOCTOR'S PARK ASHEVILLE 28801 U OF NC	U AC 63 63 71 704 253-5314	BURKHARDT, NATHAN L., JR. 129 MCDOWELL ST. ASHEVILLE 28801 U OF TENNESSEE	ORS AC 59 66 66 704 258-8800
BAILEY, JOHN BENNETT 131 MCDOWELL STREET ASHEVILLE 28801 U OF TEXAS	PD AC 75 75 81 704 254-4337	BOERNER, ROBERT MARTIN 520 BILTMORE AVENUE ASHEVILLE 28801 U OF NC	ID/PUD AC 61 61 72 704 254-5932	BURNS, MARGARET VIRGINIA 146 VICTORIA ROAD ASHEVILLE 28801 DUKE	P L 37 48 49 704 254-4616
BALDWIN, MARIE PO BOX 173 DUE WEST, SC 29639 MED U OF SC	P/PN L/RT 29 29 51	BOND, THOMAS MADISON 49 MCDOWELL ST. ASHEVILLE 28801 U OF NC	GE/IM AC 80 84 86 704 258-3870	BURT, TERENCE WILLIAM 405 WINDSWEPT DR. #703 ASHEVILLE 28801 LA STATE U	EM AC 79 80 85 704 255-3786
BARBER, JOHN FRANCIS 157 WINDSOR RD. ASHEVILLE 28804 U OF PENN	GYN L/RT 40 41 48 704 253-7209	BONNER, JACK WILBUR, III BOX 1101, HIGHLAND HOSPITAL ASHEVILLE 28802 U OF TEXAS-SW	P AC 65 65 71 704 254-3201	BURTON, HARRY G., III 257 MCDOWELL ST. ASHEVILLE 28803 U OF LOUISVILLE	CDS/TS AC 74 76 85 704 258-1121
BARNHARDT, LUTHER E., JR. 900 MEDICAL CT., STE. A 100 RANKIN DR. MARION 28752 DUKE	R/NM AC 58 58 64 704 652-4630	BOYD, ELLEN 131 MCDOWELL STREET ASHEVILLE 28801 MED U OF SC	PD AC 75 77 79 704 254-4337	BYRON, ROBERT SILL 675 BILTMORE AVENUE ASHEVILLE 28803 U OF CINCINNATI	P AC 64 64 69 704 254-5369
BATE, DAVID SOULE, JR. 1812 HENDERSONVILLE RD. ASHEVILLE 28803 GEO WASHINGTON U	FP AC 79 80 85 704 684-0011	BRANNAN, WILLIAM CHESTER 143 ASHELAND AVENUE ASHEVILLE 28801 LOMA LINDA U	OBG AC 68 69 81 704 258-9191	CALLAHAN, RICHARD DALE 1 DOCTOR'S DR. ASHEVILLE 28801 PENN STATE U	ON/HEM AC 77 78 83 704 254-8232
BEARDSLEY, THOMAS LEWIS 495 BILTMORE AVE. ASHEVILLE 28801 DUKE	OPH AC 77 80 77 704 253-9821	BRAUN, SIMON DAVID 4 HOLMWOOD RD. PO BOX 2959 ASHEVILLE 28801 EMORY U	DR AC 77 78 83 704 254-4617	CALLISON, WILLIAM JOSEPH STE. 101, 445 BILTMORE CENTER ASHEVILLE 28801 VANDERBILT U	ORS AC 53 60 60 704 254-7271
BELL, CAROL ROLAND 202 DOCTOR'S BUILDING ASHEVILLE 28801 MED U OF SC	AN AC 60 60 70 704 254-1969	BRAZIL, WILBURN OSCAR, JR. 100 VICTORIA ROAD ASHEVILLE 28801 LA STATE U	U AC 61 66 67 704 254-8883	CAMBLOS, JOSHUA FRY B. 17 FOREST ROAD ASHEVILLE 28803 U OF VIRGINIA	GS/GYN L/RT 43 48 49 704 274-2794

11. BUNCOMBE COMPONENT SOCIETY (Continued)

CAMPBELL, ALLEN BARRY 93 VICTORIA ROAD ASHEVILLE 28801 COLUMBIA U	OBG AC 61 68 68 704 253-4821	DEALY, DARILYN HEDDEN 445 BILTMORE CTR., STE. 404 ASHEVILLE 28801 DUKE	ID /IM AC 79 79 85 704 258-9635	FRIEDMAN, ALAN DAVID 100 VICTORIA ROAD ASHEVILLE 28801 U OF ALABAMA	U AC 68 69 80 704 254-8883
CAPPIELLO, DAVID LAWRENCE 129 MCDOWELL STREET ASHEVILLE 28801 CORNELL U	ORS AC 64 64 71 704 258-8800	DEAN, JOHN NEWELL 147 ASHLAND AVENUE ASHEVILLE 28801 EMORY U	IM AC 74 75 79 704 258-1188	FRY, JOHN RUDOLPH 20/20 PLAZA 90 ASHLAND AVENUE ASHEVILLE 28801 U OF WISCONSIN	OPH AC 59 65 66 704 253-5656
CHAPMAN, JESSE PUGH, JR. 520 BILTMORE AVENUE ASHEVILLE 28801 U OF PENN	TS /GS L/RT 43 48 53 704 252-7357	DEERING, TIMOTHY BRADFORD 30 CHOCTAW STREET ASHEVILLE 28801 NEW YORK MED COL	GE /IM AC 72 74 78 704 254-0881	GALLAGHER, TIMOTHY JOSEPH P. O. BOX 2959 103 DOCTOR'S BUILDING ASHEVILLE 28802 LA STATE U	DR AC 69 69 77 704 255-4167
CHILDERS, TERRY CELY 131 MCDOWELL ST. ASHEVILLE 28801 U OF VIRGINIA	PD AC 80 82 85 704 254-9811	DODD, PATRICIA 325 VANDERBILT RD. ASHEVILLE 28803 U OF MARYLAND	GS /GYN L/RT 44 54 55 704 274-2795	GALLOWAY, JAMES BRUCE GALLOWAY DR. ASHEVILLE 28803 QUEENS U	ORS L/RT 44 49 50 704 274-2236
CHIPLEY, PATRICK LINCOLN P. O. BOX 399 ENKA 28728 BOWMAN GRAY	GP AC 56 56 58 704 667-2531	DOLAN, DANIEL LYNN 9 BAIRD MOUNTAIN RD. WEST ASHEVILLE 28804 VANDERBILT U	IM /CD AC 55 55 78 704 658-2677	GAWOROWSKI, JOANNA M. P. HIGHLAND HOSPITAL P. O. BOX 1101 ASHEVILLE 28802 AKADEMIA U	P AC 67 69 76 704 254-3201
CLAPP, HUBERT LEE BOX 365 SWANNANOVA 28778 MED COLL OF GA	GP L 37 38 38 704 686-3300	DOMBY, WILLIAM ROGER 30 CHOCTAW STREET ASHEVILLE 28801 MED COLL OF VA	PUD /IM AC 72 73 80 704 255-7733	GENTLING, PETER ALLEN 5-D DOCTOR'S PARK ASHEVILLE 28801 NORTHWESTERN U	GS AC 64 64 72 704 252-2457
CLARK, KENNETH JAMES, JR. 49 MCDOWELL ST. ASHEVILLE 28801 ST U OF NY-BUFF	GE /IM AC 71 72 78 704 258-3870	DOSS, GEORGE WESTON HIGHLAND HOSPITAL P. O. BOX 1101 ASHEVILLE 28802 U OF TEXAS-SW	P AC 53 53 77 704 254-3201	GETTINGER, GLEN SCOTT 211 RIVA RIDGE DR. FAIRVIEW 28730 EMORY U	AN /IM AC 81 83 86 704 254-1969
CLARK, TERENCE PETER 445 BILTMORE AVE., STE. 304 ASHEVILLE 28801 BAYLOR	CHP /P AC 73 73 75 704 252-1421	DRAV, GREGORY JOSEPH 20 MCDOWELL ST. ASHEVILLE 28801 OHIO STATE U	HS /ORS AC 73 73 80 704 253-7521	GODBOLD, RONALD LEE 281 MCDOWELL STREET ASHEVILLE 28803 U OF ALABAMA	D AC 69 69 74 704 252-5679
CLAXTON, CALVIN P., JR. 257 MCDOWELL STREET ASHEVILLE 28803 U OF VIRGINIA	CDS /TS AC 61 61 74 704 258-1121	DURHAM, CECIL TRACY, JR. 7 MCDOWELL STREET ASHEVILLE 28801 MED U OF SC	N AC 66 66 74 704 255-7776	GOLLBERG, HAROLD RONALD 445 BILTMORE CENTER, STE. 304 ASHEVILLE 28801 U OF TEXAS	P /GER AC 66 66 72 704 252-1421
COLE, WARREN HENRY 8 W. KENSINGTON ROAD ASHEVILLE 28804 WASHINGTON U	GS RT 20 67 68 704 254-4475	EGLINTON, DANIEL THOMAS 53 S. FRENCH BROAD ASHEVILLE 28801 U OF NEW MEXICO	ORS AC 78 82 84 704 252-7180	GOUGH, WILLIAM, III 445 BILTMORE CTR., STE. 306 ASHEVILLE 28801 U OF ROCHESTER	RHU /IM AC 76 77 83 704 258-9533
COOK, JAMES HOSMER 281 MCDOWELL STREET ASHEVILLE 28803 U OF IOWA	D AC 63 64 73 704 252-5679	ELLISTON, E. BRUCE 206 ASHLAND AVE. ASHEVILLE 28801 LOMA LINDA U	FP AC 72 72 74 704 258-8681	GRAINGER, WADE KENTON PO BOX 696 SKYLAND 28776 LOMA LINDA U	FP AC 83 84 86 704 684-7801
CORCORAN, EDWIN EMMONS 69 MCDOWELL STREET ASHEVILLE 28801 MED U OF SC	IM /GE L/RT 37 37 48 704 258-3870	ELLISTON, WINSTON LEON 210 ASHLAND AVE. ASHEVILLE 28801 LOMA LINDA U	AI /PD AC 73 73 79 704 253-3382	GRAVATT, BENJAMIN THOMAS 202 DOCTOR'S BUILDING ASHEVILLE 28801 U OF PITTSBURGH	AN AC 79 80 83 704 254-1969
COSTENBADER, WM. B., JR. 131 MCDOWELL STREET ASHEVILLE 28801 U OF VIRGINIA	OTO /HNS AC 64 64 71 704 254-3517	ELMORE, MILES 10 MCDOWELL STREET ASHEVILLE 28801 MED U OF SC	IM /NEP AC 71 75 76 704 258-8545	GRAY, CRAIGAN LUTHER 143 ASHLAND AVENUE ASHEVILLE 28801 LOMA LINDA U	OBG AC 68 68 78 704 258-9191
CRAIG, ROBERT LAWRENCE 16 COLONIAL PLACE ASHEVILLE 28804 JOHNS HOPKINS	P L/RT 35 35 39	EUBANKS, REAVIS THAYER 86 VICTORIA ROAD ASHEVILLE 28801 TULANE U	GS AC 71 71 77 704 253-2396	GRIER, MICHAEL WILLIAM 30 CHOCTAW STREET ASHEVILLE 28801 U OF SOU CALIF	GE /IM AC 69 69 77 704 254-0881
CREWS, HARRY DENNISTON 10 MCDOWELL STREET ASHEVILLE 28801 JOHNS HOPKINS	NEP /IM AC 64 64 72 704 258-8545	FARMER, WOODARD EASON 27 PARK RD. ASHEVILLE 28813 TULANE U	IM L 39 47 47 704 274-0718	GRIFFIN, ROBERT ASHLEY APPALACHIAN HALL, BOX 5534 ASHEVILLE 28813 TEMPLE U	P /N AC 51 52 56 704 253-3681
CRIGLER, NORRIS WOLF, JR. P. O. BOX 2959 ASHEVILLE 28801 DUKE	R AC 76 76 81 704 254-4617	FELIX, RICHARD REID A-305 DOCTOR'S BUILDING ASHEVILLE 28801 OHIO STATE U	P /PYM AC 72 72 79 704 258-3880	GRIFFIN, WILLIAM RAY, JR. 30 HILLTOP ROAD ASHEVILLE 28803 JEFFERSON	P /N AC 44 45 48 704 253-3681
CROSBY, EDWARD BROWN PO BOX 1980 ASHEVILLE 28802 U OF ALABAMA	ORS /HS AC 68 69 75 704 258-0847	FISCHER, MARTIN JOSEPH 520 BILTMORE AVENUE ASHEVILLE 28801 WASHINGTON U	TS /GS AC 61 62 80 704 252-7357	GUNTHER, ROBERT CLARENCE 25 LAWRENCE PLACE ASHEVILLE 28801 NEW YORK U	AN AC 64 64 73 704 252-1016
CROW, SAMUEL LESLIE 418 DOCTOR'S BLDG. ASHEVILLE 28801 EMORY U	IM /CD L/RT 25 26 27 704 252-5633	FOWLER, WILLIAM BRIGHT 675 BILTMORE AVENUE ASHEVILLE 28803 BOWMAN GRAY	IM AC 56 56 63 704 252-1830	HAMIL, SHARON SWEDE OLD U. S. HIGHWAY 70 BLACK MOUNTAIN 28711 EMORY U	FP AC 79 80 81 704 669-5478
CUMMINGS, CHARLES EMMETT 281 MCDOWELL STREET ASHEVILLE 28803 LA STATE U	D AC 58 62 63 704 252-5676	FOY, DAVID MARK N-1 DOCTOR'S DR. ASHEVILLE 28801 CASE WESTERN RES	FP AC 78 78 79 704 252-8885	HAMILTON, WILLIAM GODFREY P. O. BOX 429 FAIRVIEW 28730 U OF LONDON	FP AC 66 76 78 919 628-2225
CUNNINGHAM, MARK ALAN 202 DOCTOR'S BLDG. ASHEVILLE 28801 VANDERBILT U	AN AC 70 72 78 704 254-1969	FRAZIER, CLAUDE ALBEE DOCTOR'S PARK ASHEVILLE 28801 MED COLL OF VA	A AC 44 50 50 704 254-1650	HANSCOM, ALFRED CARLETON RT. #11, BOX 260 HENDERSONVILLE 28739 LOMA LINDA U	EM /FP AC 53 54 81 704 693-7623
DAVIS, PHILIP COLEMAN 93 VICTORIA ROAD ASHEVILLE 28801 MED COLL OF VA	OBG AC 64 64 72 704 253-4821				

11. BUNCOMBE COMPONENT SOCIETY (Continued)

HAPKE, EDITH JOSEPHINE 70 WOODFIN PL., STE. 304 ASHEVILLE 28801 FREIEN U	PUD /IM AC 56 62 73 704 254-8878	HUFFMAN, ROBERT EDWARD 146 VICTORIA ROAD ASHEVILLE 28801 U OF TENNESSEE	P AC 63 63 71 704 253-3695	KIEFFER, HENRI L.G. 103 DOCTORS BLDG. PO BOX 2959 ASHEVILLE 28802 U OF VIRGINIA	DR AC 80 81 87 704 254-4617
HARDY, WINFIELD P. O. BOX 696 SKYLAND 28776 LOMA LINDA U	FP AC 60 61 61 704 684-7801	HUFFSTUTTER, WILLIAM M. 50 DOCTOR'S DR. STE. 210 ASHEVILLE 28801 U OF TENNESSEE	CHN /N AC 77 78 84 704 252-8983	KILLIAN, JOHN HUME 276 E. CHESTNUT STREET ASHEVILLE 28801 BOWMAN GRAY	OPH AC 67 67 75 704 255-8978
HARTMANN, THOMAS MICHAEL 180 PATTON MOUNTAIN RD. ASHEVILLE 28804 EMORY U	DR AC 80 81 85 704 254-4617	HULKOWER, STEPHEN D. 491 BILTMORE AVE. ASHEVILLE 28801 JEFFERSON	FP AC 81 82 88 704 258-0670	KITTNER, PHILIP JOEL 80 VICTORIA ROAD ASHEVILLE 28801 NEW YORK MED COL	OBG AC 64 64 71 704 255-8900
HASLAM, JOHN BATTLE 200 DOCTOR'S BLDG. ASHEVILLE 28801 DUKE	AC 65 65 71 704 255-4100	HUMPHREYS, DAVID HARDING 5 LIVINGSTON AT VICTORIA PLASTIC SURGERY CTR. ASHEVILLE 28801 U OF CINCINNATI	PS AC 79 80 86 704 253-3866	KNOEFEL, ARTHUR E., JR. PO BOX 875 BLACK MOUNTAIN 28711 LA STATE U	FP L/RT 35 35 38 704 669-7125
HAZLEHURST, JOHN LIVINGSTON 16 MCDOWELL STREET ASHEVILLE 28801 U OF NC	GS AC 56 56 66 704 252-3366	HUTTO, EDITH E-11 WOODFIELD ASHEVILLE 28803 MED U OF SC	D RT 58 59 63 704 298-2954	KODACK, ALBERT 6 STONEY RIDGE ASHEVILLE 28804 U OF TORONTO	FP /GYN L 40 43 46 704 252-1131
HENDERSON, JOHN ARTHUR 117 RATHFARNHAM CIRCLE ASHEVILLE 28803 U OF ILLINOIS	GS AC 45 45 72 704 254-2341	ISBEY, EDWARD K., III 495 BILTMORE AVE. ASHEVILLE 28801 U OF NC	OPH AC 81 82 88 704 258-1586	KROLL, LARRY LEROY 53 S. FRENCH BROAD ST. ASHEVILLE 28801 LOMA LINDA U	ORS AC 65 66 75 704 252-7180
HENDERSON, REX ARTHUR 36 WEMBLEY ROAD ASHEVILLE 28804 U OF MIAMI	EM AC 78 79 85 704 255-3786	ISBEY, EDWARD KENNETH, JR. 495 BILTMORE AVENUE ASHEVILLE 28801 WAYNE STATE U	OPH AC 55 61 61 704 258-1586	KRUEGER, ALAN LEE CALEDONIA ROAD P. O. BOX 5534 ASHEVILLE 28813 U OF KANSAS	P AC 67 68 79 704 253-3681
HENRY, OZMER LUCAS, JR. T B CONTROL UNIT DIVISION OF HEALTH SERVICES BLACK MOUNTAIN 28711 BOWMAN GRAY	IM AC 48 49 56 704 669-3117	ISRAEL, JOHN ROBERT 5 LIVINGSTON STREET ASHEVILLE 28801 U OF PITTSBURGH	PS AC 62 62 75 704 253-7000	KUBITSCHKE, KENNETH R. 445 BILTMORE CTR., STE. 407 ASHEVILLE 28801 BAYLOR	IM AC 78 78 86 704 258-0397
HERTENSTEIN, JAMES C. 131 MCDOWELL ST. ASHEVILLE 28801 U OF ILLINOIS	OTO /HNS AC 81 86 87 704 254-3517	JAMES, ROGER ALLEN 946 TUNNEL ROAD ASHEVILLE 28805 BAYLOR	FP AC 59 66 67 704 298-7981	LAURENS, JOHN 445 BILTMORE CENTER, STE. 303 ASHEVILLE 28801 TULANE U	CRS AC 44 44 75 704 258-8181
HESTER, DAVID ALAN 445 BILTMORE CTR., STE. 302 ASHEVILLE 28801 U OF OKLAHOMA	END /IM AC 73 78 81 704 253-6812	JARRETT, DAVID LINCOLN 53 S. FRENCH BROAD ST. ASHEVILLE 28801 LOMA LINDA U	ORS AC 63 63 74 704 252-7180	LAWRENCE, HAL CLIFFORD, III 93 VICTORIA ROAD ASHEVILLE 28801 INDIANA U	OBG AC 75 75 79 704 253-4821
HICKS, MELISSA M. 491 BILTMORE AVE. ASHEVILLE 28801 U OF MISSOURI	FP AC 84 85 88 704 258-0635	JENSEN, ROGER D. 491 BILTMORE AVE. ASHEVILLE 28801 U OF NEBRASKA	FP AC 75 76 87 704 258-0670	LAWRENCE, JOHN ELMORE, JR. 554 CHUNNS COVE ROAD ASHEVILLE 28805 DUKE	CD /IM AC 72 74 82 704 254-8054
HILL, ARTHUR THEODORE, JR. 147 ASHLAND AVENUE ASHEVILLE 28801 BOWMAN GRAY	IM AC 56 56 62 704 258-1188	JIMENEZ, EDGAR J. 143 ASHELAND AVE. ASHEVILLE 28801 U OF SOU FLORIDA	OBG AC 81 82 87 704 258-9191	LEAKE, ARTHUR ELDRIDGE, JR. 54 WESTALL AVENUE ASHEVILLE 28804 U OF NC	AN AC 66 66 72 704 255-3743
HILL, HAYWOOD NORTHROP, JR. 445-BILTMORE CTR., STE. 407 ASHEVILLE 28801 BOWMAN GRAY	IM AC 70 70 77 704 258-0397	JOHNSON, RANDALL DIVAN 16 MCDOWELL STREET ASHEVILLE 28801 U OF MICHIGAN	GS /CDS AC 75 77 83 704 252-3366	LEDBETTER, JOHN WINSLOW 7 MCDOWELL STREET ASHEVILLE 28801 BOWMAN GRAY	N AC 53 53 59 704 255-7776
HINMAN, HAVILAH EDWARD 7 RATHFARNUM RD. ASHEVILLE 28803 U OF VERMONT	OBG L/RT 36 36 49 704 684-6243	JOHNSON, RONALD W. 172 ASHELAND AVE. ASHEVILLE 28801 MED U OF SC	FP AC 81 82 87 704 252-1131	LEE, IL SUNG P. O. BOX 370 ENKA 28728 CATHOLIC U	IM AC 66 75 78 704 667-5298
HOELSCHER, KENNETH KING PO BOX 15025 ASHEVILLE 28813 M C OF WISCONSIN	PM AC 61 62 85 704 274-2400	JONAS, JAROSLAV GEORGE 20 BEAVERBROOK ROAD ASHEVILLE 28804 U OF ZURICH	ORS AC 54 54 82 704 255-0510	LEE, TERRENCE JOHN 445 BILTMORE CENTER, STE. 404 ASHEVILLE 28801 GEORGETOWN U	ID /IM AC 72 74 79 704 258-9635
HOLT, JOHN PLUMMER 86 VICTORIA ROAD ASHEVILLE 28801 MEHARRY MED COLL	FP AC 56 58 61 704 255-8494	KELEHER, MICHAEL FRANCIS 18 MAYWOOD ROAD ASHEVILLE 28804 U OF COLORADO	GS L/RT 40 49 49 704 254-1835	LENER, PAUL 1 DOCTOR'S PARK ASHEVILLE 28801 BOSTON U	U AC 54 61 61 704 253-5314
HOOKER, MICHAEL PHILLIP 202 DOCTORS BLDG. ASHEVILLE 28801 U OF OREGON	AN AC 80 80 85 704 254-1969	KELLER, CHARLES A., JR. 257 MCDOWELL STREET ASHEVILLE 28803 LA STATE U	CDS AC 59 67 67 704 258-1121	LIGON, HAROLD BELTON MEDICAL CENTER BUILDING 86 VICTORIA ROAD ASHEVILLE 28801 MED U OF SC	FP AC 55 56 56 704 252-1585
HOSKINS, JOHN ROBINSON, III 7 AMHERST RD. ASHEVILLE 28803 JEFFERSON	AN L/RT 44 50 50 704 274-5049	KELLY, RICHARD BRUCE N-1 DOCTOR'S DR. ASHEVILLE 28801 MED COLL OF OHIO	FP AC 80 80 85 704 258-0670	LINCOLN, DAVID OGDEN 69 MCDOWELL ST. ASHEVILLE 28801 ST U OF NY-BUFF	ORS AC 65 67 73 704 255-7526
HUBBARD, ROBERT THOMAS 126 LAKE SHORE DRIVE ASHEVILLE 28804 TEMPLE U	FP RT 43 43 47 704 252-5103	KENNEDY, THOMAS FRANCIS P. O. BOX 2959 ASHEVILLE 28802 U OF MICHIGAN	R AC 68 69 74 704 254-4617	LITTLEJOHN, JAMES TALMADGE 416 DOCTOR'S BUILDING ASHEVILLE 28801 U OF PENN	IM /CD AC 45 51 52 704 253-0443
HUFF, OLSON C/O THOMS REHAB. HOSP. PO BOX 15025 ASHEVILLE 28813 U OF LOUISVILLE	PD AC 62 66 70 704 255-8420	KHATRI, DAVE 549 MERRIMON AVENUE ASHEVILLE 28801 KASTURBA U	IM /GER AC 64 79 80 704 253-5685	LITZENBERGER, W. A. DREW 304-M DOCTOR'S BLDG. ASHEVILLE 28801 U OF KENTUCKY	NPM /PD AC 78 82 83 704 253-1998

11. BUNCOMBE COMPONENT SOCIETY (Continued)

LOOMIS, RALPH CHARLES 7 MCDOWELL STREET ASHEVILLE 28801 INDIANA U	NS AC 76 77 83 704 255-7776	MCKENNA, WILLIAM R. 445 BILTMORE CENTER, STE. 404 ASHEVILLE 28801 U OF PENN	ID AC 78 81 87 704 258-9635	NEIMKIN, RONALD JAY 20 MCDOWELL ST. ASHEVILLE 28801 CORNELL U	HS AC 75 76 88 704 253-7521
LYLES, EVELYN MCMASTER 93 VICTORIA ROAD ASHEVILLE 28801 MED U OF SC	OBG AC 81 82 87 704 253-4821	MCLEAN, WALTER COPLEY, JR. 276 E. CHESTNUT ST. ASHEVILLE 28801 U OF VIRGINIA	OPH AC 75 76 82 704 255-8978	NOELL, JOHN STANFORD RT. 2, BOX 630-A NEBO 28761 U OF NC	FP AC 56 56 83 704 584-0956
LYSKO, JANE E. ST. JOSEPH'S HOSPITAL DEPT. OF PATHOLOGY ASHEVILLE 28801 U OF NC	PTH AC 81 82 87 704 255-3949	MCMILLAN, JAMES H. 206 ASHELAND AVE. ASHEVILLE 28801 MED COLL OF GA	FP AC 77 78 84 704 258-8681	NORBURN, CHARLES S. P. O. BOX 5216 BILTMORE 28803 U OF VIRGINIA	GS L 17 24 24 704 272-6204
MACALPINE, ORVILLE DUNCAN 98 HOLLY HILL DR. CANDLER 28715 LOMA LINDA U	PD L/RT 40 49 49 704 667-5553	MENDELSON, STEVEN LOUIS 445 BILTMORE CTR., STE. 306 ASHEVILLE 28801 U OF ROCHESTER	RHU /IM AC 78 79 84 704 258-9533	NORBURN, RUSSELL LEE 1617 HENDERSONVILLE RD. ASHEVILLE 28803 VANDERBILT U	EM L 25 25 27 704 274-3557
MADDOX, CHARLES DEATON 4-B DOCTOR'S PARK ASHEVILLE 28801 MED COLL OF GA	IM AC 66 66 78 704 253-2865	MEYER, JOHN A. 202 DOCTORS BLDG. ASHEVILLE 28801 U OF FLORIDA	AN AC 83 81 88 919 254-1969	NOTO, JOSEPH ANTHONY 520 BILTMORE AVENUE ASHEVILLE 28801 U OF PENN	TS /GS AC 61 61 71 704 252-7357
MAITLAND, ALEXANDER, III 1 DOCTOR'S PARK ASHEVILLE 28801 YALE	U AC 55 61 62 704 253-5314	MICHAEL, OTIS BENTLEY DOCTOR'S BLDG, SUITE 301 ASHEVILLE 28801 MEHARRY MED COLL	IM /CD AC 61 63 68 704 255-8947	O'CAIN, CHARLES FRANK 30 CHOCTAW STREET ASHEVILLE 28801 EMORY U	PUD /IM AC 73 74 81 704 255-7733
MALONEY, SEAN ROBERT 445 BILTMORE AVE. STE. 106 ASHEVILLE 28801 EMORY U	PM AC 80 81 84 704 254-9796	MILTON, DAVID THOMAS 445 BILTMORE, STE. 301 ASHEVILLE 28801 U OF TENNESSEE	DR AC 81 81 86 704 255-5161	OLBRANTZ, KEITH R. 445 BILTMORE CTR., STE. 301 ASHEVILLE 28801 U OF WISCONSIN	R AC 82 83 87 704 254-2371
MARTIN, DENNIS LEE 7 MCDOWELL ST. ASHEVILLE 28801 U OF VIRGINIA	N AC 65 65 74 704 255-7776	MINKIN, BRUCE IRVING PO BOX 1980 ASHEVILLE HAND CTR. ASHEVILLE 28802 U OF TENNESSEE	HS AC 80 83 88 704 258-0847	OLINGER, BENJAMIN RAY 131 MCDOWELL STREET ASHEVILLE 28801 U OF VIRGINIA	OTO AC 60 67 67 704 254-3517
MARTIN, J. PAUL 491 BILTMORE AVE. ASHEVILLE 28801 U. OF ARIZONA	FP AC 76 77 85 704 258-0670	MOFFATT, ROBERT CARR 445 BILTMORE CENTER ASHEVILLE 28801 U OF TENNESSEE	ON /GS AC 57 65 66 704 258-2464	OLSON, PAUL RICHARD ROUTE #3, BOX 112 LEICESTER 28748 U OF VERMONT	FP AC 68 77 78 704 258-0635
MASTERS, KIM JAMES APPALACHIAN HALL PO BOX 5534 ASHEVILLE 28813 HARVARD	P /CHP AC 72 74 85 704 253-3681	MONTGOMERY, JAMES HUGH 445 BILTMORE CTR., STE. 301 ASHEVILLE 28801 U OF TENNESSEE	R /IM AC 78 78 85 704 255-3565	OXNER, CLAUDIA GERTRUDE DOCTOR'S BLDG., RM. #202 ASHEVILLE 28801 MED U OF SC	AN AC 56 60 60 704 254-1960
MAUNEY, FRANK MAXTON, JR. 257 MCDOWELL STREET ASHEVILLE 28803 DUKE	CDS /TS AC 59 59 68 704 258-1121	MONTGOMERY, WAYNE SWOPE 129 MCDOWELL ST. ASHEVILLE 28801 WAYNE STATE U	ORS AC 48 55 55 704 258-8800	PASCHAL, BARTON RILEY ONE DOCTORS DR. ASHEVILLE 28801 EMORY U	ON /HEM AC 76 76 81 704 254-8232
MAXWELL, KEITH MELVIN 445 BILTMORE AVE., STE. 401 ASHEVILLE 28801 ORAL ROBERTS U	ORS AC 82 83 88 704 251-1357	MOORE, EDWARD EUGENE 3 DOCTOR'S PARK ASHEVILLE 28801 HARVARD	OPH L 42 47 48 704 252-6741	PATE, BARRY REEVES 285 MCDOWELL STREET ASHEVILLE 28803 U OF NC	OTO /HNS AC 58 59 62 704 252-1853
MCCALL, WILLIAM HERBERT 601 CITY BUILDING ASHEVILLE 28801 MED COLL OF VA	OPH L 38 38 41 704 253-0421	MORETZ, FRANK HANNON 202 DOCTOR'S BUILDING ASHEVILLE 28801 U OF NC	AN AC 74 76 81 704 254-1969	PAYNE, WINSTON CHARLES 20/20 PLAZA, 90 ASHLAND AVE. ASHEVILLE 28801 U OF MICHIGAN	OPH AC 67 68 74 704 253-4735
MCCALLUM, REX MONROE 445 BILTMORE AVE. STE. 306 ASHEVILLE 28801 VANDERBILT U	RHU AC 80 83 86 704 258-9533	MORRIS, ARTHUR SHERMAN, JR. 80 VICTORIA ROAD ASHEVILLE 28801 U OF NC	OBG AC 59 59 69 704 255-8900	PETERSON, ERIC WEBSTER 5 CROWNINGWAY DR. ASHEVILLE 28804 DUKE	P AC 71 71 82 704 254-3201
MCCONNELL, MARY HELEN 675 BILTMORE AVENUE ASHEVILLE 28803 GEO WASHINGTON U	PD AC 50 55 55 704 253-1641	MORRISON, ROGER WILLIAM 4 LUCKY LANE ASHEVILLE 28804 HARVARD	PTH /CLP L/RT 43 51 52 704 252-4868	PETERSON, NEIL PAUL P. O. BOX 2959 ASHEVILLE 28802 NORTHWESTERN U	R /NM AC 79 78 84 704 254-4617
MCCULLOUGH, CHARLES T., JR. 129 MCDOWELL ST. ASHEVILLE 28801 VANDERBILT U	ORS AC 61 61 71 704 258-8800	MOSER, ARTUS MONROE, JR. 10 MCDOWELL STREET ASHEVILLE 28801 U OF NC	NEP /IM AC 64 64 70 704 258-8545	PIKE, ISADORE MURRAY 9 BROOKWOOD COURT ASHEVILLE 28804 EMORY U	ON /HEM AC 67 68 75 704 255-0231
MCDUFFIE, ROBERT STANLEY 325 VANDERBILT RD. ASHEVILLE 28803 EMORY U	OBG L/RT 44 44 54 704 274-2795	MULLIS, DONALD LEE 111 VICTORIA ROAD ASHEVILLE 28801 U OF MIAMI	ORS AC 72 73 80 704 252-7331	PORTER, CEDRIC W., JR. 93 VICTORIA ROAD ASHEVILLE 28801 COLUMBIA U	OBG /GPM AC 64 65 73 704 253-4821
MC GHEE, TERENCE BARCLAY 7 MCDOWELL STREET ASHEVILLE 28801 MED COLL OF GA	N /IM AC 76 77 81 704 255-7776	NAGEL, DONALD CHARLES REHAB. CENTER ALCOHOLIC PO BOX 1441 BLACK MOUNTAIN 28711 U OF NC	ALD /FP AC 72 72 76 704 669-3424	POTTS, LEO JOSEPH HIGHLAND HOSPITAL PO BOX 1101 ASHEVILLE 28802 U OF ADELAIDE	P AC 55 54 82 704 254-3201
MCGUIRE, JOHN O'BRIEN 16 MCDOWELL STREET ASHEVILLE 28801 DUKE	GS /VS AC 71 72 79 704 252-3366	NAILLING, RICHARD CABOT 5 DOCTOR'S PARK ASHEVILLE 28801 VANDERBILT U	GS /GYN L 40 43 44 704 254-6381	POWELL, BENJAMIN PHILIP 421 VANDERBILT ROAD ASHEVILLE 28803 U OF ALABAMA	AN AC 71 72 79 704 252-1016
MCKEEL, MILLARD FILMORE 445 BILTMORE AVE. ASHEVILLE 28801 U OF ILLINOIS	NS AC 49 49 56 704 258-8500	NEBLETT, DONALD THOMAS 16 ALL SOULS CRESCENT ASHEVILLE 28803 U OF TENNESSEE	P AC 58 59 78 704 274-1415	POWELL, JACK 190 W. DOCTOR'S BUILDING ASHEVILLE 28801 LOMA LINDA U	GS AC 47 50 54 704 253-1529

11. BUNCOMBE COMPONENT SOCIETY (Continued)

POWELL, JAMES B., II 131 MCDOWELL STREET ASHEVILLE 28801 U OF ALABAMA	HNS /PSF AC 65 65 74 704 254-3517	RUSSELL, JEFFREY KENT 445 BILTMORE CTR., STE. 302 ASHEVILLE 28801 U OF VIRGINIA	DIA /END AC 72 72 77 704 253-6812	SIEGEL, GLENN N. HIGHLAND HOSPITAL PO BOX 1101 ASHEVILLE 28802 NORTHWESTERN U	P AC 75 77 87 704 254-3201
POWELL, WILLIAM FLYNN 62 GERTRUDE PLACE ASHEVILLE 28801 DUKE	OPH /OTO L/RT 37 38 46 704 252-8931	RUSSELL, JOHN HUNTER 14 MCDOWELL ST. ASHEVILLE 28801 U OF VIRGINIA	CD AC 63 63 71 704 254-8054	SLOAN, JAMES MARSHALL, III 942 TUNNEL ROAD ASHEVILLE 28805 DUKE	FP AC 56 56 62 704 298-7972
POZNER, ROBERT S. 445 BILTMORE CTR. STE. 305 ASHEVILLE 28801 EAST CAROLINA U	IM AC 84 75 87	RUSSELL, PHILIP EVERITT 204 DOCTOR'S BUILDING ASHEVILLE 28801 DUKE	IM /PUD AC 50 54 54 704 253-9371	SLUDER, FLETCHER SUMPTER 472 CHUNN'S COVE ROAD ASHEVILLE 28805 RUSH MED COLL	OBG L/RT 38 38 46 704 252-7374
PRATHER, FONZO GOFF 5 FAIRWAY DRIVE ASHEVILLE 28805 U OF MARYLAND	GP L/RT 23 23 47 704 298-4071	SAENGER, PAUL JAY 129 MCDOWELL ST. ASHEVILLE 28801 U OF NC	ORS AC 76 76 85 704 258-8800	SMITH, EVERETT DUANE BOX 1030 CANDLER 28715 LOMA LINDA U	GP AC 53 54 54 704 667-2526
PRINTZ, DON RALPH 10 DEERFIELD ROAD ASHEVILLE 28803 OHIO STATE U	D L/RT 32 32 47 704 274-1234	SAGBERG, ANNE ELISABETH 343 BARNARD AVENUE ASHEVILLE 28804 U OF OSLO	P AC 47 58 59 704 254-3201	SMITH, RICHARD LLOYD 30 CHOCTAW STREET ASHEVILLE 28801 TULANE U	GE AC 72 72 79 704 254-0881
PYERITZ, ERIC ALLEN 501 BILTMORE AVE. ASHEVILLE 28801 U OF PITTSBURGH	FP AC 78 80 87 704 258-0670	SALISBURY, KENT WILLIAM 14 MCDOWELL STREET ASHEVILLE 28801 HARVARD	CD /IM AC 68 68 77 704 254-8054	SNODDY, WILLIAM RAY N-1 DOCTOR'S DR. ASHEVILLE 28801 U OF ALABAMA	FP AC 75 77 78 704 252-8885
RANKIN, CHARLES ALBERT, JR. 80 VICTORIA ROAD ASHEVILLE 28801 JEFFERSON	OBG AC 54 67 68 704 255-8900	SANDRIDGE, DAVID ALLEN 50 DOCTORS DR. #120 W.ANNEX ASHEVILLE 28801 MED COLL OF VA	OBG AC 65 65 74 704 255-8900	SOMMERVILLE, LEWIS CASS 1425 PATTON AVENUE ASHEVILLE 28806 LOMA LINDA U	FP AC 54 55 55 704 254-5385
RAPER, JAMES SIDNEY 29 MARTINDALE ROAD ASHEVILLE 28804 DUKE	R L/RT 38 40 10 704 253-0027	SAUNDERS, WADE HAMPTON, III 14 MCDOWELL STREET ASHEVILLE 28801 DUKE	CD AC 67 68 73 704 254-8054	SPENCER, JOHN PAUL 111 VICTORIA AT OAKLAND ASHEVILLE 28801 U OF CA-DAVIS	ORS AC 72 76 79 704 252-7331
RARDIN, THOMAS EDWIN 43 OAKLAND ROAD ASHEVILLE 28801 CASE WESTERN RES	RHU AC 62 62 72 704 253-2824	SAVORY, PAUL BORRGADEALE 78 FOREST RD. ASHEVILLE 28803 MCGILL U	R AC 47 47 70 704 274-3628	SPRINKLE, LAWRENCE TILSON BOX 218, 104 N. MAIN ST. WEAVERVILLE 28787 JEFFERSON	GP AC 45 45 48 704 645-3031
RATHBUN, LEWIS STANDISH 76 FOREST RD. ASHEVILLE 28803 HARVARD	GYN L/RT 39 47 48 704 274-0748	SCHULHOF, LARY ALAN 7 MCDOWELL STREET ASHEVILLE 28801 INDIANA U	NS AC 69 69 75 704 255-7776	SQUIRES, RAYMOND JAY 49 FOREST ROAD ASHEVILLE 28803 EMORY U	PTH AC 69 72 78 704 274-4664
REINES, ERIC DAVID 445 BILTMORE CTR. STE. 404 ASHEVILLE 28801 ST. GEORGE'S U	ID AC 82 82 87 704 258-9365	SCHUTTE, HAROLD DELANO 53 S. FRENCH BROAD AVE. ASHEVILLE 28801 LOMA LINDA U	PD AC 62 63 63 704 258-0969	STANLEY, SHERBURN MOORE ROUTE #1, BOX 5 TODD 28684 MCGILL U	OM L/RT 40 48 50 704 264-4274
REYNOLDS, ROBERT JACK 445 BILTMORE AVE. STE. 407 ASHEVILLE 28801 U OF TENNESSEE	IM AC 80 81 86 704 258-0397	SELMAN, RICHARD DAVID HIGHLAND HOSPITAL P. O. BOX 1101 ASHEVILLE 28802 EMORY U	P AC 72 72 73 704 254-3201	STEELE, RICHARD AUSTIN 445 BILTMORE AVE. STE. 408 ASHEVILLE 28801 DUKE	IM /CD AC 56 56 86 704 258-9083
RIBNER, BRUCE STEVEN VA MEDICAL CENTER ASHEVILLE 28805 HARVARD	ID AC 70 71 87 704 298-7911	SERFAS, DAVID HILL 14 MCDOWELL ST. ASHEVILLE 28801 CORNELL U	CD AC 77 77 86 704 254-8054	STEINFELD, JOHN ROBERT P. O. BOX 2959 ASHEVILLE 28802 U OF VIRGINIA	DR AC 68 68 75 704 254-4617
RICE, LUCIAN CANDLER, JR. 147 ASHELAND AVENUE ASHEVILLE 28801 EMORY U	IM AC 70 71 73 704 258-1188	SEVERN, HENRY DOELLER 4 PINE TREE RD. ASHEVILLE 28804 JOHNS HOPKINS	ORS L/RT 40 46 47 704 252-9948	STEPHENS, FREEMAN IRBY 54 SUNSET PARKWAY ASHEVILLE 28801 COLUMBIA U	IM L/RT 40 48 48 704 253-8178
ROBERTS, ROY FOSTER P. O. BOX 8127 ASHEVILLE 28814 TULANE U	IM /CD L 33 33 35 704 253-6549	SHAMBLIN, WILLIAM JOSEPH, JR HIGHLAND HOSPITAL P. O. BOX 1101 ASHEVILLE 28802 U OF ALABAMA	CHP /P AC 71 75 76 704 254-3201	STEVENS, JAMES CONRAD 445 BILTMORE AVE., STE. 403 ASHEVILLE 28801 U OF ALABAMA	GS AC 73 73 87 704 253-4143
ROBERTSON, BRISON OAKLEY, III N-1 DOCTOR'S DR. ASHEVILLE 28801 U OF SOU ALA	FP AC 80 81 84 704 252-8885	SHIELDS, CHARLES ROBERT PO BOX 15025 ASHEVILLE 28813 U OF OKLAHOMA	PM AC 80 81 84 704 274-2400	STRANGES, STEVEN M. 7 MCDOWELL ST. ASHEVILLE 28801 UNIV. OF S.C.	NS AC 81 87 87 704 255-7778
ROGERS, DAVID YORK 115 1/2 MT. CARMETL RD. ASHEVILLE 28806 HAHNEMANN	FP /EM AC 77 80 84 704 253-3717	SHIREY, JOHN LUTHER NEW LEICESTER HIGHWAY RT. #4, BOX 1525 ASHEVILLE 28806 JEFFERSON	A L/RT 39 49 50 704 683-2360	SUMMERLIN, HARRY HOLLER, JR. 944 TUNNEL ROAD ASHEVILLE 28805 DUKE	FP AC 61 61 66 704 298-3090
ROOS, STEVEN DAVID 104 WINDWARD DR. ASHEVILLE 28803 U OF COLORADO	AN AC 84 85 87 704 298-9639	SHIVERS, JAMES ALLISON STE. 301, 445 BILTMORE CTR. ASHEVILLE 28801 U OF NC	DR /NM AC 71 71 77 704 254-2371	TAUBER, STUART DAVIS 29 RAVENSCROFT DRIVE ASHEVILLE 28801 U OF PITTSBURGH	END AC 60 60 73 704 258-2404
ROSENBERG, JOEL BENJAMIN 445 BILTMORE CENTER, STE. 305 ASHEVILLE 28801 U OF CONNECTICUT	IM AC 77 77 81 704 253-1482	SHOOK, EARL LESTER, JR. 100 VICTORIA ROAD ASHEVILLE 28801 NEW YORK MED COL	U AC 52 58 58 704 254-8883	TEAFORD, MICHAEL JACOB ST. JOSEPH'S HOSPITAL ASHEVILLE 28801 MED COLL OF GA	PTH AC 76 78 83 704 255-3943
ROWE, CHARLES THOMAS DOCTOR'S BLDG. STE. 103 PO BOX 2959 ASHEVILLE 28802 U OF VIRGINIA	DR AC 68 68 79 704 254-4617	SHUFORD, FULLER ADAMS 49 MCDOWELL ST. ASHEVILLE 28801 U OF NC	GE /IM AC 62 62 66 704 258-3870	TENNEY, JAMES BERNARD 32 HOYT ROAD ARDEN 28704 HAHNEMANN	GPM /PH AC 60 65 77 704 255-5671

11. BUNCOMBE COMPONENT SOCIETY (Continued)

THOMPSON, FRANK ALAN W-18 DOCTORS BLDG. ASHEVILLE 28801 U OF NC	GE /IM AC 75 76 81 704 252-2904	WALLER, LOUIS CLINTON PO BOX 6406 ASHEVILLE 28816 LOMA LINDA U	FP L/RT 44 46 47 704 252-8341	WESTLY, STEPHEN K. PO BOX 1980 ASHEVILLE HAND CTR., PA ASHEVILLE 28802 TULANE U	ORS /HS AC 78 80 88 704 258-0847
THRASH, WILLIAM VIRGIL 147 ASHELAND AVENUE ASHEVILLE 28801 MED COLL OF GA	IM AC 70 71 76 704 258-1188	WALLER, ROBERT JOSEPH 200 DOCTOR'S BUILDING ASHEVILLE 28801 GEORGETOWN U	TR AC 73 74 78 704 255-4100	WHITE, TERRY EDWARD PO BOX 15025 ASHEVILLE 28813 U OF MISSOURI	PM AC 80 83 86 704 274-2400
TRAMM, JEANNE NORGAARD ST. JOSEPH'S HOSPITAL ASHEVILLE 28801 NORTHWESTERN U	AN AC 81 82 85 704 252-1016	WALTON, RICHARD FRANK 491 BILTMORE AVE. ASHEVILLE 28801 QUEENS U	FP AC 61 63 77 704 258-0635	WILLETT, EUGENE STANLEY 111 VICTORIA AT OAKLAND ROAD ASHEVILLE 28801 MED COLL OF VA	ORS AC 69 70 77 704 252-7331
TROXLER, DAVID HAYS 30 CHOCTAW ST. ASHEVILLE 28801 DUKE	PUD AC 74 75 85 704 255-7733	WANDER, JOHN C. PO BOX 610 FAIRVIEW 28730 ST LOUIS U	FP AC 79 80 87 704 628-2225	WILLIAMS, CHARLES EMERY 285 MCDOWELL STREET ASHEVILLE 28803 LA STATE U	OTO /HNS AC 63 63 75 704 252-1853
TURK, ROBERT SPENCER 3-D DOCTORS PARK ASHEVILLE 28801 EMORY U	GS AC 56 56 64 704 258-8206	WEAST, ROBERT RANDOLPH STE. 301, 445 BILTMORE CENTER ASHEVILLE 28801 U OF PENN	DR AC 70 72 77 704 254-2371	WILSON, CATHERINE MARIE 143 ASHELAND AVENUE ASHEVILLE 28801 LOMA LINDA U	OBG AC 63 68 70 704 258-9191
TURPIN, JAMES WESLEY PO BOX 1335 FAIRVIEW 28730 EMORY U	OM /FP R 55 55 81 704 628-4287	WEAVER, ZEBULON, III 80 VICTORIA ROAD ASHEVILLE 28801 U OF NC	HEM /ON AC 61 61 65 704 258-0994	WITTEN, ERNEST ROBERT S. 80 WEMBLEY RD. ASHEVILLE 28804 GEORGETOWN U	IM L 44 44 50 704 253-5707
VALENCIA, RODOLFO CIRINEO 425-B U. S. HIGHWAY 70 SWANNANOVA 28778 U OF SANTO TOMAS	IM AC 64 64 73 704 686-3881	WEILBAECHER, JAMES E., JR. 129 MCDOWELL STREET ASHEVILLE 28801 LA STATE U	ORS AC 58 65 75 704 258-8800	WOODARD, MARSHALL WAYNE 607 FLATIRON BUILDING ASHEVILLE 28801 DUKE	OPH L 43 54 55 704 252-5668
VAN-BLARICOM, LAWRENCE S. 445 BILTMORE AVE. ASHEVILLE 28801 DALHOUSIE U	NS AC 49 58 58 704 258-8500	WEISENBERGER, ANTHONY J. APPALACHIAN HALL P. O. BOX 5534 ASHEVILLE 28813 WASHINGTON U	P /ALD AC 71 72 82 704 253-3681	WORLEY, JAMES HARR 675 BILTMORE AVENUE ASHEVILLE 28803 U OF TENNESSEE	GS L 32 32 35 704 254-2361
VANDERBEEK, RANDALL B. 100 VICTORIA RD. ASHEVILLE 28801 DUKE	U AC 63 63 72 704 254-8883	WEISS, RICHARD ELLIOTT 7 MCDOWELL STREET ASHEVILLE 28801 STANFORD U	NS AC 64 64 73 704 255-7776	YODER, CHARLES DEWAYNE 50 DOCTOR'S DR., STE. 304M ASHEVILLE 28801 U OF NC	PD /NPM AC 74 74 78 704 253-1998
WALLENBORN, PETER A., III 28 GRIFFING BLVD. ASHEVILLE 28804 U OF VIRGINIA	OTO AC 79 84 85 704 252-1853	WELLS, ROBERT STANLEY 445 BILTMORE CTR., STE. 407 ASHEVILLE 28801 U OF OKLAHOMA	IM AC 80 83 85 704 258-0397	YOUNG, MICHAEL HARRILL 50 DOCTOR'S DR., STE. 215 ASHEVILLE 28801 U OF NC	N /IM AC 75 78 82 704 252-6066

12. BURKE COMPONENT SOCIETY

OFFICERS—President: Emmett Royce White, M.D., Box 10, Rutherford College, 28671 (704 879-9541)
Secretary: Sreenivas M. Reddy, M.D., P.O. Box 726, Valdese 28690 (704 874-2921)

ABERNATHY, DAVID SMITH 341 E. PARKER ROAD MORGANTON 28655 DUKE	/IM AC 80 81 84 704 433-0225	COLLETT, JAMES ROUNTREE 2203 S. STERLING ST., STE. 231 MORGANTON 28655 HARVARD	IM /CD L/RT 44 44 47 704 437-0121	FORGY, BYRON KEITH 341 E. PARKER ROAD MORGANTON 28655 U OF MIAMI	GS AC 72 74 81 704 433-6390
ANDERSON, LARRY GLENN 2203 STERLING ST. MORGANTON 28655 U OF ILLINOIS	ORS AC 67 71 76 704 437-6500	CROFT, JAMES MORRIS P. O. DRAWER 849 MORGANTON 28655 MED COLL OF GA	FP AC 64 65 65 704 437-9401	FREEMAN, WILLIAM TOWNSEND P. O. BOX 2245 MORGANTON 28655 MED U OF SC	AN AC 53 53 85 704 438-2168
ANTLEY, RAY M., SR. 2201 S. STERLING ST. MORGANTON 28655 EMORY U	R AC 62 62 86	CROOM, DORWYN WAYNE, II 311 S. SHORE DR. NEBO 28761 WASHINGTON U	PTH AC 76 79 81 704 438-2255	GARROU, BENJAMIN WESLEY, SR. 560 MALCOLM BLVD. RUTHERFORD COLLEGE 28671 U OF NC	IM AC 61 61 67 704 874-0522
BARRON, JOHN ISAAC P. O. BOX 489 MORGANTON 28655 U OF TENNESSEE	FP L 50 51 52 704 437-5641	DAVIS, ANDREW CALVIN 335 E. PARKER RD. MORGANTON 28655 MED U OF SC	OPH AC 79 79 83 704 433-6220	GILES, JOHN HENRY 350 E. PARKER ROAD MORGANTON 28655 BOWMAN GRAY	GS AC 59 59 72 704 437-7388
BOWEN, J. HARTLEY, III 208 CAMELOT DRIVE MORGANTON 28655 JEFFERSON	PTH AC 77 79 83 704 438-2254	DEATON, PLEASANT PAUL PO BOX 700 VALDESE 28690 MED COLL OF VA	GS AC 53 60 60 704 874-0555	GLUGOVER, DONALD BENJAMIN 76 MONTANYA VIEW VALDESE 28690 CHICAGO MED SCH	ORS AC 62 62 85 704 874-3379
BREZICKI, PAUL ALEXANDER PO BOX 599 RUTHERFORD COLLEGE 28671 U OF TORONTO	FP AC 79 80 86 704 874-2811	DEEKENS, STEWART A., JR. 350 E. PARKER ROAD MORGANTON 28655 MED COLL OF VA	FP AC 78 81 84 704 437-9401	HAMER, ALFRED WILSON, JR. 2203 S. STERLING ST., STE. 132 MORGANTON 28655 U OF NC	OBG AC 58 58 65 704 437-6122
BUKHARI, MUSHTAQ AHMAD DOCTOR'S CLINIC RUTHERFORD COLLEGE VALDESE 28690 SRINAGAR MED SCH	GE /IM AC 68 75 81 704 879-8335	DELLINGER, CLYDE JAMES P. O. BOX 8 DREXEL 28619 DUKE	FP AC 61 63 64 704 437-3634	HART, ELZIE FRANKLIN, JR. 350 E. PARKER ROAD MORGANTON 28655 U OF NC	OTO /PS AC 67 67 74 704 433-6410
CHURCH, JACK LEE BOX 104, BROUGHTON HOSP. MORGANTON 28655 U OF TENNESSEE	R /IM AC 63 64 71 704 433-2256	ELLISON, CARROL WENDELL 500 E. PARKER ROAD MORGANTON 28655 MED COLL OF GA	OBG AC 68 69 76 704 433-5700	HERINGTON, DAVID S. 2203 S. STERLING ST. MORGANTON 28655 U OF MARYLAND	FP AC 83 85 87 704 437-4211

12. BURKE COMPONENT SOCIETY (Continued)

HOGSHEAD, RALPH, JR. P. O. DRAWER 690 MORGANTON 28655 TEMPLE U	FP AC 43 48 48 704 437-8121	MELTON, JAMES DURANT ROUTE #3, BOX 50 MORGANTON 28655 U OF NC	FP AC 70 70 86 704 437-9401	SCHMITT, RAYMOND F., JR. 215-A RIVER TRAIL RIVERVIEW APTS. MORGANTON 28655 LA STATE U	CHP /P AC 59 59 70 704 433-2058
HOWERTON, PHILIP THOMAS 2203 S. STERLING ST., STE.176 MORGANTON 28655 DUKE	R AC 58 58 66 704 438-2250	MILLER, ALMA ELIZABETH PO BOX 18 BROUGHTON HOSPITAL MORGANTON 28655 MEHARRY MED COLL	P /IM AC 49 54 72 704 637-2729	SHAH-KHAN, SARDAR MAHMOOD 303 COLLEGE STREET MORGANTON 28655 OSMANIA MED COLL	IM /CD AC 61 61 71 704 437-4261
HYDE, AUSTIN TABER NORRIS-BIGGS CLINIC RUTHERFORDTON 28139 U OF VIRGINIA	A 51 54 57 704 286-9036	MOORE, WILLIAM MORGAN, III 403 S. KING STREET MORGANTON 28655 MED COLL OF GA	OBG AC 71 72 78 704 433-4661	SIMMONS, CHARLES NUMA PO BOX 26 CROSSNORE 28616 MED U OF SC	R AC 55 55 79 704 733-3203
JACUMIN, WALTER JOE P. O. BOX 700 VALDESE 28690 MED COLL OF VA	R /NM AC 66 66 72 704 879-9541	NEALE, RICHARD C., JR. P. O. BOX 249 RUTHERFORD COLLEGE 28671 MED COLL OF VA	PTH /CLP AC 59 65 66 704 879-8767	SPIGGLE, JOHN ALEXANDER 500 E. PARKER ROAD MORGANTON 28655 U OF TENNESSEE	U AC 69 69 77 704 433-5141
JARRAH, AZMI SHAFIQ 100 MEDICAL HTS. MORGANTON 28655 AMER.U OF BEIRUT	PD /PNP AC 61 61 74 704 433-9630	OMER, SYED BROUGHTON HOSPITAL MORGANTON 28655 OSMANIA MED COLL	N /IM AC 50 52 74 704 433-2284	STEELE, WALTER FRANKLIN VALDESE GENERAL HOSPITAL VALDESE 28690 U OF NC	GS /TS AC 66 66 74 704 874-3160
KATH, PHILIP DOUGLAS 335 E. PARKER ROAD MORGANTON 28655 MAYO MED SCHOOL	OPH AC 76 77 81 704 433-6220	ORRISON, WILLIAM GRESHAM 335 E. PARKER ROAD MORGANTON 28655 U OF TEXAS	OPH AC 69 69 78 704 433-6220	SUH, SANG HYON P. O. BOX 266 MORGANTON 28655 YONSEI U	GS AC 56 56 75 704 433-2235
KILBRIDE, KEVIN ANTHONY BOX 114, BROUGHTON HOSPITAL MORGANTON 28655 NAT U OF IRELAND	P /GP AC 61 62 82 704 433-2476	OWENS, ROBERT CARL 341 E. PARKER ROAD MORGANTON 28655 U OF TEXAS	IM AC 79 79 83 704 433-0225	TANAS, KHALIL S. 111 WEDGEWOOD CT. MORGANTON 28655 AMER U OF BEIRUT	AC 72 75 88
KIRKSEY, WILLIAM ALBERT 302 S. KING STREET MORGANTON 28655 WASHINGTON U	GP L/RT 44 47 47 704 437-1850	PETERS, PETER D. 1115 KATHERINE ST. VALDESE 28690 U OF LATVIA	GP /EM AC 40 74 78 704 874-0519	THOMAS, JAMES JOSEPH 100 MEDICAL HEIGHTS DR. MORGANTON 28655 U OF ILLINOIS	PD AC 56 63 65 704 433-4484
KURTS, YURY PO BOX 700 VALDESE GEN. HOSPITAL VALDESE 28690 TADJIK MED INST	AN AC 65 65 87 704 874-2251	PLYLER, EDWARD THURMAN 2203 S. STERLING ST. MORGANTON 28655 U OF NC	FP AC 81 82 85 704 437-4211	VERNON, JAMES TAYLOR P. O. BOX 1139 MORGANTON 28655 WASHINGTON U	P L/RT 45 45 46 704 437-5839
LAFFERTY, JOHN MORRISON PO BOX 597 RUTHERFORD COLLEGE 28671 U OF NC	OBG AC 79 80 76 704 874-2251	POPE, THOMAS DAVID 403 S. KING STREET MORGANTON 28655 BAYLOR	OBG AC 72 72 80 704 433-4661	WELLBORN, WILLIAM R., JR. PO BOX 259 LAKE LURE 28655 TULANE U	OBG L/RT 42 46 56 704 437-1924
LEE, CHOO HYUNG BROUGHTON HOSPITAL MORGANTON 28655 YONSEI U	IM /HEM AC 48 48 73 704 433-2501	POWELL, KENNETH ALTON P. O. BOX 330 RUTHERFORD COLLEGE 28671 BOWMAN GRAY	FP AC 60 60 63 704 874-2107	WHITE, EMMETT ROYCE BOX 10 RUTHERFORD COLLEGE 28671 BOWMAN GRAY	TR /R AC 54 54 61 704 879-9541
LEE, KYUNG KUN P. O. BOX 2203 MORGANTON 28655 YONSEI U	GS AC 57 57 82 704 433-2463	RAYNOR, LEIGHTON ALVIN 335 E. PARKER RD. MORGANTON 28655 U OF NC	OPH AC 77 79 83 704 433-6220	WILLIS, LARRY FRANKLIN 335 E. PARKER ROAD MORGANTON 28655 MED COLL OF GA	OPH AC 68 69 77 704 433-6220
LEE, SAE SOON 350 E. PARKER RD. MORGANTON 28655 YONSEI U	GS /PDS AC 48 48 70 704 437-7395	REDDY, SREENIVAS MADDURI PO BOX 726 VALDESE 28690 OSMANIA MED COLL	IM /ON AC 75 75 85 704 874-2921	WILSON, LAWRENCE STEVEN VALDESE DOCTORS' CLINIC P. O. BOX 700 VALDESE 28690 SUNY-SYRACUSE	U AC 77 78 84 704 874-4890
LINDQUIST, RICHARD KURT 2203 S. STERLING ST., STE. 132 MORGANTON 28655 DUKE	OBG AC 59 59 64 704 437-6122	RIGGS, MILLARD MCADOO 105 WOODSWAY LANE MORGANTON 28655 DUKE	FP L/RT 43 47 47 704 433-1585	WITHERS, ABNER CARR BOX 38 DREXEL 28619 U OF NC	P AC 76 76 79 704 377-4243
MCGIMSEY, JAMES FRANKS, JR. WESTERN CAROLINA CENTER ENOLA ROAD MORGANTON 28655 HARVARD	IM /P AC 43 46 53 704 433-2744	RUSS, DONALD BARNARD RT. #10, BOX 200-H MORGANTON 28655 U OF NC			

13. CABARRUS COMPONENT SOCIETY

OFFICERS—President: John J. Wassel, M.D., P.O. Box 1606, Concord 28025 (704 788-3155)

Secretary: David W. McMurray, M.D., 130 Lake Concord Rd., Concord 28025 (704 782-3114)

AREY, JOHN VINCENT 1054 BURRAGE ROAD, N. E. CONCORD 28025 HARVARD	GYN AC 46 46 51 704 788-4151	BARRINGER, ARCHIBALD LIPE BOX 278 MOUNT PLEASANT 28124 TEMPLE U	FP L/RT 36 37 44 704 436-9929	BLUM, JEFFREY CLARK 130 LAKE CONCORD ROAD, NE PO BOX 2870 CONCORD 28025 U OF MARYLAND	DR /IM AC 73 77 80 704 788-4130
BAKER, LINNY MARSHALL 40 ARDSLEY AVENUE, N.E. CONCORD 28025 DUKE	PD /A AC 60 60 64 704 782-1918	BEAVER, ROBERT HOWELL 109 COUNTRY CLUB DR. CONCORD 28025 U OF TENNESSEE	ORS AC 73 73 83 704 786-5122	BOBBITT, JAMES DANIEL 33 LAKE CONCORD ROAD, N.E. CONCORD 28025 WEST VA U	OPH AC 69 74 77 704 786-2015
BARNHARDT, ALBERT EARL 2100 S. MAIN ST., #57 KANNAPOLIS 28081 U OF MARYLAND	GP L/RT 33 36 41 704 938-4388	BENBOW, JOHN MILLER 40 ARDSLEY AVENUE, N.E. CONCORD 28025 DUKE	PD AC 73 75 76 704 786-1144	BROWN, JAMES W., JR. 633 GRANDVIEW DR., NE CONCORD 28025 DUKE	OTO /HNS L/RT 41 49 52 704 782-8316

13. CABARRUS COMPONENT SOCIETY (Continued)

BURCHFIELD, WILLIAM JOHN 500 LAKE CONCORD RD., NE CONCORD 28025 U OF MICHIGAN	OPH AC 67 67 73 704 782-1127	GALLAGHER, KATHLEEN A. 130 LAKE CONCORD RD. PO BOX 2870 CONCORD 28025 U OF NC	DR AC 76 76 84 704 786-0214	LONG, FRANK EDWARD 1054 BURRAGE ROAD, N. E. CONCORD 28025 U OF MARYLAND	OBG AC 75 75 79 704 788-4151
BURKE, DAVID JOSEPH 528 LAKE CONCORD ROAD, N. E. PO BOX 1606 CONCORD 28025 U OF IOWA	ORS AC 67 68 75 704 788-3155	GERDES, JOSEPH JOHN 1648 PROVIDENCE RD. CHARLOTTE 28207 GEORGETOWN U	DR AC 70 71 76 704 786-0214	LONG, THOMAS THERON, III 920 N. CHURCH STREET CONCORD 28025 BOWMAN GRAY	GE/IM AC 66 66 75 704 788-4186
CARROLL, CHARLES FISHER, JR. CABARRUS MEMORIAL HOSP. CONCORD 28025 U OF MARYLAND	PTH AC 53 56 59 704 788-5987	GIBSON, CLAYTON T. 109 COUNTRY CLUB DR. CONCORD 28025 NORTHWESTERN U	ORS/HS AC 79 81 88 704 786-5122	MALONE, JOHN HUGH, JR. 56 ARDSLEY AVENUE, N.E. CONCORD 28025 DUKE	IM AC 60 60 67 704 782-1101
CHALFANT, WILLIAM PAXSON 56 LAKE CONCORD ROAD, N.E. CONCORD 28025 GEO WASHINGTON U	GS/CDS AC 66 66 73 704 786-1104	HAMMONDS, ROBERT EUGENE 113 COUNTRY CLUB DR. CONCORD 28025 MED COLL OF GA	OTO/PS AC 58 61 66 704 788-2154	MC ALEXANDER, DONALD LEE 56 ARDSLEY AVENUE CONCORD 28025 MED COLL OF GA	IM AC 81 81 86 704 782-1101
CHIKES, PETER GEORGE 34 ARDSLEY AVE., NE CONCORD 28025 U OF NC	OTO AC 72 72 74 704 782-2166	HAMRICK, LADD WATTS, JR. 68 LAKE CONCORD ROAD, N.E. CONCORD 28025 BOWMAN GRAY	IM/NM AC 46 46 46 704 782-3135	MCMURRY, DAVID WILLIS 130 LAKE CONCORD ROAD CONCORD 28025 U OF NC	IM AC 82 83 80 704 782-3114
COLLINS, DAVID LEONARD 48 ARDSLEY AVE. NE CONCORD 28025 HARVARD	GS AC 54 54 62 704 786-1108	HARPER, DAVID KEITH 500 LAKE CONCORD RD., NE CONCORD 28025 U OF NC	OPH AC 81 81 85 704 782-1127	MCWHORTER, ROBERT LIGON 68 LAKE CONCORD ROAD, N.E. CONCORD 28025 DUKE	IM AC 47 47 54 704 782-3135
COOKE, JAMES HARBIN, JR. 130 LAKE CONCORD RD. CONCORD 28025 DUKE	IM AC 76 79 81 704 782-3114	HAWKINS, BARRY FUGH PO BOX 2958 CONCORD 28025 U OF VIRGINIA	IM L/RT 44 51 52 704 782-1101	MILLER, HAROLD MELTON 4367 WEDDINGTON RD. CONCORD 28025 U OF CA-IRVINE	EM/FP AC 72 73 85 704 786-2111
CORRELL, EARL EUGENE KANNAPOLIS MEDICAL CLINIC KANNAPOLIS 28081 U OF TENNESSEE	GP AC 46 47 51 704 933-2101	HENRY, HECTOR HIMEL, II 102 LAKE CONCORD ROAD, N.E. CONCORD 28025 TULANE U	U/PD AC 65 65 70 704 786-5133	MONROE, GEORGE CLARKE, III 470 LAKE CONCORD RD. CONCORD 28025 BAYLOR	IM AC 75 75 79 704 786-7122
COTTRELL, WILLIAM MILNES 758 WILLIAMSBURG DR. CONCORD 28025 EMORY U	AN AC 75 78 79 704 786-2111	HUGHES, LYNN ALLEN 11 ARDSLEY AVENUE, N. E. CONCORD 28025 U OF OKLAHOMA	OTO AC 68 71 73 704 788-1103	MONROE, LANCE TRUMAN 476 CAMROSE CIRCLE, NE CONCORD 28025 NEW YORK U	OBG/OBS L 32 36 38 704 782-3717
CRAVEN, FREDERICK THORNS P. O. BOX 185 CONCORD 28025 NEW YORK U	GP L/RT 38 38 40 704 782-2710	JASMINE, MARK S. PO BOX 1606 CONCORD 28026 HARVARD	ORS AC 82 84 86 704 788-3155	MOON, JAMES PATRICK 1054 BURRAGE RD. NE CONCORD 28025 U OF SOU. DAKOTA	OBG AC 79 81 87 704 788-4151
CROOK, JOHN NEWMAN 56 LAKE CONCORD ROAD CONCORD 28025 DUKE	GS/CDS AC 66 66 74 704 786-1104	JENKINS, WANDA LOUISE 211 LEPHILLIP COURT CONCORD 28025 U OF CINCINNATI	OBG AC 79 83 83 704 786-1115	MORRIS, RAE HENDERSON 111 LOUISE DRIVE, S.E. CONCORD 28025 JEFFERSON	GS L/RT 29 29 32 704 782-4918
CROSLAND, DAVID BAILEY 1054 BURRAGE ROAD, N. E. CONCORD 28025 U OF NC	OBG AC 58 58 64 704 788-4151	JONES, CLAYTON JOE 107 COUNTRY CLUB DRIVE CONCORD 28025 U OF TENNESSEE	GYN AC 52 58 59 704 786-7158	NANCE, FREDERICK LEE, JR. 314 PROFESSIONAL BUILDING KANNAPOLIS 28081 BOWMAN GRAY	GP AC 53 53 56 704 932-0211
DOBSON, LOLO ALLEN, JR. 115 COOK ST. PO BOX 1058 MT. PLEASANT 28124 BOWMAN GRAY	FP AC 80 81 82 704 436-6521	KALDY, PATRICIA MARIE P. O. BOX 1058 MOUNT PLEASANT 28124 BOWMAN GRAY	FP AC 80 80 77 704 436-6521	NORDAN, JOHN MCLEAN 102 LAKE CONCORD ROAD, N.E. CONCORD 28025 BOWMAN GRAY	U AC 69 69 76 704 786-5131
ENGSTROM, GEORGE ALFRED 40 ARDSLEY AVENUE, N.E. CONCORD 28025 DUKE	PD AC 59 59 66 704 786-1145	KEEL, JAMES FRANKLIN, III 68 LAKE CONCORD ROAD, N.E. CONCORD 28025 DUKE	IM AC 74 78 79 704 782-3135	OTTENI, GERALD VINCENT 123 OVERBROOK DRIVE CONCORD 28025 U OF VIRGINIA	DR AC 70 70 76 704 786-2111
ERNST, HENRY EDWIN 167 INGLESIDE DRIVE, S.E. CONCORD 28025 MED COLL OF VA	IM L/RT 43 47 48 704 782-0960	KEIPPER, VINCENT LEE MCCALLA 56 ARDSLEY AVENUE, N. E. CONCORD 28025 VANDERBILT U	IM AC 73 77 77 704 782-1101	PANCOTTO, FRANK SALVATORE 920 N. CHURCH ST. CONCORD 28025 CHICAGO MED SCH	GE AC 75 76 81 704 788-4186
FLOWE, BENJAMIN HUGH 56 LAKE CONCORD ROAD, N.E. CONCORD 28025 DUKE	GS/TS AC 49 50 58 704 786-1105	KELLING, DOUGLAS G., JR. 68 LAKE CONCORD ROAD, N. E. CONCORD 28025 HARVARD	IM/PUD AC 72 74 75 704 782-3135	POWELL, THOMAS WILLIAM 48 ARDSLEY AVE., NE CONCORD 28025 U OF NC	GS/CDS AC 74 74 84 704 786-1108
FORTNEY, SIDNEY RAY 68 LAKE CONCORD ROAD, N.E. CONCORD 28025 DUKE	IM/END AC 63 63 70 704 782-3135	KNEEDLER, WILLIAM HARDING 2305 BYRD ST. RALEIGH 27608 U OF PENN	IM L 26 30 47 704 782-3236	PUCKETT, JAMES BUTLER 68 LAKE CONCORD RD., NE CONCORD 28025 U OF NC	IM/ON AC 74 74 85 704 782-3135
FREEMAN, TYLER IRA 8355 BAR HARBOR LN. CHARLOTTE 28210 CHICAGO MED SCH	IM/OM AC 59 60 82 704 552-6772	LILES, GEORGE WELCH 539 JACKSON PARK RD. KANNAPOLIS 28081 DUKE	GS AC 44 44 48 704 932-4169	QUINN, ROBERT P. 11 ARDSLEY AVE. CONCORD 28025 OHIO STATE U	OTO/HNS AC 80 86 87 704 788-1103
FURR, CARL AUGUSTUS, JR. 1054 BURRAGE ROAD, N. E. CONCORD 28025 U OF NC	OBG AC 58 58 66 704 788-4151	LOCKHART, DAVID ARMISTEAD 40 ARDSLEY AVENUE, N.E. CONCORD 28025 DUKE	PD AC 51 53 54 704 786-1144	RANKIN, RICHARD BRANDON, JR. 500 LAKE CONCORD RD., NE CONCORD 28025 DUKE	OPH AC 53 53 56 704 782-1127
GABLE, RONALD SELMAN 33 LAKE CONCORD ROAD, N.E. CONCORD 28025 MED COLL OF GA	OPH AC 65 65 80 704 786-2015	LOFTUS, JAMES MORGAN, JR. PO BOX 1606 CONCORD 28026 GEORGETOWN U	ORS AC 74 79 79 704 788-3155	REEVES, WILLIAM JOHN CABARRUS MEM. HOSP. CONCORD 28025 BOWMAN GRAY	PTH AC 58 58 65 704 786-2111
				RHODES, CHARLES WINSTON W. PO BOX 1058 MOUNT PLEASANT 28124 BOWMAN GRAY	FP AC 80 81 80 704 436-6521

13. CABARRUS COMPONENT SOCIETY (Continued)

RILEY, DAVID LINDLEY 130 LAKE CONCORD RD. CONCORD 28025 MED COLL OF VA	DR AC 73 74 80 704 786-0214	SURRATT, ROBERT WALTER 56 ARDSLEY AVENUE, N.E. CONCORD 28025 U OF NC	IM AC 78 79 81 704 782-1101	WATERBURY, REX G. 1054 BURRAGE RD., NE CONCORD 28025 BOWMAN GRAY	OBG AC 83 87 88 704 788-4151
RITCHIE, HENRY JACKSON 865 CHURCH STREET, NORTH CONCORD 28025 U OF NC	GP AC 57 57 65 704 786-3181	SWAN, BILL JOE 776 WILLIAMSBURG DRIVE CONCORD 28025 U OF TENNESSEE	AN AC 54 60 60 704 782-7638	WHEATLEY, JAMES WALTER 500 LAKE CONCORD RD., NE CONCORD 28025 U OF MARYLAND	OPH AC 76 76 80 704 782-1127
ROSSER, GEORGE THOMAS 1925 TRILLIUM LANE CHARLOTTE 28211 U OF TENNESSEE	R AC 62 66 67 704 786-0214	TOMLIN, EDWIN MERRILL 102 LAKE CONCORD ROAD, N.E. CONCORD 28025 U OF TENNESSEE	U AC 46 56 57 704 786-5131	WHITAKER, DONALD NASH, JR. 140 LECLINE DRIVE, NE CONCORD 28025 BOWMAN GRAY	CD AC 75 75 81 704 788-3367
SELLERS, FRANK BARKLEY PO BOX 1606 CONCORD 27026 BOWMAN GRAY	ORS AC 59 59 66 704 788-3155	TUTTLE, MARLER SLATE, SR. 134 S. MAIN STREET KANNAPOLIS 28081 TEMPLE U	FP L 38 38 40 704 932-7016	YAP, ELSA DUMAUG CABARRUS MEMORIAL HOSPITAL CONCORD 28025 CEBU INST OF MED	PTH AC 63 74 76 704 788-5987
SIKES, THOMAS EDWARD, JR. 109 COUNTRY CLUB DR., NE CONCORD 28025 MED COLL OF GA	ORS AC 70 71 77 704 786-5122	WASSEL, JOHN JOSEPH PO BOX 1606 CONCORD 28026 GEORGETOWN U	ORS AC 74 81 82 704 788-3155	ZELLNER, ERIC EUGENE 103 COUNTRY CLUB DR. CONCORD 28025 PENN STATE U	FP/EM AC 74 74 80 704 788-1140
SUMNER, ROBERT GRIST 68 LAKE CONCORD ROAD, N.E. CONCORD 28025 CORNELL U	IM/CD AC 59 65 66 704 782-3135				

14. CALDWELL COMPONENT SOCIETY

OFFICERS—President: Robert L. Rogers, M.D., 308 Mulberry St., S.W., Lenoir 28645 (704 758-2309)

Secretary: Kenneth Dols, M.D., 401 Mulberry St., Lenoir 28645

BELK, ROBERT SAMUEL 322 MULBERRY ST. SW PO BOX 1020 LENOIR 28645 MED U OF SC	IM/CD AC 69 69 73 704 758-5544	GUERRA, MARC FRANCIS 912 CONNELLY SPRINGS RD. LENOIR 28645 ST U OF NY-BUFF	FP AC 80 80 85 704 728-8224	MOSS, PAUL N. 541 MAIN ST. HUDSON 28638 BOWMAN GRAY	GP AC 54 54 55 704 728-3551
BOWEN, JOHN HENRY 912 CONNELLY SPRINGS ROAD P. O. BOX 1014 LENOIR 28645 U OF NC	FP/GP AC 80 82 84 704 728-8224	HAIRFIELD, THEODORE VINCENT 328 MULBERRY ST., SW LENOIR 28645 BOWMAN GRAY	GP AC 54 54 62 704 754-3329	NEWMAN, ROBERT HENRY PO BOX 659 LENOIR 28645 INDIANA U	DR AC 76 76 81 704 754-2283
CARPENTER, KENNETH C. P. O. BOX 699 LENOIR 28645 BOWMAN GRAY	GP AC 47 48 50 704 754-7861	HANCOCK, GEORGE MARVIN 401 MULBERRY ST. SW, STE. 101 LENOIR 28645 VANDERBILT U	GS AC 61 61 76 704 758-5501	PHELAN, WESTELL C. PO BOX 659 401 MULBERRY ST. SW STE. 111 LENOIR 28645 CREIGHTON U	DR AC 76 77 86 704 754-2283
CARSWELL, JANE TRIPLETT P. O. BOX 960 LENOIR 28645 MED COLL OF VA	FP AC 58 61 61 704 754-0541	HICKMAN, HARRY STUART 623 MAIN STREET, S.E. HUDSON 28638 DUKE	PD L 38 40 42 704 728-8484	ROACH, ROBERT BURCHELL 401 MULBERRY ST. SW, STE. 101 LENOIR 28645 TEMPLE U	GS AC 43 43 51 704 758-5501
CRUTCHER, KENNETH L. RT. #1, BOX 134-B HUDSON 28638 DUKE	FP/EM AC 84 85 87 919 728-7019	LORE, RALPH ELI 306 PENNTON AVENUE, S.W. LENOIR 28645 RUSH MED COLL	GS L/RT 33 33 37 704 754-7356	ROGERS, ROBERT LEE, JR P. O. BOX 2640 LENOIR 28645 MED COLL OF GA	OBG AC 57 63 64 704 758-2309
CURTIS, RICHARD FRANKLIN PO BOX 659 LENOIR 28645 MED U OF SC	R/NM AC 67 67 83 704 754-8421	LUTZ, CHARLES LARRY P. O. BOX 1020 LENOIR 28645 TULANE U	IM/GE AC 70 70 74 704 758-5544	SCHEIL, CHARLES PHILIP P. O. BOX 960 LENOIR 28645 DUKE	FP AC 58 58 64 704 754-0541
DARSIE, JAMES LEIGH MULBERRY MEDICAL PARK LENOIR 28645 BAYLOR	OTO AC 66 66 79 704 754-2464	MAULL, JOHN M. PO BOX 1020 LENOIR 28645 EMORY U	IM AC 81 81 87 704 758-5544	SCHNEIDER, INAAM J. PO BOX 1020 LENOIR 28645 WAYNE STATE U	IM AC 77 77 88 704 758-5544
DILL, DAVID LEE 203 CEDAR ROCK EST. DR. LENOIR 28645 MED COLL OF GA	DR AC 72 73 77 704 754-2283	MCCORMICK, JOHN THOMAS 401 MULBERRY ST. SW, STE. 103 LENOIR 28645 EMORY U	ORS AC 74 75 80 704 758-7091	SCHNEIDER, RICHARD J. PO BOX 1020 LENOIR 28645 WAYNE STATE U	IM AC 76 79 88 704 758-5544
DOLS, KENNETH JOHN 401 MULBERRY ST. STE. 103 LENOIR 28645 U OF ILLINOIS	ORS AC 82 82 87 704 758-7091	MCNEILL, DONALD D., JR. P. O. DRAWER 680 LENOIR 28645 U OF NC	PTH/CLP AC 65 65 72 704 754-7063	SHULL, LONNIE NEWELL, JR. 401 MULBERRY ST. SW, STE. 101 LENOIR 28645 MED U OF SC	GS AC 69 69 76 704 758-5501
FAIL, PHILIP JACKSON 913 HARPER AVENUE, S.W. LENOIR 28645 MED U OF SC	GP AC 59 60 60 704 758-2353	METZGER, GEORGE ANDREW 322 MULBERRY ST., SW PO BOX 1020 LENOIR 28645 U OF MARYLAND	IM/NEP AC 72 74 78 704 758-5544	SNOW, SIDNEY LEWIS 328 MULBERRY STREET, S.W. LENOIR 28645 U OF OTTAWA	U AC 63 78 79 704 754-2166
GARBER, BRIAN HOWARD 401 MULBERRY ST., SW, STE. 161 LENOIR 28645 BOWMAN GRAY	GS/VS AC 81 82 82 704 758-5501	MILLSAPS, DAVID MCIVER 226-H MORGANTON BLVD. LENOIR 28645 DUKE	PD AC 77 79 80 704 758-5111	STALHEIM, RODNEY MARTIN 322 MULBERRY ST., SW PO BOX 1020 LENOIR 28645 MED U OF SC	IM/CD AC 71 72 80 704 758-5544
GRIFFIN, JOSEPH LAIRD P. O. BOX 2640 LENOIR 28645 MED COLL OF GA	OBG AC 72 73 80 704 758-2300	MORGAN, NANCY ELAINE 401 MULBERRY ST., SW, STE. 200 LENOIR 28645 OHIO STATE U	FP AC 79 81 84 704 754-0707	STEWART, DOUGLAS WAYNE THOMPSON MED. SPECIALISTS, PA PO BOX 1020 LENOIR 28645 PENN STATE U	NEP/IM AC 78 79 84 704 758-5544

14. CALDWELL COMPONENT SOCIETY (Continued)

THOMPSON, FREDERICK A. 322 MULBERRY ST., SW PO BOX 1020 LENOIR 28645 DUKE	IM /CD L/RT 46 47 52 704 758-5544	TROUTMAN, BAXTER SUTTLES 521 MT. VIEW ST. LENOIR 28645 U OF MARYLAND	GP L/RT 36 36 39 704 754-0561	WOODHOUSE, SHERRY LOU PO DRAWER 680 LENOIR 28645 U OF IOWA	PTH AC 80 81 88 704 758-2114
THOMPSON, OTIS RICHARD, JR. 322 MULBERRY ST., SW PO BOX 1020 LENOIR 28645 BOWMAN GRAY	IM /CD AC 53 53 57 704 758-5544	TYE, JOHN GAROLD 401 MULBERRY ST., SW. LENOIR 28645 U OF CINCINNATI	OPH AC 79 80 85 704 754-0561	ZEMP, CHARLES H., JR. 226-H MORGANTON BLVD. LENOIR 28645 MED U OF SC	PD AC 49 65 65 704 758-5111
TILLEY, PAUL DONALD P. O. BOX 5607 LENOIR 28645 BOWMAN GRAY	GP AC 59 59 64 704 758-2368	WALTON, CAREY JAMES, JR. P. O. BOX 1020 322 MULBERRY ST., SW LENOIR 28645 BOWMAN GRAY	IM /GE L/RT 55 55 59 704 758-5544		

16. CARTERET COMPONENT SOCIETY

OFFICERS—President: Margaret N. Harker, M.D., 10 Medical Park, Morehead City 28557 (919 247-3476)
Secretary: W. Stanley Rule, M.D., 23 Medical Park, Morehead City 28557 (919 726-0511)

AQUADRO, CHARLES FRASURE 326 FRONT STREET BEAUFORT 28516 U OF TENNESSEE	GP /OM AC 52 52 71 919 728-5141	GAINEY, JOHN WHITE, JR. P. O. DRAWER 97 MOREHEAD CITY 28557 U OF NC	GP AC 55 55 57 919 726-3406	TEETER, ROBERT TENNANT #9 MEDICAL PARK MOREHEAD CITY 28557 U OF NC	OBG AC 74 74 78 919 726-0107
BALLANCE, JULIA B. 13 MEDICAL PARK MOREHEAD CITY 28557 MED U OF SC	PD AC 82 83 88 919 726-0511	GARRISON, ROBERT WALTER 15 MEDICAL PARK MOREHEAD CITY 28557 CASE WESTERN RES	U AC 76 77 82 919 247-2101	WALKER, WILLIAM THOMAS, JR. #5 MEDICAL PARK MOREHEAD CITY 28557 JOHNS HOPKINS	IM AC 79 79 83 919 726-9091
BORDEN, RICHARD WINSTEAD PO BOX 1078 3108 ARENDELL ST. MOREHEAD CITY 28557 DUKE	GP AC 53 53 56 919 726-3127	HARKER, MARGARET NELSEN P. O. DRAWER 897 MOREHEAD CITY 28557 GEO WASHINGTON U	GP AC 68 69 74 919 247-3476	WAY, BRADY COLE 3 MEDICAL PARK MOREHEAD CITY 28557 BOWMAN GRAY	GS AC 76 76 85 919 726-1136
BRADY, WALTER MORRIS #5 MEDICAL PARK MOREHEAD CITY 28557 MED COLL OF VA	FP AC 51 52 53 919 726-8414	KEMPTON, LEO V. N1466 RED OAKS DR. LA CROSSE, WI 54601 U OF WISCONSIN	P AC 50 51 87 608 788-6123	WAY, JOHN EDWARD #3 MEDICAL PARK MOREHEAD CITY 28557 U OF MARYLAND	GS L 38 38 47 919 726-1136
FALLS, DARRYL LEE #9 MEDICAL PARK MOREHEAD CITY 28557 U OF NC	OBG AC 80 80 84 919 726-0107	MAJSTORAVICH, JOSEPH, JR. P. O. BOX 1317 MOREHEAD CITY 28557 U OF NC	OPH AC 74 74 79 919 726-0411	WRAY, RICHARD HENRY, III 15 MEDICAL PARK MOREHEAD CITY 28557 U OF NC	TS /GS AC 68 68 76 919 247-2101
FERRY, SENECA TAYLOR, II P. O. BOX 8 SMYRNA 28579 U OF MISSOURI	EM /FP AC 65 65 78 919 729-7831	MORRISON, LEON MACMILLAN 9 MEDICAL PARK MOREHEAD CITY 28557 U OF FLORIDA	OBG AC 75 76 80 919 247-4297	YURKO, JOHN EVANS 15 MEDICAL PARK MOREHEAD CITY 28557 MED COLL OF VA	GS AC 63 63 71 919 247-2101
FRESCA, VICTOR ATTILIO ROUTE #2 OAK BLUFF AT BRANDYWINE BAY MOREHEAD CITY 28557 LOYOLA U	GP /R AS 37 37 74 919 726-5587	OLIVER, GEORGE MOTLEY, JR. 6 MEDICAL PARK MOREHEAD CITY 28557 U OF NC	OBG AC 70 71 77 919 726-8016	ZETTL, MATTHEW LEE 15 MEDICAL PARK MOREHEAD CITY 28557 TULANE U	CD /IM AC 65 67 84 919 247-5426
		PURUSHOTHAMAN, C. V. #4 MEDICAL PARK MOREHEAD CITY 28557 CALICUT U			ORS AC 75 75 81 919 247-2101

18. CATAWBA COMPONENT SOCIETY

OFFICERS—President: Joel B. Miller, M.D. P.O. Drawer 38, Hickory 28603 (704 322-4140)
Secretary: William T. Thorwarth, M.D., P.O. Box 308, Hickory 28603 (704 322-2871)
Executive Secretary: Mrs. Margaret D. Lawing, 617 Gabriel Ave., Newton 28658 (704 464-2505)

ABERNETHY, HENRY WALTER 221 13TH AVE. PL. NW-FP HICKORY 28601 U OF NC	FP /IM AC 55 55 60 704 322-5800	BISHOPRIC, ALICE 1205 N. CENTER STREET HICKORY 28601 MED U OF SC	OBG AC 78 79 83 704 328-2901	BOYLES, LARRY WAYNE 420 N. CENTER ST. HICKORY 28601 U OF NC	N /IM AC 70 70 76 704 327-9869
BATES, PAUL KENNETH, JR. 240 18TH STREET CIRCLE, SE HICKORY 28602 U OF LOUISVILLE	PD AC 69 74 75 704 322-2550	BLANCHAT, TIMOTHY JOSEPH 11 13TH AVENUE, N. E. HICKORY 28601 WEST VA U	IM AC 74 74 78 704 322-3541	BOYLES, WAYNE FRANCIS ROUTE #3, BOX 155 HICKORY 28601 WASHINGTON U	FP AC 52 52 54 704 327-4745
BAUER, JOHN MONTGOMERY ROUTE #2, BOX 197 CONOVER 28613 LA STATE U	PTH AC 76 76 81 704 322-3821	BOOKER, JOHN PARKS, JR. P. O. BOX 308 HICKORY 28603 MED U OF SC	DR AC 67 67 74 704 322-2644	BRADSHAW, PETER H. 420 N. CENTER ST. HICKORY 28601 U OF NC	GS AC 82 83 87 704 327-9178
BAUM, JEFFREY ALAN 250 18TH ST. CIR. SE HICKORY 28602 U OF VIRGINIA	ORS AC 80 82 87 704 322-5172	BOOLS, JOHN C. 18 13TH AVE. NE PO BOX 308 HICKORY 28603 MED COLL OF OHIO	DR /NM AC 80 81 87 704 322-2871	BROOKS, THOMAS WILLIAM, III 521 THIRD AVENUE, N.W. HICKORY 28601 MED COLL OF GA	R /NM AC 62 62 71 704 322-2644
BELL, IRA EUGENE, JR. CATAWBA MEMORIAL HOSPITAL 810 FAIRGROVE CHURCH RD. SE HICKORY 28602 MED COLL OF GA	TR /R AC 45 50 51 704 322-0856	BOONE, EDWARD EVERETT ROUTE #2, BOX 199 CONOVER 28613 BOWMAN GRAY	IM AC 71 71 77 704 322-1128	BROWN, PAUL EUGENE 250 18TH ST. CIR. SE HICKORY 28602 U OF NC	ORS AC 69 69 75 704 322-5172

18. CATAWBA COMPONENT SOCIETY (Continued)

BYERLY, WESLEY GRIMES, JR. 24 SECOND AVENUE, N.E. HICKORY 28601 HARVARD	GS AC 52 52 58 704 328-2231	ESPEY, DAN, JR. 24 SECOND AVE., NE HICKORY 28601 U OF LOUISVILLE	FP AC 47 51 52 704 327-4453	GUTTLER, SANFORD DENNIS 1 TRADE STREET GRANITE FALLS 28630 TEMPLE U	FP AC 76 77 80 704 396-3136
CALDWELL, LAWRENCE M. II P. O. BOX 849 NEWTON 28658 U OF NC	GE /IM AC 71 71 77 704 464-4550	FAHL, JAMES COX 24 SECOND AVENUE, N. E. HICKORY 28601 HARVARD	GS AC 48 48 72 704 328-2231	HANCOCK, MILLIE PITTS 221 - 13TH AVENUE PLACE, N.W. HICKORY 28601 JOHNS HOPKINS	A /PD AC 62 65 67 704 322-1275
CALDWELL, LAWRENCE M., SR. 406 S. COLLEGE AVE. NEWTON 28658 U OF PENN	GP L/RT 32 32 34 704 464-2330	FEWELL, JOSEPH EURANUS, JR. 420 N. CENTER STREET HICKORY 28601 MED U OF SC	PS AC 74 79 84 704 322-8380	HARLAN, STEVEN DANE P. O. BOX 308 HICKORY 28603 U OF MISSOURI	R AC 76 76 81 704 322-2644
CAPOROSI, PAUL VINCENT RT. #2, BOX 195 CONOVER 28613 MED SCH-UMDNJ	OBG AC 65 70 75 704 322-4920	FITZ, THOMAS EDMUNDS 2133 9TH ST. NW HICKORY 28601 DUKE	IM /CD L/RT 50 53 57 704 324-6346	HARRIS, JEFFREY DAVISON HIGHWAY 127 NORTH P. O. BOX 6050 HICKORY 28601 U OF CINCINNATI	FP AC 77 78 81 704 495-8226
CHATHAM, SCOTT T. PO DRAWER 38 HICKORY 28603 U OF FLORIDA	OBG AC 76 76 87 704 322-4140	FITZGERALD, DWIGHT MELVIN ROUTE #2, BOX 196 CONOVER 28613 U OF ILLINOIS	GS /TS AC 69 76 78 704 322-8485	HARRIS, WILLIAM RIX P. O. BOX 2588 HICKORY 28603 U OF NC	OPH AC 56 56 64 704 322-2050
CHI, HONG YUP 105 N. MAIN AVENUE NEWTON 28658 MED COLL OF VA	FP AC 66 66 71 704 464-5424	FORSHEY, ALAN GRAY 105-B SOUTH MAIN NEWTON 28658 OHIO STATE U	FP AC 78 79 83 704 465-3928	HART, ROBERT WILLIAM, III 221 13TH AVENUE PL., NW HICKORY 28601 MED U OF SC	FP AC 65 66 67 704 322-5800
CHRISTENSEN, HARVEY EARL ROUTE #2, BOX 190 CONOVER 28613 STANFORD U	GS /TS AC 60 61 72 704 322-9105	FOSTER, JOHN THOMAS P. O. BOX 2588 HICKORY 28603 DUKE	OPH AC 62 62 68 704 322-2050	HEARON, BRIAN PAUL 230 18TH ST. CIRCLE SE HICKORY 28602 U OF MISSISSIPPI	CD /IM AC 77 77 85 704 324-4804
CLARKE, WILLIAM LOWE, JR 551 THIRD ST. NE HICKORY 28601 EMORY U	FP L/RT 41 47 48 704 327-4441	FRANKEL, NICHOLAS BOX 308 HICKORY 28603 MED COLL OF VA	DR /NR AC 75 77 87 704 322-2644	HODGES, JAMES ROBINSON 210 13TH AVENUE PLACE, N.W. HICKORY 28601 U OF MICHIGAN	FP AC 72 72 79 704 328-2941
CLONINGER, CHARLES EDGAR 9674 RIVIERA DR. SHERRILLS FORD 28673 U OF MARYLAND	FP L/RT 41 41 43 704 478-3155	FRIEDMAN, EDNA CHARNEY 5161 COLLINS AVENUE, APT. 412 MIAMI BEACH, FL 33140 U OF ZURICH	PD /AN L/RT 39 43 57 305 864-2880	HUFFMAN, ALLEN WILLIAM, JR. 1205 N. CENTER STREET HICKORY 28601 U OF NC	OBG AC 67 67 76 704 328-2901
COLEMAN, LESTER L., JR. P. O. BOX 376 HILDEBRAN 28637 BOWMAN GRAY	FP AC 50 50 52 704 397-3522	FROEDGE, JERRY KEITH 240 18TH STREET CIRCLE, SE HICKORY 28602 U OF LOUISVILLE	PD AC 69 70 75 704 322-2550	HUGGINS, MICHAEL B. 610 4TH AVE. ,NE CONOVER 28613 U OF NC	GS /VS AC 81 86 87 704 322-9105
COOK, LELAND JAMES 420 N. CENTER ST. HICKORY 28601 U OF KENTUCKY	GS AC 79 80 85 704 327-9178	GACHET, FRED SMITH, JR. 1205 N. CENTER STREET HICKORY 28601 JOHNS HOPKINS	GYN AC 57 65 65 704 328-2901	ISENHOWER, JOSEPH ANDREW 24 SECOND AVENUE, N.E. HICKORY 28601 BOWMAN GRAY	FP AC 54 54 55 704 328-2231
CUTCHIN, JOSEPH HENRY, JR. P. O. BOX 67 SHERRILLS FORD 28673 DUKE	GP L/RT 42 43 43 704 478-2431	GAITHER, JAMES COMER ROUTE #2, BOX 199 CONOVER 28658 WASHINGTON U	IM AC 61 62 68 704 322-1128	JAMES, JOHN CLAY ROUTE #3, BOX 436 MAIDEN 28650 BOWMAN GRAY	GP AC 57 57 62 704 428-9740
DAVIS, JOHN WOODROW 24 SECOND AVENUE, N. E. HICKORY 28601 JEFFERSON	FP AC 46 47 50 704 328-2231	GARDNER, WILLIAM RONALD 420 N. CENTER STREET HICKORY 28601 U OF MIAMI	GS /VS AC 63 64 73 704 327-9178	JOHNSON, ANDREW FINLEY 1370 5TH ST. CIRCLE, NW HICKORY 28601 U OF TENNESSEE	U AC 67 67 75 704 256-2185
DE LA GARZA, CARLOS A. 24 SECOND AVE., NE HICKORY 28601 U OF COLORADO	FP AC 76 78 85 704 328-2231	GERRARD, EDWARD ROLLAND 1202 N. CENTER STREET HICKORY 28601 BAYLOR	U AC 67 67 75 704 322-4340	JOHNSON, THOMAS GARY 132 35TH AVE., NW HICKORY 28601 MED U OF SC	DR AC 74 76 85 704 327-6342
DEATON, HUGO L. 420 N. CENTER STREET HICKORY 28601 COLUMBIA U	GS /TS AC 57 58 64 704 327-9178	GOINS, JAMES ROBERT 210 13TH AVENUE PLACE, NW HICKORY 28601 U OF NC	OBG AC 77 78 85 704 322-3017	KESSLER, J. PATRICK 912 SECOND ST., NE HICKORY 28601 OHIO STATE U	AN AC 66 67 67 704 322-0870
DEPERCZEL, JOHN LESLIE 521 11TH AVE. CIRCLE NW HICKORY 28601 LOYOLA U	ORS /GP AC 72 73 81 704 324-2800	GOODIN, THOMAS ELLIOTT, III 701 5TH AVE., NE CONOVER 28613 U OF TENNESSEE	AN AC 66 67 67 704 322-0870	KIM, TONG SU 612 THIRD AVENUE, NE HICKORY 28601 SEOUL NATL U	FP AC 51 54 54 704 328-2231
DICKINSON, MICHAEL WRIGHT 420 N. CENTER STREET HICKORY 28601 U OF VIRGINIA	GS /CDS AC 75 75 81 704 327-9178	GOODMAN, BENJAMIN WARREN 24 SECOND AVENUE, N. E. HICKORY 28601 U OF TENNESSEE	FP AC 51 54 54 704 328-2231	KING, HARRY LEE PO BOX 2186 HICKORY 28603 U OF VIRGINIA	OPH L/RT 23 31 32 704 327-8526
DILLON, DANIEL CHRISTIAN 11 13TH AVENUE, N. E. HICKORY 28601 INDIANA U	IM /GE AC 68 68 75 704 322-1068	GRIFFIN, HAROLD WALKER 1610 10TH ST. DR. NW HICKORY 28601 EMORY U	OPH AC 59 60 63 704 322-6040	KING, WALTER LEE PO BOX 2186 HICKORY 28603 U OF VIRGINIA	OPH AC 67 67 72 704 322-5120
DIXON, ROBERT ROSS 240 18TH ST. CIRCLE, SE HICKORY 28602 BOWMAN GRAY	PD AC 68 68 75 704 322-2550	GRIFFIN, RICHARD MADISON 27 13TH AVENUE, N.E. HICKORY 28601 EMORY U	OPH AC 59 60 63 704 322-6040	KURAD, JOSEPH WARD 1202 N. CENTER STREET HICKORY 28601 U OF MARYLAND	U AC 60 67 67 704 322-4340
EARL, JOHN KEITH 210 13TH AVE. PLACE, N.W. HICKORY 28601 U OF OKLAHOMA	FP AC 72 73 77 704 328-2941	GRIGSBY, HARDIN BLAND P. O. BOX 310 CONOVER 28613 INDIANA U	GYN AC 55 55 66 704 328-8146	LEFLER, WADE HAMPTON, JR. P. O. BOX 2588 HICKORY 28601 BOWMAN GRAY	PTH AC 57 67 67 704 322-3821
ENNIS, GEORGE ELLIOTT 912 SECOND STREET, N. E. HICKORY 28601 U OF NC	IM /HEM AC 58 58 65 704 328-2381	GUARINO, GUY JOSEPH ROUTE #2, BOX 197 CONOVER 28613 LA STATE U			

18. CATAWBA COMPONENT SOCIETY (Continued)

LEONARD, WALTER EVAN 130 27TH STREET, S.W. HICKORY 28601 BOWMAN GRAY	FP AC 53 53 54 704 322-1153	OWENS, FREDERICK THOMAS 912 SECOND STREET, N.E. HICKORY 28601 MED COLL OF GA	PUD /IM AC 70 71 77 704 322-8265	SPEES, LYNN BEECHER THE CHILDHEALTH CENTER 1375 4TH ST. DR. NW HICKORY 28601 BOWMAN GRAY	PD AC 75 75 73 704 322-4453
LEWIS, MICHAEL R. PO BOX 629 HUDSON 28638 JEFFERSON	FP AC 72 73 87 704 728-4875	OWSLEY, JAMES HAROLD P. O. BOX 308 HICKORY 28601 U OF ALABAMA	R /NM AC 57 58 64 704 322-2644	STEG, BRIAN DAVID 230 18TH ST. CIRCLE SE HICKORY 28602 CASE WESTERN RES	CD /CD AC 78 79 86 704 324-4804
LONG, WILLIAM EVERETT P. O. BOX 1239 CONOVER 28613 U OF NC	FP AC 72 72 76 704 464-3821	PARKER, JAMES LEE 850-H 8TH ST. NE HICKORY 28601 U OF NC	PTH AC 63 63 71 704 322-3821	STEVENS, ROBERT BRUCE 3430 5TH ST. DRIVE, NW HICKORY 28601 U OF CINCINNATI	AN AC 78 83 86 704 327-7443
LOVIN, VICKIE WEST RT. #2, BOX 195 CONOVER 28613 BOWMAN GRAY	OBG AC 81 82 86 704 322-4920	PEELER, FORREST EDWARDS ROUTE #3, BOX 436 MAIDEN 28650 MED COLL OF VA	FP AC 50 51 51 704 428-2446	STEWART, ROY ALLEN P. O. BOX 970 NEWTON 28658 EMORY U	OPH L 40 46 48 704 464-0982
LYNN, ARTHUR SIMONTON, JR. ROUTE #2, BOX 199 CONOVER 28613 U OF NC	IM /CD AC 62 62 68 704 322-1128	PEKMAN, WILLIAM MARTIN 250 18TH ST. CIRCLE, SE HICKORY 28602 U OF CHICAGO	HS /ORS AC 78 79 85 704 322-5172	STUTESMAN, ANDREA A. 343 SECOND ST. NW HICKORY 28601 LSU-SHREVEPORT	PM AC 83 83 87 704 322-1300
MACLAUCHLIN, WILLIAM T. P. O. DRAWER 1239 CONOVER 28613 MED U OF SC	FP L/RT 41 46 47 704 464-3821	PETERS, STANLEY 250 18TH ST. CIR. SE HICKORY 28602 KING EDWARD COLL	ORS AC 64 64 75 704 322-5172	STUTESMAN, JAMES L. 343 SECOND ST. NW HICKORY 28601 U OF TX-HOUSTON	PM AC 83 83 87 704 322-1300
MARCUS, RICHARD WM. 600 FIRST PLAZA 1985 TATE BLDG. SE HICKORY 28601 U OF TEXAS	N AC 79 79 86 704 328-5500	PETERSON, ROBERT LIND 210 13TH AVENUE PLACE, N.W. HICKORY 28601 U OF WASHINGTON	OBG AC 71 72 79 704 322-3018	SWEENEY, CHARLOTTE A. RT. #2, BOX 195 CONOVER 28613 EAST CAROLINA U	OBG AC 83 83 83 704 322-4920
MCCLOSKEY, SCOTT MICHAEL 420 N. CENTER STREET HICKORY 28601 U OF MARYLAND	NS AC 75 77 81 704 327-9740	PIERCE, ROBERT JAMES, JR. 1202 N. CENTER STREET HICKORY 28601 U OF NC	U AC 64 64 71 704 322-4340	SZABO, JANET ROSE P. O. BOX 308 HICKORY 28603 U OF NC	R AC 79 85 86 704 322-2644
MCDUGAL, EMORY GARY RT. #2, BOX 190 CONOVER 28613 U OF SOU ALA	VS AC 77 82 84 704 322-9105	POLLOCK, JOSEPH J. 912 SECOND ST., NE HICKORY 28601 GEO WASHINGTON U	PUD /IM AC 58 60 87 704 322-8265	TART, DAVID E. 24 SECOND AVENUE, N.E. HICKORY 28601 U OF NC	D /IM AC 74 74 79 704 328-6185
METZGER, GEORGE ANDREW P. O. BOX 1020 322 MULBERRY ST. SW LENOIR 28645 U OF MARYLAND	IM 72 72 78 704 758-5544	PRUITT, JERRY L. 24 SECOND AVENUE, N.E. HICKORY 28601 BOWMAN GRAY	D AC 71 71 76 704 328-6185	TAYLOR, STEVEN BRUCE RT. #3, BOX 331, STE. 22 FAIRGROVE PROF. BLDG. HICKORY 28601 BOSTON U	R AC 81 82 87 704 327-6342
MICHAEL, DOUGLAS WORTH PO BOX 1239 CONOVER 28613 JEFFERSON	FP AC 79 81 84 704 464-3821	REED, CHARLES NATHAN 24 SECOND AVE., NE HICKORY 28601 U OF NC	D /IM AC 79 80 85 704 328-6185	TAYLOR, WILLIAM RILEY PO BOX 3710 HICKORY 28603 U OF ALABAMA	ON /IM AC 78 78 85 704 324-9550
MIKUS, KEVIN PETER PO BOX 1239 CONOVER 28613 WAYNE STATE U	FP AC 82 84 86 704 464-3821	RILEY, WILLIAM JOSEPH 605 W. 25TH STREET NEWTON 28658 MED COLL OF VA	GS AC 55 60 62 704 464-5340	THOMPSON, WILLIAM CECIL, III 210 13TH AVE. PL., NW HICKORY 28601 WEST VA U	FP AC 78 79 82 704 322-7170
MILLER, JOEL BYRON P. O. DRAWER 38 HICKORY 28601 BOWMAN GRAY	OBG AC 74 74 80 704 322-4140	ROBERTSON, KENT ALAN 420 N. CENTER ST. HICKORY 28601 LA STATE U	AN /IM AC 76 76 85 704 324-3369	THORNTON, JACK WALKER P. O. DRAWER 2484 HICKORY 28601 U OF MISSISSIPPI	OTO /HNS AC 64 64 71 704 322-3725
MORETZ, JOSEPH ALFRED, III 250 18TH ST. CIRCLE, SE HICKORY 28602 EMORY U	ORS AC 72 73 81 704 322-5172	ROSS, JAMES MILLER P. O. BOX 490 CLAREMONT 28610 U OF TENNESSEE	FP AC 63 65 65 704 459-7324	THORWARTH, WILLIAM T., JR. CATAWBA RADIOLOGICAL ASSOC. P. O. BOX 308 HICKORY 28603 DARTMOUTH U	DR /NM AC 75 76 84 704 322-2871
MOREWITZ, NANCY D. 420 N. CENTER ST. HICKORY 28601 EASTERN VA	N AC 81 82 87 704 327-0553	RUDISILL, ELBERT ANDREW, JR. 133 FIRST AVE., SE HICKORY 28601 BOWMAN GRAY	FP AC 77 77 81 704 322-5915	TRADO, CHARLES ELEMENDORF IKERD BUILDING 612 THIRD AVE., NE HICKORY 28601 U OF NC	P /GP AC 59 59 72 704 324-9900
NELSON, JOHN DOUGLAS 3345 4TH ST. BLVD. NW HICKORY 28601 LSU-SHREVEPORT	FP AC 83 83 88 704 256-9853	SANTOSO, RUDY ADRIAN ROUTE #3, BOX 331 HICKORY 28602 PADJADJARAN U	N /P AC 71 74 83 704 324-4143	VOGEL, JOSEPH VINCENT ROUTE #2, BOX 197 CONOVER 28613 DUKE	PTH AC 77 82 85 704 322-3821
NIELAND, ROBERT BRUCE 24 SECOND AVENUE, N. E. HICKORY 28601 U OF IOWA	FP AC 69 70 76 704 328-2231	SCHMITT, PHILIP JULIAN PO BOX 9149 HICKORY 28603 GEORGETOWN U	P /CHP AC 80 83 85 704 327-7888	WARREN, THOMAS LARRY RT. #2, BOX 195 CONOVER 28613 U OF ALABAMA	OBG AC 63 63 71 704 322-4920
O'CONNOR, ROBERT DARRELL FAIRGROVE CHURCH ROAD P. O. DRAWER 2484 HICKORY 28601 MED COLL OF VA	OTO AC 60 67 67 704 322-3725	SCHULTEN, HERBERT JOHN 912 SECOND ST. NE HICKORY 28601 U OF MARYLAND	ORS AC 70 70 79 704 324-2800	WELCH, CARL LESTER 221 13TH AVE. PL. NW HICKORY 28601 MED COLL OF GA	FP AC 65 68 68 704 322-5800
OBERLIN, DELOY CHARLES ROUTE #3, BOX 690 NEWTON 28658 STANFORD U	AN /EM AC 76 78 81 704 322-6070	SEAGLE, LEE MARCUS, JR. 133 FIRST AVENUE, S.E. HICKORY 28602 DUKE	FP AC 57 57 61 704 322-5915	WHALEY, JAMES DAVANT 138-A S. BATTERY CHARLESTON, SC 29401 MED U OF SC	U L/RT 25 25 36 803 722-9998
ORLOWSKI, RICHARD 225 18TH ST. SE P. O. BOX 3710 HICKORY 28603 WASHINGTON U	ON /HEM AC 78 83 84 704 324-9550	SIMS, WILLIAM LEONARD 420 N. CENTER ST. HICKORY 28601 U OF KENTUCKY	NS AC 79 80 85 704 324-9609	WILLIAMS, LARRY THOMAS PO BOX 1362 HICKORY 28603 U OF NC	AN AC 79 81 86 704 322-0870

18. CATAWBA COMPONENT SOCIETY (Continued)

WILLIAMS, RANDAL JAMES P. O. BOX 2588 HICKORY 28603 DUKE	OPH AC 69 69 78 704 322-2050	WISE, JOHN EDNEY 1624 N. CENTER STREET HICKORY 28601 U OF NC	IM AC 60 60 67 704 328-2094	WRIGHT, ELIZABETH ANN 420 N. CENTER ST. HICKORY 28601 U OF KENTUCKY	N AC 67 68 85 704 327-4419
WILLIAMS, ROBERT CYRUS, JR. FAIRGROVE CHURCH ROAD BOX 2484 HICKORY 28603 MED U OF SC	OTO AC 71 72 79 704 322-3725	WOTRING, JAMES WILLIAM, JR. P. O. BOX 38 HICKORY 28601 MED COLL OF VA	OBG AC 61 62 68 704 322-4140	YOUNG, WILLIAM LEE, III 210 13TH AVENUE PLACE, N.W. HICKORY 28601 U OF VIRGINIA	FP AC 74 74 79 704 328-2941
WINFIELD, HEBER GREY, III 250 18TH ST. CIRCLE, SE HICKORY 28602 U OF NC	ORS AC 70 70 76 704 322-5172				

19. CHATHAM COMPONENT SOCIETY

OFFICERS—President: Byron J. Hoffman, Jr., M.D., P.O. Box 689, Siler City 27344 (919 663-3360)
Secretary: John W. Sanders, M.D., P.O. Box 689, Siler City 27344 (919 663-3360)

BROWN, WALTER JOHN 79 TRUNDLE RDG.FEARRINGTON PITTSBORO 27312 BERLIN U	PH /FP AS 33 36 80 919 933-9331	HOFFMAN, BYRON JAY, JR. 421 N. HOLLY STREET SILER CITY 27344 EMORY U	IM AC 76 77 81 919 663-3360	MCMANUS, KEITH ERIC 401 N. IVY AVE. SILER CITY 27344 U OF NC	FP AC 84 86 81 919 663-2761
DYKERS, JOHN REGINALD, JR. P. O. BOX 565 422 N. IVY AVENUE SILER CITY 27344 U OF NC	FP AC 60 60 78 919 663-2931	HOLT, JAMES BEATTY ROUTE #5, BOX 40 PITTSBORO 27312 U OF NC	FP AC 77 77 78 919 542-3251	WHITE, FRANKLIN DELANO P. O. BOX 567 SILER CITY 27344 U OF NC	FP AC 59 59 61 919 663-2761

20. CHEROKEE (GRAHAM) COMPONENT SOCIETY

OFFICERS—President: *Mario M. Seigle, M.D., 505 Peachtree St., Murphy 28906 (704 837-2672)
Secretary: *Floyd E. Blaylock, M.D., Valley River Clinic, Andrews 28901 (704 321-4510)
 *1987 Officers, 1988 Officers not reported

BLALOCK, FLOYD E., JR. VALLEY RIVER CLINIC ANDREWS 28901 U OF TENNESSEE	FP /GP AC 51 53 54 704 321-4510	MUGHARBIL, ZIYAD H. MURPHY MEDICAL CENTER PHYSICIANS BLDG. MURPHY 28906 AMER.U OF BEIRUT	U AC 80 82 87 704 837-7513	TURITTO, LOUIS ANTHONY 2 WHITAKER LANE ANDREWS 28901 U OF BOLOGNA	GS AC 68 71 85 704 321-5010
MITCHELL, BRIAN P. PO BOX 158 MURPHY 28906 U OF PITTSBURGH	IM AC 74 76 87 704 837-2696	STEPHENS, JAMES EDWARD P. O. BOX 516 ROBBINSVILLE 28771 MED COLL OF VA	GP AC 60 61 61 704 479-3392	WELLS, HELEN LEWIS 503 PEACHTREE STREET MURPHY 28906 BOWMAN GRAY	GP AC 46 47 48 704 837-2515

21. CHOWAN-PERQUIMANS COMPONENT SOCIETY

OFFICERS—President: Edward G. Bond, M.D., Chowan Medical Center, Edenton 27932 (919 482-2116)
Secretary: David O. Wright, M.D., Chowan Medical Center, Edenton 27932 (919 482-2116)

BAKER, BERNIE B., SR. EDENTON OB-GYN CENTER,PA P. O. BOX 990 EDENTON 27932 DUKE	OBG AC 65 65 72 919 782-7407	DEVINE, LEIBERT EARL P. O. BOX 298 EDENTON 27932 OHIO STATE U	FP AC 75 75 80 919 482-7774	PERRY, JOHN CHRISTOPHER P. O. BOX 429 EDENTON 27932 U OF FLORIDA	FP AC 79 80 83 919 482-2116
BAKER, MARVIN I. PO BOX 1047 EDENTON 27932 U OF FLORIDA	R /NM AC 60 60 83 919 482-8446	FRANCIS, JOHN ARLIE PO BOX 990 EDENTON 27932 WEST VA U	OBG AC 71 71 85 919 482-7407	POTOCKI, LANCE DEWITT PO BOX 429 EDENTON 27932 U OF MARYLAND	FP AC 81 81 85 919 482-2116
BLAKEMORE, WILLIAM STEPHEN 101 MARK DR. EDENTON 27932 ROYAL CO-IRELAND	OPH AC 79 80 84 919 482-7471	HASKETT, JOSEPH RAY, JR. EDENTON INTERNAL MED. PA PO BOX 2012 EDENTON 27932 U OF NC	IM AC 76 76 82 919 482-5171	VOIGT, WARD LANDIS CHOWAN MEDICAL CENTER EDENTON 27932 U OF NC	GS AC 63 63 70 919 482-2116
BOND, EDWARD GRIFFITH CHOWAN MEDICAL CENTER EDENTON 27932 U OF VIRGINIA	IM /CD AC 48 48 56 919 482-2116	LANE, ROBERT EARL 118 W. MARKET ST. HERTFORD 27944 TULANE U	FP AC 67 67 74 919 426-5711	WRIGHT, DAVID ORLO CHOWAN MEDICAL CENTER EDENTON 27932 BOWMAN GRAY	FP AC 58 58 63 919 482-2116

23. CLEVELAND COMPONENT SOCIETY

OFFICERS—President: Martin W. Stallings, M.D., Kings Mountain Hospital, Kings Mountain 28086 (704 739-2521)
Secretary: Jess A. Powell, M.D., 201 Grover St., Shelby 28150 (704 487-3141)

ADAMS, CHARLES HUBERT 103 WATTERSON STREET KINGS MOUNTAIN 28086 U OF VIRGINIA	FP AC 58 59 59 704 739-3681	BANKOV, ROBERT WILLIAM PO BOX 2366 SHELBY 28150 U OF SOU ALA	EM AC 78 82 86 704 872-3339	BARKER, DAVID BERT 808 N. WASHINGTON ST. SHELBY 28150 U OF TENNESSEE	U AC 71 71 80 704 484-0117
---	--	--	--	--	---

23. CLEVELAND COMPONENT SOCIETY (Continued)

BARRIER, CECIL LEE, SR.	GP AC	DAY, PHILIP MARK	GP AC	LAMPLEY, CHARLES GORDON, III	OBG AC
ROUTE #3, BOX 105	59 59 60	198 LAKESIDE DR.	82 83 86	110 W. GROVER ST.	62 62 70
LAWNDALE 28090		GROVER 28073		SHELBY 28150	
U OF NC	704 538-7891	MICHIGAN ST U	704 937-7905	BOWMAN GRAY	704 487-5258
BARRINGER, MICHAEL LYNN	GS AC	EVANS, OTIS DRUELL, JR.	OBG AC	LANEY, ROBERT GAFFNEY, III	GS AC
904 MEADOWBROOK LANE	76 76 84	110 W. GROVER STREET	51 52 53	809 N. LAFAYETTE ST.	81 82 80
SHELBY 28150		SHELBY 28150		SHELBY 28150	
U OF NC	704 482-6359	U OF MARYLAND	704 487-5258	U OF NC	704 487-8591
BEUTEL, WILLIAM DEAN	GS AC	FERRELL, PAUL BRENT	RHU /IM AC	LANGLEY, CHARLES PITMAN, III	IM AC
801 W. KING ST.	79 82 86	808 SCHENCK ST.	75 75 84	808 SCHENCK STREET	75 76 79
KINGS MOUNTAIN 28086		SHELBY 28150		SHELBY 28150	
U OF ILLINOIS	704 734-0221	U OF NC	704 482-1482	U OF NC	919 482-1482
BINION, GERALD RAY	OBG AC	GANGOO, ABDUL RASHID	ID AC	LEE, JOSEPH, III	FP AC
110 W. GROVER STREET	62 62 74	810 W. KING STREET	68 76 83	711 W. MOUNTAIN STREET	63 64 65
SHELBY 28150		KINGS MOUNTAIN 28086		KINGS MOUNTAIN 28086	
U OF TEXAS-SW	704 487-5258	SRINAGAR MED SCH	704 739-8946	MED U OF SC	704 739-5456
BLACKBURN, THOMAS REID	DR AC	GEBEL, EMILE LOUIS	OPH AC	LUDWIG, GARY KEITH	PTH /FOP AC
PO BOX 1148	65 65 75	1413 N. LAFAYETTE STREET	62 62 67	104 BROOKDALE ROAD	72 73 82
SHELBY 28150		SHELBY 28150		SHELBY 28150	
BOWMAN GRAY	704 487-3141	DUKE	704 482-6767	U OF MICHIGAN	704 487-3147
BOMBENGER, JAMES JOHN	PUD /IM AC	GENTRY, JOHN BILLY	PTH AC	MANGUM, GARY LIONELL	ORS AC
ROUTE #3, BOX 774-B	73 74 84	307 S. POSTON STREET	59 59 67	202 E. GROVER ST.	67 67 78
CONNELLY SPRINGS 28612		SHELBY 28150		SHELBY 28150	
U OF ILLINOIS	704 397-6147	U OF NC	704 482-0241	BOWMAN GRAY	704 482-7311
BOWLES, RICHARD MORGAN	PD AC	GILLIATT, CECIL LEE, JR.,	PD AC	MAYBIN, RICHARD MADDEN	GP /HYP AC
101 GROVER STREET	52 53 55	101 GROVER STREET	62 63 68	ROUTE #2	46 46 52
SHELBY 28150		SHELBY 28150		LAWNDALE 28090	
DUKE	704 482-1435	HARVARD	704 482-1435	MED U OF SC	704 538-8532
BOWLING, RICHARD FRANKLIN	GS AC	GOSSETT, ROBERT PETER	U AC	MAYSE, RAY SCOTT	IM AC
P. O. BOX 638	53 53 61	1001 N. WASHINGTON ST.	77 80 83	707 W. KING STREET	76 79 80
SHELBY 28150		SHELBY 28150		KINGS MOUNTAIN 28086	
BOWMAN GRAY	704 487-8591	U TX-SAN ANTONIO	919 482-2011	BOWMAN GRAY	704 739-9776
BOYETTE, DOUGLAS RAY	CD /IM AC	HAMRICK, JOHN CARL	GS L/RT	MCGILL, JOHN CHARLES	FP AC
808 SCHENCK STREET	75 75 80	P. O. BOX 668	35 35 40	PO BOX 1309	46 50 52
SHELBY 28150		SHELBY 28150		KINGS MOUNTAIN 28086	
BOWMAN GRAY	704 482-1482	U OF MARYLAND	704 487-5132	VANDERBILT U	704 739-3681
BREWER, DANIEL EUGENE	FP AC	HAMRICK, JOHN CARL, JR.	ORS AC	MCKNIGHT, RODNEY LEONARD	AN AC
1198 WYKE RD.	84 85 82	110 W. GROVER STREET	67 67 76	P. O. BOX 957	55 55 56
SHELBY 28150		SHELBY 28150		SHELBY 28150	
BOWMAN GRAY	919 487-1148	BOWMAN GRAY	704 487-1177	U OF NC	704 434-9671
BRIDGES, THOMAS HOWARD	EM AC	HANNAH, FRANK THOMAS	OPH AC	MCMURRAY, CLARENCE MCCAIN	IM AC
P. O. BOX 1706	65 65 67	313 S. WASHINGTON STREET	64 64 71	808 SCHENCK STREET	46 46 53
SHELBY 28150		SHELBY 28150		SHELBY 28150	
U OF NC	704 487-3134	DUKE	704 482-0696	BOWMAN GRAY	704 482-1482
BRIGGS, DOUGLAS MERRILL	FP AC	HARDEMAN, RICHARD AUSTIN	FP AC	MCMURRY, AVERY WILLIS	GS AC
1198 WYKE ROAD	78 79 82	616 E. MARION STREET	60 60 82	207 LEE STREET	45 45 51
SHELBY 28150		SHELBY 28150		SHELBY 28150	
DOWNSTATE ME CTR	704 487-1148	EMORY U	704 487-6338	JEFFERSON	919 482-6359
BURRUS, JAMES HENRY	GYN AC	HARRELL, WARREN LAMAR, JR.	R AC	MILAM, WILLIAM FREER	PTH AC
P. O. BOX 1256	57 57 64	1237 BROOKWOOD DRIVE	58 67 67	PO BOX 1268	66 66 79
SHELBY 28150		SHELBY 28150		SHELBY 28150	
U OF NC	704 482-2486	EMORY U	704 482-3880	OHIO STATE U	704 487-3147
CARTER, NUMA RICHARDSON, JR.	FP AC	HARRIS, THOMAS REGINALD	PUD /IM AC	MILLER, DONALD STUART	ND /ON AC
512 DIXON BOULEVARD	50 50 57	808 SCHENCK STREET	55 56 57	1405-B N. LAFAYETTE STREET	62 62 78
SHELBY 28150		SHELBY 28150		SHELBY 28150	
BOWMAN GRAY	704 487-7540	U OF TENNESSEE	704 482-1482	HARVARD	704 482-8936
CHAMBERLAIN, STEVEN A.	OBG AC	HUNTER, JOHN BALDWIN	GS /GP L/RT	MILLER, ROBERT MICHAEL	FP AC
110 W. GROVER ST.	83 84 87	618 E. MARION STREET	28 32 47	1198 WYKE ROAD	67 68 76
SHELBY 28150		SHELBY 28150		SHELBY 28150	
MED U OF SC	704 487-5258	NEW YORK U	704 487-6022	U OF TENNESSEE	704 487-1148
CHEANEY, RUSSELL ALAN	AN AC	INJEJIKIAN, JIRAIR ALEXAN	TS /GS AC	MINUS, JOSEPH SHEPPARD	PD AC
300 GROVER ST.	82 85 86	709 GROVER STREET	61 61 70	101 GROVER STREET	65 65 71
SHELBY 28150		SHELBY 28150		SHELBY 28150	
U OF LOUISVILLE	704 482-5716	AMER. U OF BEIRUT	704 482-8371	DUKE	704 482-1435
CHEN, KEH-FANG	OBG AC	JOHNSON, PAUL D.	OBG AC	MUENCH, LAURENCE WALTER	AN AC
604 W. KING ST.	68 72 78	110 W. GROVER ST.	83 85 87	310 DOWNING DR.	62 62 84
KINGS MOUNTAIN 28086		SHELBY 28150		KINGS MOUNTAIN 28086	
TAIWAN U-TAIPEI	704 739-8059	U OF TENNESSEE	704 487-5258	WASHINGTON U	704 739-4683
CLONINGER, ROWELL CONNOR	GS L/RT	JONES, CRAIG S.	GS L	NAMAN, CARL HAWKINS	GS /VS AC
309 WESTFIELD RD.	44 45 51	4051 GULFSHORE BLVD. N'PH-205	36 36 38	1200 HARDIN DRIVE	67 68 75
SHELBY 28150		NAPLES, FL 33940		SHELBY 28150	
U OF MARYLAND	704 487-8591	INDIANA U	813 261-5609	MED COLL OF GA	704 482-6359
COLLINS, WARREN JAMES	GYN AC	JONES, ROBERT S., JR.-BOBBY	FP AC	PEARSON, LAWRENCE H.	D AC
105 GROVER STREET	48 57 67	421 W. MARION ST.	81 81 79	700 N. LAFAYETTE ST.	79 80 83
SHELBY 28150		SHELBY 28150		SHELBY 28150	
DUKE	704 482-2486	EAST CAROLINA U	704 484-8001	U OF NC	704 484-0464
CONDIE, SCOTT DOUGLAS	FP AC	JONES, ROBERT SPURGEON	FP AC	PLONK, GEORGE WEBB	GS L/RT
1198 WYKE ROAD	75 78 82	113 GROVER STREET	54 54 55	902 CRESCENT CIRCLE	44 45 53
SHELBY 28150		SHELBY 28150		KINGS MOUNTAIN 28086	
U OF ILLINOIS	704 487-1148	U OF NC	704 487-5228	JEFFERSON	704 739-2272
CROW, JOHN BUREN	FP AC	KELLY, JOHNSON HALL	U AC	POTTS, JAMES MARTIN	GS /TS AC
591 CROW ROAD	48 49 50	1001 N. WASHINGTON ST.	78 78 84	809 N. LAFAYETTE STREET	73 73 79
SHELBY 28150		SHELBY 28150		SHELBY 28150	
BOWMAN GRAY	704 487-7052	BOWMAN GRAY	704 482-2011	MED COLL OF GA	919 487-8591

23. CLEVELAND COMPONENT SOCIETY (Continued)

POWELL, JESS AVERETTE, III 201 GROVER STREET SHELBY 28150 U OF TENNESSEE	DR AC 73 75 79 704 487-3141	SPRAGINS, JOEL FRED 808 N. SCHENCK STREET SHELBY 28150 U OF ARKANSAS	GE /IM AC 64 64 73 704 482-1482	WALKER, JOSEPH EDWARDS EDWARD CLINIC RT. #3, BOX 146 LAWNDAL 28090 DUKE	FP /AI AC 60 62 63 704 538-8616
REYNOLDS, JOHN LAURENCE 404 MELODY LANE SHELBY 28150 AUTONOMA UNIV	AN AC 80 86 87 704 482-5716	STALLINGS, MARTIN WADE 108 EDMONT DR. KINGS MOUNTAIN 28086 U OF ALABAMA	PD AC 69 70 76 704 739-2521	WASHBURN, HARRILL GENE P. O. BOX 815 BOILING SPRINGS 28017 BOWMAN GRAY	FP AC 58 59 63 704 434-2281
ROBINSON, SAM 106 EDMONT DRIVE KINGS MOUNTAIN 28086 U OF TENNESSEE	GS /TS AC 53 65 66 704 739-4749	STIDHAM, GREGORY ALAN 1198 WYKE RD. SHELBY 28150 MED COLL OF VA	FP AC 83 84 86 704 487-1148	WASHBURN, WILLARD WYAN P. O. BOX 795 BOILING SPRINGS 28017 JEFFERSON	GP /FP L/RT 43 43 47 704 434-7910
RUTLEDGE, JOHN HOYLE, III 105 GROVER ST. SHELBY 28150 U OF KENTUCKY	GYN AC 74 74 86 704 482-2486	STORY, WILLIAM AUGUSTUS 201 GROVER STREET SHELBY 28150 EMORY U	R /IM AC 58 66 67 704 487-0003	WEDDLE, RICHARD ANDREW 808 SCHENCK ST. SHELBY 28150 INDIANA U	GE /IM AC 81 81 86 704 482-1482
SARAZEN, PAUL MARK, JR. 101 GROVER STREET SHELBY 28150 DUKE	PD AC 48 50 55 704 482-1435	SURRATT, WILSON FARRIS 507 COUNTRY CLUB ACRES SHELBY 28150 MED COLL OF GA	AN AC 83 85 86 704 482-5716	WEITZNER, HOWARD B. 608 W. KING ST. STE. 3 KINGS MOUNTAIN 28086 NEW YORK MED COL	OBG AC 59 60 88 919 734-0099
SECREST, ALVIN JACKSON, JR. 1001 N. WASHINGTON STREET SHELBY 28150 BOWMAN GRAY	U AC 63 63 71 704 482-2011	TOFFOLO, RUDOLF RONALD GOLD RUN CT., RT. 5, BOX 87 KINGS MOUNTAIN 28086 ST U OF NY-BUFF	R AC 57 58 84 704 739-3712	WILLIAMS, JACK DEAN 209-B LEE ST. PO BOX 1968 SHELBY 28150 DUKE	OTO AC 65 65 73 704 487-9088
SINCOX, FRANCIS JOHN, JR. PO BOX 1309 KINGS MOUNTAIN 28086 EMORY U	FP AC 58 63 64 704 739-3681	VAN FLEET, WILLIAM VERNON 802 N. LAFAYETTE ST. SHELBY 28150 GEO WASHINGTON U	P /CHP AC 61 65 79 704 482-7395	ZUCKER, JOSEPH 107 W. KING ST. KINGS MOUNTAIN 28086 DALHOUSIE U	ORS AC 79 80 84 704 739-0151

24. COLUMBUS COMPONENT SOCIETY

OFFICERS—President: Samuel N. Wheatley, M.D., Baldwin Woods, Whiteville 28472 (919 642-3294)

Secretary: Ron Walters, M.D., 200 Jefferson St., Whiteville 28472

BAREFOOT, WILLIAM F. P. O. BOX 573 WHITEVILLE 28472 TULANE U	GS L/RT 34 34 35 919 642-3256	FLOYD, ANDERSON GAYLE 302 N. THOMPSON STREET WHITEVILLE 28472 MED U OF SC	GP L/RT 37 37 39 919 642-2150	STOUT, WILLIAM ALLEN P. O. BOX 675 TABOR CITY 28463 BOWMAN GRAY	FP AC 61 61 63 919 653-2112
BAUCOM, SANDRA SASSER RT. #7, BOX 34B WHITEVILLE 28472 U OF NC	PD AC 82 83 87 919 642-0158	GLINSKI, RONALD PETER ROUTE #1, BOX 46A WHITEVILLE 28472 U OF MICHIGAN	U /PTH AC 75 76 81 919 642-5832	THIGPEN, FRONIS RAY 805 S. MADISON STREET WHITEVILLE 28472 U OF NC	FP /PD AC 76 77 75 704 642-6121
BULLOCK, THURMAN M., JR. PO BOX 465 CHADBOURN 28431 BOWMAN GRAY	FP /A RT 61 61 63 919 654-5369	GRUBB, STEPHEN DALE PIREWAY RD. PO BOX 675 TABOR CITY 28463 WASHINGTON U	FP AC 75 76 79 919 653-2113	TRAYLOR, HENRY WILLIAM, JR. 805 S. MADISON WHITEVILLE 28472 GEORGETOWN U	IM /EM AC 77 79 83 919 642-6121
BUNN, DAVID GLENN EAST MAIN STREET WHITEVILLE 28472 U OF MARYLAND	GP AC 47 47 49 919 642-2016	HODGSON, JOHN D. PO BOX 1249 WHITEVILLE 28472 GEORGETOWN U	IM AC 82 83 88 919 642-0331	WALTERS, H. GROVER, JR. 711 N. THOMPSON STREET WHITEVILLE 28472 U OF MARYLAND	GS AC 48 48 53 919 642-3214
CARROLL, FRANCIS MURRAY 104 SEVENTH AVENUE CHADBOURN 28431 BOWMAN GRAY	FP /A AC 55 55 57 919 654-3143	KINDSCHUH, PETER MICHAEL BALDWIN WOODS WHITEVILLE 28472 LOYOLA U	OBG AC 80 80 85 919 642-6848	WALTERS, RONALD MARTIN 220 JEFFERSON ST. WHITEVILLE 28472 U OF NC	GS /VS AC 81 81 79 919 642-3214
COLLIER, ROBERT 104 7TH AVE. CHADBOURN 28431 U OF COLORADO	FP /IM AC 54 55 88 919 654-3143	MUKAMAL, RONALD SASSON 333 JEFFERSON STREET WHITEVILLE 28472 ST U OF NY-BUFF	GS /ORS AC 64 65 73 919 642-2336	WALTON, GEORGE BRITAIN, JR. P. O. BOX 345 CHADBOURN 28431 DUKE	R /NM AC 56 56 64 919 642-8011
CONRAD, LARRY LEE R.R. 7, BOX 68-B, SPIVEY RD. WHITEVILLE 28472 INDIANA U	EM AC 64 64 86 919 642-9735	MUNROE, JOHN FRANCIS BALDWIN WOODS, S.W. P. O. BOX 1249 WHITEVILLE 28472 U OF NC	IM /END AC 60 60 68 919 642-2230	WHEATLEY, SAMUEL NALLY BALDWIN WOODS WHITEVILLE 28472 U OF KENTUCKY	OBG AC 75 76 79 919 642-3294
COTTLE, RONALD WADE 118 E. WALTER ST. WHITEVILLE 28472 U OF NC	FP AC 83 84 86 919 642-2706	PIECH, KENNETH STOWELL 1211 PINKNEY ST. WHITEVILLE 28472 DUKE	PTH AC 75 78 83 919 642-8011	WILLIAMSON, ROSSIE M. 3004 WEDGEWOOD DR. CEDAR CREEK VILLAGE N. MYRTLE BEACH, SC 29582 U OF PENN	GP L/RT 37 37 40 803 249-2126
DIMITRIUS, ROBIN P. O. BOX 364 WHITEVILLE 28472 EIN SHAMS U	AN AC 66 77 81 919 642-8011	SMITH, RONNIE DALE 701 E. FIFTH ST. TABOR CITY 28463 U OF NC	GP AC 78 79 81	WILLIFORD, PHILLIP MABON P. O. BOX 1249 WHITEVILLE 28472 U OF NC	IM AC 81 82 85 919 642-8157
DONAYRE, LUIS ERNESTO 144 JEFFERSON STREET WHITEVILLE 28472 SAN MARCOS U	GS /TS AC 59 67 68 919 642-3136			WYCHE, JOSEPH THOMAS RT. #7, BOX 30 WHITEVILLE 28472 U OF PENN	FP L/RT 41 41 48 919 642-2706

25. CRAVEN-PAMLICO-JONES COMPONENT SOCIETY

OFFICERS—**President:** Richard W. Hudson, M.D., P.O. Box 336, Bayboro 28515 (919 745-3191)**Secretary:** J. Kenneth Chance, M.D., 802 McCarthy Blvd., New Bern 28560 (919 633-4183)**Executive Secretary:** Helen Harrell, P.O. Box 2157, Craven Co. Hospital, New Bern 28560 (919 633-8607)

ADAMS, LARRY LEE PO BOX 2038 NEW BERN 28560 U OF NC	DR AC 72 72 77 919 638-1158	BOUNOUS, EDWIN P., JR. BOX 68 POLLOCKSVILLE 28573 DUKE	IM AC 80 84 88 919 224-4591	GRECO, PETER PAUL P. O. BOX 2908 1914 NEUSE BLVD. NEW BERN 28561 MED SCH-UMDNJ	D AC 67 68 74 919 633-1817
AIKEN, HOVEY EUGENE, JR. 707 PROFESSIONAL DRIVE NEW BERN 28560 MED U OF SC	PD AC 56 63 64 919 633-2900	BROOKS, LESLIE F. 810 KENNEDY AVE. NEW BERN 28560 GEORGETOWN U	FP AC 80 87 88 919 633-1678	GREWAL, SATPAL KAUR CRAVEN COUNTY HOSPITAL PO BOX 5117 NEW BERN 28560 M C OF AMRITSAR	TR AC 63 76 82 919 633-8730
AKPELE, IGNATIUS ESE PO BOX 306 NEW BERN 28560 MEHARRY MED COLL	TS /VS AC 77 79 87 919 633-1688	BUFF, SAMUEL JOSEPH P. O. BOX 2065 NEW BERN 28560 DUKE	DR AC 77 79 83 919 633-5057	GRICE, ORMOND DREW 800 HOSPITAL DR. STE. #6 NEW BERN 28560 U OF NC	GS AC 67 67 77 919 633-3557
ARMISTEAD, RAY BAXTER 1315 S. GLENBURNIE RD. STE. 7 NEW BERN 28562 GEORGETOWN U	ORS AC 76 77 80 919 633-3256	BURNETT, JOHN WESLEY, JR. 810 KENNEDY AVE. NEW BERN 28560 MED COLL OF VA	FP AC 71 71 76 919 633-1678	HAHN, MICHAEL WAYNE 801 MCCARTHY BLVD. NEW BERN 28560 LA STATE U	OBG AC 82 82 86 919 633-3942
ASHFORD, CHARLES H., JR. 800 HOSPITAL DRIVE NEW BERN 28560 JOHNS HOPKINS	CDS /VS AC 62 62 70	BUSTARD, VICTOR WILLIAM 1912 NEUSE BOULEVARD NEW BERN 28560 DALHOUSIE U	OBG /GYN AC 59 76 78 919 633-3339	HALL, WILLIAM JAMES, JR. P. O. BOX 2406 NEW BERN 28560 U OF LOUISVILLE	OTO AC 77 80 83 919 638-2666
BAGGETT, JOHN ROBERT 702 NEWMAN ROAD MCCARTHY SQUARE NEW BERN 28560 U OF NC	IM AC 56 56 63 919 633-5333	CAMERON, HAROLD H. 802 MCCARTHY BLVD. NEW BERN 28562 U OF NC	OPH AC 70 70 87 919 633-4183	HAMMOND, ALFRED F., JR. 1514 TRENT BOULEVARD NEW BERN 28560 JEFFERSON	GP L/RT 34 34 37 919 637-6066
BALLARD, HARRY HAMPTON 800 HOSPITAL DR. STE. #6 NEW BERN 28560 WEST VA U	GS /VS AC 71 76 82 919 633-2081	CHANCE, JAMES KENNETH 802 MCCARTHY BLVD. NEW BERN 28560 BOWMAN GRAY	OPH AC 76 76 81 919 633-4183	HARVEY, BERTHA B. 3510 CANTERBURY RD. NEW BERN 28560 MED U OF SC	P AC 82 82 87 919 633-4171
BARDEN, GRAHAM ARTHUR, III 707 PROFESSIONAL DR. NEW BERN 28560 DUKE	PD AC 82 82 79 919 633-2900	COOPER, LYLE RAY PO BOX 2685 3 NEW BERN MEDICAL ARTS CTR. NEW BERN 28560 U OF NC	IM AC 80 81 80 919 638-4023	HILLER, CARL JULIEN P. O. DRAWER 1694 NEW BERN 28560 MED U OF SC	ORS AC 62 62 69 919 633-3256
BARDEN, GRAHAM ARTHUR, JR. 707 PROFESSIONAL DRIVE NEW BERN 28560 DUKE	PD AC 48 48 53 919 633-2900	DAVIDSON, ANDREW 802 MCCARTHY BLVD. NEW BERN 28560 U OF NC	OPH AC 69 69 76 919 633-4183	HOLMES, ROBERT PEEL, III 702 NEWMAN ROAD MCCARTHY SQUARE NEW BERN 28560 U OF NC	IM AC 56 56 63 919 633-5333
BAREFOOT, VERNA YOUNG 2504 OLD CHERRY POINT ROAD NEW BERN 28560 GEO WASHINGTON U	PH L 50 51 53 919 637-5574	DAVIS, JUNIUS WEEKS, JR. 201 ABNER NASH ROAD NEW BERN 28562 MED U OF SC	PD /PH L/RT 46 46 50 919 633-4121	HORNBAKE, EARL RODNEY, III 1700 ST. DELIGHT CHURCH RD. NEW BERN 28560 U OF PITTSBURGH	IM AC 76 77 79 919 633-0363
BECKWITH, GEORGE HUGHES PO BOX 2554 702 NEWMAN RD. MCCARTHY SQ. NEW BERN 28560 U OF VIRGINIA	CD /IM AC 71 71 76 919 633-4046	DAVIS, MICHAEL LEE EASTERN CAROLINA INT.MED. P. O. BOX 68 POLLOCKSVILLE 28573 WEST VA U	IM AC 74 75 79 919 224-4591	HUDSON, RICHARD WOODARD PO BOX 729 PAMLICO MEDICAL CTR. PA BAYBORO 28515 U OF NC	FP AC 61 61 64 919 745-3191
BELL, EDWIN LILLINGTON 702 NEWMAN RD. PO BOX 2554 NEW BERN 28560 DUKE	IM /PUD AC 82 83 79 919 633-5333	DEGRAW, MARTIN CRAWFORD 810 KENNEDY AVE. NEW BERN 28560 BOWMAN GRAY	FP AC 81 84 79 919 633-1685	HUNT, WILLIAM BRYCE, JR. P. O. BOX 2157 NEW BERN 28560 BOWMAN GRAY	PUD /IM AC 53 53 76 919 633-8608
BELL, WILLIAM HARRISON, JR. P. O. BOX 2065 NEW BERN 28560 CORNELL U	R /NM AC 46 46 53 919 633-5057	DUFFY, CHARLES 607 POLLOCK STREET NEW BERN 28560 JEFFERSON	FP L 30 30 35 919 637-2077	JACKSON, DONALD CHARLES P. O. BOX 2065 NEW BERN 28560 SHEFFIELD U	R AC 54 55 73 919 633-5057
BENDER, NEIL CARMICHAEL P. O. BOX 68 POLLOCKSVILLE 28573 U OF NC	IM AC 63 63 68 919 633-1010	DUNN, ERNEST CLINTON, JR. PO BOX 729 PAMLICO MEDICAL CTR., PA BAYBORO 28515 U OF NC	GP AC 79 79 79 919 633-1616	JOYNER, RONNIE STEPHEN 801 MCCARTHY BLVD. NEW BERN 28560 U OF NC	OBG AC 76 76 81 919 633-3942
BENNETT, JOHN JOE 102 GIBBS ROAD NEW BERN 28560 U OF MARYLAND	GP /OM AC 60 60 79 919 633-0709	GAGE, LAWRENCE E. EASTERN CAROLINA IM, PA PO BOX 68 POLLOCKSVILLE 28573 VANDERBILT U	IM /CD AC 80 81 86 919 224-4591	JREISAT, KHALED F. PO BOX 2588 NEW BERN 28561 MED U OF PECS	N /CHN AC 78 83 87 919 633-3744
BLACKERBY, JAMES 1807 TRYON ROAD NEW BERN 28560 U OF LOUISVILLE	GP L/RT 32 32 66 919 637-3424	GOODHALL-GUNN, PATRICIA PO BOX 983 NEW BERN 28560 U OF LIVERPOOL	AN AC 54 55 84 919 633-6117	KING, FRANCIS PARKER 210 WILSON POINT NEW BERN 28562 HARVARD	IM RT 46 46 53 919 637-5411
BLACKERBY, JAMES N. 800 HOSPITAL DR. NEW BERN 28560 U OF LOUISVILLE	GS AC 56 63 64 919 633-2081	GOODWIN, BONNIE JEANNE PO BOX 68 POLLOCKSVILLE 28573 DARTMOUTH U	IM /ON AC 77 83 86 919 633-1010	KUNKEL, COOPER DAVE, III 802 MCCARTHY BLVD. NEW BERN 28560 U OF VIRGINIA	OPH AC 56 62 65 919 633-4183
BLAIR, ROBERT GILLESPIE, JR. P. O. DRAWER 1694 TRIANGLE PLAZA NEW BERN 28560 U OF NC	ORS AC 70 70 77 919 633-4477	GRADY, RICHARD DWIGHT P. O. BOX 2406 709 PROFESSIONAL DR. NEW BERN 28560 U OF NC	OTO /HNS AC 77 77 83 919 638-2666	LASATER, JOHN DAVID 800 HOSPITAL DR., STE. 4 NEW BERN 28560 U OF OKLAHOMA	U AC 78 79 87 919 633-2712
BOUNOUS, CHRISTINE G. BOX 68 POLLOCKSVILLE 28573 DUKE	IM AC 82 84 88 919 633-1010			LITTLE, HENRY REECE, JR. 800 HOSPITAL DRIVE NEW BERN 28560 MED COLL OF VA	FP L/RT 51 53 53 919 637-6118

25. CRAVEN-PAMLICO-JONES COMPONENT SOCIETY (Continued)

LITTLE, SUZANNE BROWN 800 HOSPITAL DRIVE NEW BERN 28560 MED COLL OF VA	IM /CD AC 49 53 53 919 637-6118	MUTHER, ELLIS FRANK 721 PROFESSIONAL DR. NEW BERN 28560 TULANE U	N /P AC 60 60 70 919 633-3744	STONE, HARRY BENJAMIN, III 709 PROFESSIONAL DR. PO BOX 2406 NEW BERN 28560 DUKE	OTO /A AC 65 65 73 919 638-2666
MACDONALD, HENRY JOHN, JR. PO BOX 2406 709 PROFESSIONAL DR. NEW BERN 28560 U OF NC	OTO AC 69 69 75	NASHICK, GEORGE HENRY PO BOX 729 PAMLICO MEDICAL CTR., PA BAYBORO 28515 U OF CONNECTICUT	GP AC 75 75 76 919 633-1616	TAYLOE, JOHN COTTEN, JR. P. O. DRAWER 2604 MEDICAL ARTS CENTER NEW BERN 28560 U OF NC	ORS AC 60 60 66 919 633-1635
MAHANEY, JOHN PHILIP, JR. 810 KENNEDY AVE. NEW BERN 28560 MED COLL OF VA	FP AC 71 74 76 919 633-1678	NEWELL, ROBERT B., JR. 2000 NEUSE BLVD. NEW BERN 28560 NORTHWESTERN U	PTH /CLP AC 70 73 87 919 633-8684	TINGA, JOHN HINNES 903 PINE TREE DRIVE NEW BERN 28560 BOWMAN GRAY	OBG AC 75 75 81 919 633-4005
MAIER, RUDOLPH JOSEPH 721 PROFESSIONAL DR. NEW BERN 28560 LOYOLA U	N AC 63 63 85 919 633-3744	O'DONNELL, ROBERT WILLIAM 2407 GRACE AVE. PO BOX 2587 NEW BERN 28560 U OF MARYLAND	P AC 74 77 87 919 633-4171	TOWARNICKY, MICHAEL R. PO BOX 68 POLLOCKSVILLE 28573 OHIO STATE U	IM /NM AC 83 83 88 919 633-1010
MANLEY, JAMES JOSEPH P. O. BOX 2585 705 PROFESSIONAL DR. NEW BERN 28561 MED SCH-UMDNJ	FP /EM AC 78 80 84 919 637-6194	OLIVER, DAVID CLARK 702 NEWMAN RD. MCCARTHY SQUARE NEW BERN 28560 BOWMAN GRAY	CD /IM AC 74 74 78 919 633-5333	TRULUCK, THOMAS BRIAN 903 PINE TREE DRIVE NEW BERN 28560 MED U OF SC	OBG AC 75 75 81 919 633-4005
MARTIN, DENNIS KEITH 903 PINETREE DRIVE NEW BERN 28560 U OF NC	OBG AC 78 78 78 919 633-4005	OVERBY, JOSEPH RANDAL, JR. 810 KENNEDY AVE. P. O. BOX 5409 NEW BERN 28560 BOWMAN GRAY	FP AC 71 71 76 919 633-1678	UNDERHILL, THURLOW REED 800 HOSPITAL DRIVE, STE. #4 NEW BERN 28560 U OF NC	U AC 70 70 78 919 633-2712
MAY, RONALD BRUCE CRAVEN COUNTY HOSPITAL P. O. BOX 1390 NEW BERN 28560 U OF PENN	PD /HEM AC 73 74 84 919 633-4121	PARKER, CHARLES L. 801 MCCARTHY BLVD. NEW BERN 28560 INDIANA U	OBG /GYN AC 73 73 76 919 633-3942	VANDERSEA, HAROLD MARK 800 HOSPITAL DRIVE NEW BERN 28560 ST U OF NY-BUFF	ORS AC 70 71 78 919 638-8113
MCNEILL, MARY DAVIS P. O. BOX 719 HAVELOCK 28532 LA STATE U	FP /PD AC 56 59 64 919 447-3613	PATTERSON, F. M. SIMMONS 4503 MORGAN LANE NEW BERN 28560 U OF PENN	GS L/RT 39 39 47 919 633-3492	WARD, RICHARD M. 3 BATTS HILL RD. NEW BERN 28562 DUKE	PTH AC 80 83 82 919 633-8682
MCQUADE, JOHN FRANCIS, III 4511 GLOUCESTER DRIVE NEW BERN 28560 YALE	CD AC 73 75 78 919 633-1010	POCOCK, DONALD ANDREW 5003 TRENT WOODS DRIVE NEW BERN 28560 CASE WESTERN RES	IM /ID AC 73 74 81 919 633-1010	WARTMAN, MARK GRAHAM PO DRAWER 1694 TRIANGLE PLAZA NEW BERN 28560 WEST VA U	ORS AC 80 81 85 919 633-4477
MILLNS, DALE THOMAS 800 HOSPITAL DRIVE NEW BERN 28560 CASE WESTERN RES	U L/RT 46 53 53 919 633-2712	PRESTON, RONALD ALLYN P. O. BOX 68 POLLOCKSVILLE 28573 MED COLL OF VA	IM AC 70 70 76 919 633-1010	WILFONG, ROBERT FARRINGTON 2713 NEUSE BLVD. NEW BERN 28560 DUKE	NS AC 67 67 76 919 633-6070
MOELLER, GARLAND R. P. O. BOX 68 POLLOCKSVILLE 28573 DUKE	RHU /IM AC 77 78 83 919 224-4591	RAWLS, WILLIAM 801 MCCARTHY BLVD. NEW BERN 28560 U OF NC	OBG AC 66 66 72 919 633-3942	WILKINS, KENNETH WORTH, JR. 702 NEWMAN ROAD MCCARTHY SQUARE NEW BERN 28560 U OF NC	IM AC 80 81 84 919 633-5333
MOELLER, MARK BOLTON P. O. BOX 68 POLLOCKSVILLE 28573 DARTMOUTH U	ID /IM AC 77 81 82 919 633-1010	REIDA, RONALD JACK 4514 GREENVIEW RD. NEW BERN 28560 U OF KANSAS	EM /PD AC 67 67 84 919 637-4016	WILLINGHAM, SHARON J. G. 1315 S. GLENBURNIE PO BOX 2068 NEW BERN 28560 U OF LOUISVILLE	P AC 81 82 88 919 636-5503
MOELLER, WENDY PAULSON P. O. BOX 68 POLLOCKSVILLE 28573 DUKE	GE /IM AC 77 78 83 919 633-1010	RICHARDSON, E. C., JR. 4001 TRENT PINES DR. NEW BERN 28560 JEFFERSON	GYN /OBS L/RT 43 43 48 919 633-3942	WINTERS, RICHARD R. WALKER 1425 GLENBURNIE RD. NEW BERN 28560 ST LOUIS U	PS AC 70 70 86 919 637-6800
MOORE, RONALD ALVIN 702 NEWMAN ROAD MCCARTHY SQUARE NEW BERN 28560 U OF NC	IM /ON AC 72 72 76 919 633-5333	SCHIESS, ROBERT JOHN, III 2713 NEUSE BOULEVARD NEW BERN 28560 BOWMAN GRAY	NS AC 78 80 84 919 633-6070	YEREX, JOYCE ALICE 908 PLANTATION DR. NEW BERN 28560 U OF ST ANDREWS	R AC 55 69 88 919 633-1010
MORGAN, RICHARD EARL 5211 TRENTWOODS DR. NEW BERN 28560 BOWMAN GRAY	GS AC 73 73 78 919 633-2081	SINNING, MARK ALAN 800 HOSPITAL DR. NEW BERN 28560 U OF KANSAS	TS /VS AC 78 79 87 919 638-8118		

26. CUMBERLAND COMPONENT SOCIETY

OFFICERS—President: Stephen C. Rochman, M.D., 513 Owen Dr., Fayetteville 28304 (919 485-8801)

Secretary: David R. Beckham, M.D., 1762 Metromedical Drive, Fayetteville 28302 (919 323-5491)

ALLEN, GLADSTONE WESLEY P. O. BOX 552 FAYETTEVILLE 28301 MEHARRY MED COLL	OBG /OBS AC 41 42 66 919 488-1865	AUL, CHRISTOPHER TAYLOR 4092 PROFESSIONAL DR. HOPE MILLS 28348 WASHINGTON U	FP AC 77 80 85 919 424-0123	BALLENTINE, KINCHEN W. 486 WINDWOOD ON SKYE FAYETTEVILLE 28305 U OF TENNESSEE	R AC 67 67 77 919 323-2012
ALLEYNE, GRANT LIVINGSTONE P. O. BOX 64838 FAYETTEVILLE 28306 U OF WEST INDIES	OBG AC 70 74 77 919 323-2767	BAGGETT, JOSEPH WOODROW P. O. BOX 53514 FAYETTEVILLE 28305 U OF MARYLAND	OBG L 45 45 51 919 485-1837	BARRY, WILLIAM 3322 MELROSE ROAD FAYETTEVILLE 28304 U OF NC	EM /FP AC 56 56 57 919 323-5880
ATASSI, INAD BADREDDIN 101 ROBESON ST. STE. 410 FAYETTEVILLE 28301 DAMASCUS U	NS AC 72 75 81 919 483-5050	BAINES, EDWARD F. 1673 BANBURY DR. FAYETTEVILLE 28304 MED COLL OF VA	AN AC 84 84 88 919 323-5491	BATTEN, HUBERT ELMORE CAPE FEAR VALLEY HOSPITAL FAYETTEVILLE 28302 MED COLL OF VA	R AC 51 53 53 919 323-2012

26. CUMBERLAND COMPONENT SOCIETY (Continued)

BECKHAM, DAVID ROBERTSON 1762 METROMEDICAL DR. FAYETTEVILLE 28302 MED U OF SC	AN AC 62 68 69 919 323-5491	DALY, LIAM N. 1262 OLIVER ST. FAYETTEVILLE 28304 U OF DUBLIN	P AC 60 67 69 919 484-5151	GOMEZ, RAUL FERNANDO P. O. BOX 40237 FAYETTEVILLE 28304 U OF CALDAS	P AC 67 67 74 919 484-9634
BEYER, ALFRED JAMES 521 BEAUMONT ROAD FAYETTEVILLE 28304 CASE WESTERN RES	GS AC 67 67 82 919 483-5031	DANIEL, CROWELL TURNER, JR. 1641 OWEN DRIVE FAYETTEVILLE 28304 MED COLL OF VA	OBG AC 48 48 59 919 484-6474	HAIR, GLENN EDGAR 3314 MELROSE ROAD FAYETTEVILLE 28304 U OF NC	OT/OTO AC 59 59 65 919 323-1463
BEYER, CATHERINE HERLIHY 1213 WALTER REED ROAD FAYETTEVILLE 28305 CASE WESTERN RES	PD AC 67 67 85	DRAKE, DAVID EWING P. O. BOX 3654 FAYETTEVILLE 28305 DUKE	FP AC 51 52 56 919 485-3078	HAITHCOCK, WILLIAM DANA, JR. 1219 WALTER REED ROAD FAYETTEVILLE 28304 MED U OF SC	OBG AC 73 77 80 919 323-2103
BINDER, GEORGE ARTHUR 401 LAKESHORE DR. FAYETTEVILLE 28305 U OF ILLINOIS	DR AC 73 74 84 919 484-4028	ELLENBOGEN, CHARLES 1601-B OWEN DRIVE FAYETTEVILLE 28304 U OF CHICAGO	IM /ID AC 64 69 81 919 323-1152	HALL, JAMES SAMUEL 3415-C MELROSE ROAD FAYETTEVILLE 28304 DUKE	PD AC 57 57 62 919 484-8163
BLACKBURN, ROBERT ALFRED 1262 OLIVER ST. FAYETTEVILLE 28304 INDIANA U	OTO /P AC 66 66 83 919 485-7181	ELLISON, GERALD LYNN 495 RAYCONDA FAYETTEVILLE 28304 GEO WASHINGTON U	DR AC 65 65 73 919 323-2012	HARDISON, JOE WILLIAM 1320 MEDICAL DRIVE FAYETTEVILLE 28304 U OF NC	OBG /GE AC 65 65 72 919 323-3301
BLACKWELL, BRUCE WAYNE 1601-B OWEN DR. FAYETTEVILLE 28304 OHIO STATE U	FP AC 80 82 85 919 323-1152	FABIAN, DENIS 503 OWEN DR. PO BOX 64517 FAYETTEVILLE 28306 LONDON U	PS /GS AC 36 36 76 919 483-8121	HARDISON, LEWIS BENJAMIN P. O. BOX 64369 FAYETTEVILLE 28306 BOWMAN GRAY	FP AC 52 52 56 919 323-0085
BLUE, JOHN FREDERICK, JR. 4092 PROFESSIONAL DR. HOPE MILLS 28348 GEO WASHINGTON U	FP AC 78 79 84 919 424-0123	FAILLACE, DEON F. 1790 METROMEDICAL DR. FAYETTEVILLE 28304 U OF MICHIGAN	GS AC 76 79 88 919 323-2626	HARMON, PERRY MONROE 1811 LAKESHORE DR. FAYETTEVILLE 28305 U OF NC	OBG AC 74 75 82 919 484-3271
BRIGGS, JOHN GLENN, JR. 1782 METRO MEDICAL DR. FAYETTEVILLE 28304 U OF NC	PS AC 69 69 78 919 323-1203	FLEISHMAN, MALCOLM P. O. BOX 35126 FAYETTEVILLE 28303 U OF NC	IM /CD AC 54 54 59 919 484-0144	HARRIS, LARRY COLEMAN P. O. BOX 40405 FAYETTEVILLE 28309 DUKE	PD AC 77 78 81 919 323-4281
BRYAN, JOHN HUGH DEPT. OF RADIATION ONCOLOGY BOX 41208, CAPE FEAR MED. CTR. FAYETTEVILLE 28304 U OF NC	TR /PHO AC 69 69 83 919 323-6690	FLEISHMAN, STEPHEN BAER 2619 TORCROSS DR. CUMBERLAND MENTAL HEALTH DEPT. FAYETTEVILLE 28304 U OF MARYLAND	P /CHP AC 74 76 76 919 323-0601	HARTNESS, ALVIN HUNTER PO BOX 43505 FAYETTEVILLE 28309 BOWMAN GRAY	PD AC 65 65 76 919 323-4571
BUTLER, CAREY JONES 516 OWEN DRIVE FAYETTEVILLE 28304 MED COLL OF VA	OTO /OT AC 52 52 54 919 485-6101	FULLER, WAYNE T. 611 RAVENCROFT CT. FAYETTEVILLE 28304 MED COLL OF VA	AC 80 00 87 919 488-1167	HAYES, BENNETT ALLEN, JR. 1219 WALTER REED ROAD FAYETTEVILLE 28304 U OF NC	OBG AC 57 57 65 919 323-2103
CAMPBELL, FRANK HIGHSMITH P. O. BOX 53651 FAYETTEVILLE 28305 DUKE	GS /TS AC 46 50 56 919 485-6161	GARBER, EDGAR CLYDE, JR. 1641 OWEN DRIVE FAYETTEVILLE 28304 MED COLL OF VA	GYN AC 44 47 50 919 484-6474	HENLEY, DOUGLAS EUGENE 4092 PROFESSIONAL DR. HOPE MILLS 28348 U OF NC	FP AC 77 77 79 919 424-0123
CHAUDHURI, DEBI PRASAD 1617 OWEN DRIVE FAYETTEVILLE 28304 NLRATAN COLL	GS AC 62 71 77 919 323-0101	GARDNER, FRANCIS SIDNEY, JR. 1219 WALTER REED ROAD FAYETTEVILLE 28304 U OF MARYLAND	OBG AC 51 51 61 919 323-2103	HENLEY, JOHN T., JR. 3314 MELROSE RD., STE. 100 FAYETTEVILLE 28304 U OF NC	OTO AC 72 72 81 919 323-1463
CHIPMAN, MARTIN 1262 OLIVER ST. FAYETTEVILLE 28304 BAYLOR	N AC 60 60 87 919 484-5151	GARISON, GARY BROWN 3423-A MELROSE ROAD FAYETTEVILLE 28304 TEMPLE U	CD /IM AC 62 62 71 919 484-6154	HOFFMAN, CHARLES A., JR. 513 OWEN DRIVE FAYETTEVILLE 28304 MED COLL OF VA	U AC 54 54 66 919 485-8801
CISZEK, THOMAS ARTHUR PO BOX 2000 FAYETTEVILLE 28302 ST LOUIS U	NPM /PD AC 77 78 86 919 323-6762	GASKINS, RAYMOND A., JR. 126 THORNCLIFF FAYETTEVILLE 28303 U OF NC	FP /OM AC 75 75 82 919 323-3183	HOFFMAN, EDNA T. MAURA 348 VALLEY ROAD FAYETTEVILLE 28305 MED COLL OF VA	OBG AC 54 54 73 919 485-4755
CLARK, FRANKLIN ST. CLAIR 1790 METROMEDICAL DRIVE FAYETTEVILLE 28304 U OF NC	GS /CDS AC 73 73 79 919 323-2626	GHOSTINE, SALIM YACCOUB 101 ROBESON ST. #410 FAYETTEVILLE 28301 U OF MONTPELLIER	NS AC 58 58 88 919 483-5050	HOWLER, WILLIAM EDWARD, JR. 1778 METROMEDICAL DRIVE FAYETTEVILLE 28304 MED U OF SC	GE AC 70 73 77 919 323-5203
CLARK, LOUIS PHILLIP, JR. 225 TIMBERLAKE DR. FAYETTEVILLE 28304 MEHARRY MED COLL	HS /ORS AC 70 71 84 919 484-2171	GILBERT, DAVID BRANSON 1756 METROMEDICAL DRIVE FAYETTEVILLE 28304 U OF COLORADO	CD /IM AC 65 65 81 919 323-1322	HURDLE, THOMAS GRAY 1786 METROMEDICAL DR. FAYETTEVILLE 28304 MED COLL OF VA	U AC 45 45 55 919 485-8151
COOK, WILLIAM EUGENE 115 S. CHURCHILL DRIVE FAYETTEVILLE 28303 WASHINGTON U	FP /PUD L/RT 30 30 34 919 484-5321	GILBERT, STANLEY KEITH, JR. 1300 MEDICAL DRIVE FAYETTEVILLE 28304 U OF VIRGINIA	ORS /HS AC 75 78 82 919 484-2171	IZURIETA, HENRY 514 BEAUMONT ROAD FAYETTEVILLE 28304 U OF MADRID	IM AC 61 71 72 919 485-8831
COPELAND, GARY BENJAMIN 1629 OWEN DRIVE FAYETTEVILLE 28304 BOWMAN GRAY	OPH AC 60 60 67 919 484-6141	GIMESH, JOHN SIGMUND 3415-C MELROSE ROAD FAYETTEVILLE 28304 U OF BUDAPEST	PD AC 54 61 82 919 484-8163	JIAMACHELLO, NICHOLAS 307 SYLVAN ROAD FAYETTEVILLE 28305 U OF PENN	OBG RT 58 58 71 919 485-8729
CRUMMIE, ROBERT GWINN 6245 CLIFFDALE ROAD FAYETTEVILLE 28304 DUKE	P AC 65 64 69 919 868-4816	GINN, FRED LEGRAY CAPE FEAR VALLEY HOSPITAL FAYETTEVILLE 28302 DUKE	PTH AC 62 66 78 919 323-6149	JOHNSON, JAMES ERWIN 3308 MELROSE ROAD FAYETTEVILLE 28304 U OF MINN	ORS AC 69 70 79 919 484-4874
CUENCA, NELIDA ALBA 6748-B IRON GATE DR. FAYETTEVILLE 28306 U OF CORDOBA	PD /PH AC 57 57 75	GODWIN, HAROLD LACY 1601-B OWEN DRIVE FAYETTEVILLE 28304 HARVARD	ADM AC 47 47 53 919 323-1152	JONES, J. WESLEY 1309 MEDICAL DR., STE. 102 FAYETTEVILLE 28304 DUKE	GE /IM AC 76 76 84 919 323-2477

26. CUMBERLAND COMPONENT SOCIETY (Continued)

JORDAN, WELDON HUSKE 114 BROADFOOT AVENUE FAYETTEVILLE 28305 HARVARD	IM AC 47 47 55	JORDAN, WILLIAM RAND 2008 LITHO PLACE FAYETTEVILLE 28304 U OF NC	U AC 70 70 79	KEENEY, GLENWARD THOMAS 1219 WALTER REED ROAD FAYETTEVILLE 28304 MED COLL OF VA	OBG AC 67 67 77	KERANEN, VICTOR JOSEPH 3314 MELROSE ROAD, SUITE 104 FAYETTEVILLE 28304 DUKE	NS AC 64 64 71	KILGORE, LARRY CHARLES 1220 WALTER REED RD. FAYETTEVILLE 28304 U OF ARKANSAS	FP AC 81 81 82	KIM, SARAH 1317 MEDICAL DR. STE. #3 FAYETTEVILLE 28304 LOMA LINDA U	AI AC 50 50 82	KIM, WILLIAM NO CHUN 1317 MEDICAL DR. STE. #3 FAYETTEVILLE 28304 LOMA LINDA U	OBG/OM AC 52 52 82	LANGLEY, JOHN R. 1317 MEDICAL DR. STE. #2 FAYETTEVILLE 28304 MED U OF SC	GS/VS AC 68 68 87	LARSEN, LARS CHRISTIAN 1601 OWEN DRIVE FAYETTEVILLE 28304 SUNY-SYRACUSE	FP AC 73 74 84	LEMASTER, PIERRE CLIFFORD 1291 OLIVER STREET FAYETTEVILLE 28304 U OF FLORIDA	PD AC 71 75 78	LEVI, GEORGE ALBERT 1629 OWEN DRIVE FAYETTEVILLE 28304 MED U OF SC	OPH L 50 50 58	LEWIS, DONALD R., JR. 150-7 LONDON CT. FAYETTEVILLE 28311 U OF MARYLAND	GP AC 85 87 88	LOGEL, ROBERT JOHN 3308 MELROSE ROAD FAYETTEVILLE 28305 U OF MISSOURI	ORS AC 72 72 77	LOGUE, STEPHEN STUART 1766 METROMEDICAL DR. FAYETTEVILLE 28304 U OF NC	IM AC 79 82 84	LOHAVICHAN, CHOOMSANG PO BOX 42736 FAYETTEVILLE 28304 SIRIRAJ HOSP U	NEP/IM AC 65 65 74	LOHAVICHAN, VIRAT P. O. BOX 64277 FAYETTEVILLE 28306 SIRIRAJ HOSP U	CD/IM AC 63 64 73	LOUGHLIN, HOWARD HOPKINS 1213 WALTER REED ROAD FAYETTEVILLE 28304 U OF PENN	PD AC 70 74 76	LUTMAN, GEORGE BENTON P. O. BOX 2000 FAYETTEVILLE 28302 U OF MISSOURI	PTH AC 64 64 74	MACRAE, JOHN DONALD 700 MEASE PLAZA, APT. 850 DUNEDIN, FL 34698 U OF PENN	R L/RT 27 28 30	MARCOTTE, DAVID BACON 1262 OLIVER ST. FAYETTEVILLE 28304 CORNELL U	P AC 63 63 82	MAY, CHARLES RAYSOR, III 2345 ROLLING HILL RD. FAYETTEVILLE 28304 MED U OF SC	AN AC 62 62 84	MCALISTER, LINDA THERESA PO BOX 53514 FAYETTEVILLE 28305 U OF CALIFORNIA	OBG AC 78 80 85	MCCUTCHEN, THOMAS M., JR. 1213 WALTER REED ROAD FAYETTEVILLE 28304 VANDERBILT U	PD AC 63 68 69	MCDANIEL, JACK PASCHAL 1320 MEDICAL DRIVE FAYETTEVILLE 28304 U OF NC	OBG AC 56 56 64	MCFADYEN, OSCAR LEE, JR. 524 VALLEY ROAD FAYETTEVILLE 28305 DUKE	IM L/RT 40 41 42	MCILWAIN, THOMAS P. 1262 OLIVER ST. FAYETTEVILLE 28304 MED U OF SC	P AC 75 77 88	MCLESTER, WILLIAM DUMAS 597 OLIVER STREET FAYETTEVILLE 28304 U OF NC	OPH/PTH AC 65 65 71	MEEK, JOE BERNARD 1300 MEDICAL DRIVE FAYETTEVILLE 28304 MED U OF SC	ORS AC 64 64 73	MEHTA, HASUMATI V. 518 SANDHURST DR. FAYETTEVILLE 28304 U OF BOMBAY	FP/OBG AC 69 75 75	MEHTA, VIJAYKUMAR B. 518 SANDHURST DR. FAYETTEVILLE 28304 BARODA U	HEM/ON AC 57 71 75	MELTZER, MORTON ROUTE #1, BOX 231-A CAMERON 28326 NEW YORK MED COL	FP 65 65 70	MEYMANDI, ASSAD 1212 WALTER REED ROAD FAYETTEVILLE 28304 GEO WASHINGTON U	P/N AC 62 66 67	MILLER, DUDLEY 150 ROBESON STREET FAYETTEVILLE 28301 U OF MISSOURI	ADM/OBG AC 59 59 70	MILLER, HORACE WILLIAM, JR. 1766 METROMEDICAL DR. FAYETTEVILLE 28304 BOWMAN GRAY	IM/CD AC 51 51 53	MILLER, WILLIAM CAREY, JR. 1653 BANBURY DRIVE FAYETTEVILLE 28304 MED U OF SC	R AC 58 58 69	MOELLER, ARLYN MCCLAY 118 POMPTON DRIVE FAYETTEVILLE 28304 U OF IOWA	FP AC 56 56 83	MORESS, RALPH LOUIS P. O. BOX 2068 FAYETTEVILLE 28302 CORNELL U	P AC 59 60 75	MORRISON, ROBERT H. 331 FAIRFIELD RD. FAYETTEVILLE 28303 U OF VIRGINIA	OBG L/RT 44 44 55	NEWMAN, WILLIAM HAROLD 3427 MELROSE ROAD FAYETTEVILLE 28304 BOWMAN GRAY	GS/TS AC 56 56 65	PANTELAKOS, CONSTANTINE G. 1653 OWEN DRIVE FAYETTEVILLE 28304 DUKE	OTO AC 57 57 64	PARFITT, HENRY E., JR. 1786 METROMEDICAL DR. FAYETTEVILLE 28303 U OF NC	U AC 75 76 83	PATOW, WARREN EDWARD 1601-B OWEN DR. FAYETTEVILLE 28304 M C OF WISCONSIN	OBG AC 47 48 85	PAUL, FRANKLIN ARTHUR 6834 TOWBRIDGE ROAD FAYETTEVILLE 28306 HAHNEMANN	GS/VS AC 58 59 84	PENNINK, MENNO 3314 MELROSE RD. STE. 103 FAYETTEVILLE 28304 U OF AMSTERDAM	NS AC 65 74 75	POLLARD, JOHN CHRISTOPHER 1213 WALTER REED DRIVE FAYETTEVILLE 28304 U OF VIRGINIA	PD AC 68 68 75	POWELL, WILLIAM CARLYLE P. O. BOX 53127 FAYETTEVILLE 28305 BOWMAN GRAY	PD AC 52 52 58	PRITCHARD, WILLIAM LEE 3314 MELROSE RD. FAYETTEVILLE 28304 JOHNS HOPKINS	NS AC 56 62 63	RAMPULLA, ELLIOT JOHN 1762 METROMEDICAL DRIVE P. O. BOX 64405 FAYETTEVILLE 28306 BOWMAN GRAY	AN AC 72 72 82	REAVES, LEONARD ERATUS, III 2841 SKYE DR. FAYETTEVILLE 28303 U OF NC	IM/GE AC 61 61 78	RITCHEY, JOHN PHILLIP 6816 UPPINGHAM ROAD FAYETTEVILLE 28306 U OF OREGON	OPH AC 65 65 77	RIVERS, RUEBEN NORMAN 1738 METROMEDICAL DRIVE FAYETTEVILLE 28304 DUKE	IM AC 78 82 84	ROBINSON, RONALD E. 1329 ROBESON ST. FAYETTEVILLE 28305 MED COLL OF VA	R AC 79 83 88	ROCHMAN, STEPHEN CHARLES 513 OWEN DRIVE FAYETTEVILLE 28304 MEHARRY MED COLL	U AC 70 71 78	ROTHSTEIN, MANFRED SHELDON 1308 MEDICAL DRIVE FAYETTEVILLE 28304 DUKE	D AC 74 75 77	SALIBA, CONSTANTIN 3318 MELROSE ROAD FAYETTEVILLE 28304 U OF ST JOSEPH	GS AC 50 50 71	SANDERSON, WM. EARL 2175 VILLAGE DR. FAYETTEVILLE 28305 U OF NC	FP AC 84 85 87	SAPPENFIELD, LUTHER C. JR. 1629 OWEN DRIVE FAYETTEVILLE 28304 DUKE	OPH AC 57 57 65	SHAW, FRANK STEDMAN P. O. BOX 53127 FAYETTEVILLE 28305 U OF PENN	PD/PDA AC 59 59 66	SHEN, SUNG FAN 2414 HOPE MILLS ROAD FAYETTEVILLE 28304 TAIWAN U-TAIPEI	FP AC 66 72 78	SHEREFF, RICHARD HENRY 139 HUNTER CIRCLE FAYETTEVILLE 28304 U OF TENNESSEE	D/A AC 70 71 78	SIEWERS, CHRISTIAN FOGLE S.E. REGIONAL REHAB. P. O. BOX 2000 FAYETTEVILLE 28302 MED COLL OF VA	ORS/PM AC 44 50 50	SNIPES, RICHARD DEAN P. O. BOX 53514 FAYETTEVILLE 28305 DUKE	GYN L 42 45 46
--	-------------------	--	------------------	---	--------------------	---	-------------------	--	-------------------	---	-------------------	---	-----------------------	--	----------------------	---	-------------------	--	-------------------	--	-------------------	---	-------------------	---	--------------------	--	-------------------	--	-----------------------	---	----------------------	---	-------------------	---	--------------------	---	--------------------	--	------------------	---	-------------------	--	--------------------	---	-------------------	--	--------------------	--	---------------------	--	------------------	--	------------------------	---	--------------------	---	-----------------------	--	-----------------------	--	----------------	---	--------------------	--	------------------------	--	----------------------	--	------------------	--	-------------------	---	------------------	--	----------------------	---	----------------------	--	--------------------	---	------------------	--	--------------------	--	----------------------	--	-------------------	---	-------------------	--	-------------------	--	-------------------	---	-------------------	--	----------------------	--	--------------------	---	-------------------	--	------------------	---	------------------	---	------------------	--	-------------------	---	-------------------	--	--------------------	--	-----------------------	--	-------------------	--	--------------------	---	-----------------------	--	-------------------

26. CUMBERLAND COMPONENT SOCIETY (Continued)

SNYDER, NORMAN IRWIN 1262 OLIVER ST. FAYETTEVILLE 28304 WAYNE STATE U	P /CHP AC 72 73 85 919 484-5151	VIETA, PAUL ANTHONY 911 HAY ST. PO BOX 53514 FAYETTEVILLE 28305 MED SCH-UMDNJ	OBG AC 66 67 76 919 485-1191	WHETSELL, DOUGLAS WAYNE 1756 METROMEDICAL DR. FAYETTEVILLE 28304 MED U OF SC	IM /PUD AC 68 68 85 919 323-1322
STAPLETON, SYDNEY SCOTT 101 ROBESON ST., STE. 407 FAYETTEVILLE 28301 U OF NC	OPH AC 80 81 84 919 483-2117	WAHBEH, CAMILLE JAMIL 1601-B OWEN DRIVE FAYETTEVILLE 28304 AMER.U OF BEIRUT	OBG AC 77 81 84 919 323-1152	WILLIS, ROBERT FREDERICK 204 S. MAIN STREET HOPE MILL 28348 MED COLL OF VA	FP AC 51 52 52 919 424-6644
STEFFES, BRUCE CARL 1790 METROMEDICAL DR. FAYETTEVILLE 28304 U OF MICHIGAN	GS AC 76 76 83 919 323-2626	WALLS, BERTRAM EMMANUEL 1774 METROMEDICAL DRIVE FAYETTEVILLE 28304 DUKE	OBG AC 76 76 82 919 323-4155	WITHERS, LARRY DALE 150 ELLERSLIE DR. FAYETTEVILLE 28303 EMORY U	AN AC 77 79 81 919 864-5117
STEWART, ALBERT, JR. 114 BROADFOOT AVENUE FAYETTEVILLE 28305 WASHINGTON U	IM AC 44 48 50 919 484-3365	WEAVER, ROY ALBERT CAPE FEAR HOSPITAL PO BOX 2000 FAYETTEVILLE 28302 U OF NC	PTH AC 63 63 71 919 323-6149	WOODWORTH, THOMAS BELL 1657 OWEN DRIVE FAYETTEVILLE 28304 U OF MICHIGAN	FP AC 69 71 75 919 484-6540
STEWART, DAVID DUBOSE 114 BROADFOOT AVE. FAYETTEVILLE 28305 MED U OF SC	IM AC 82 82 85 919 484-1156	WEBB, ROBERT KENT PO BOX 42736 FAYETTEVILLE 28304 WEST VA U	NEP /IM AC 67 73 76 919 484-8114	WORDEN, NEIL ASHTON 116 ROWAN STREET FAYETTEVILLE 28301 U OF LOUISVILLE	FP AC 51 51 55 919 483-0463
STOWE, FRED REECE, JR. 3314 MELROSE RD., STE. 102 FAYETTEVILLE 28304 U OF NC	N /CHN AC 58 58 77 919 484-7405	WELLS, CHARLES LEWIS CAPE FEAR VALLEY MED. CTR. PO BOX 2000 FAYETTEVILLE 28302 U OF PITTSBURGH	PTH AC 59 60 70 919 323-6149	WRIGHT, EUGENE EDWARD, JR. 1738 METROMEDICAL DR. FAYETTEVILLE 28304 DUKE	IM AC 78 79 82 919 323-2503
TRAN, LUCAS VAN 101 ROBESON ST. STE. 410 FAYETTEVILLE 28301 SAIGON U	N AC 76 83 86 919 483-5050	WETTER, JAMES MICHAEL 1601-B OWEN DRIVE FAYETTEVILLE 28306 ST U OF NY-BUFF	FP AC 74 78 79 919 323-1152	ZELLNER, ERIC G. B. 2129 ROLLING HILLS RD. FAYETTEVILLE 28304 U OF MONTERREY	PM AC 81 82 86 919 323-6036

29. DAVIDSON COMPONENT SOCIETY

OFFICERS—President: Dale M. Mandel, M.D., 105 Pineywood Rd., P.O. Box 1187, Thomasville 27360 (919 475-7148)
Secretary: Donald W. Bosken, M.D., 400 Randolph Rd., Thomasville 27360 (919 475-7163)
Executive Secretary: Kay K. Saintsing, P.O. Box 1642, Lexington 27292 (704 243-2629)

ABBOTT, THOMAS DEAN RIPPLE BLDG. PO BOX 120 WELCOME 27374 U OF VIRGINIA	FP AC 83 84 86 704 731-4006	BYRNES, THOMAS H., JR. 309 PINEYWOOD ROAD THOMASVILLE 27360 DUKE	IM /CD AC 63 63 71 919 475-8121	FEDDER, MARC 208-D W. CENTER STREET P. O. BOX 557 LEXINGTON 27292 AUTONOMA UNIV	IM /ID AC 75 79 84 704 249-4296
ALEXANDER, H. ANTHONY 209 PINEYWOOD RD. THOMASVILLE 27360 BOWMAN GRAY	IM AC 85 87 82 919 475-8121	CABRAL, DEBORAH BARBARA 208-B W. CENTER ST. LEXINGTON 27292 ST U OF NY-BUFF	FP AC 80 82 85 704 249-2921	FUTRELL, THOMAS MILTON 201 W. HOLLY HILL ROAD THOMASVILLE 27360 TEMPLE U	FP AC 80 81 84 919 475-9164
ARNOLD, TERRY VINCENT 13 MEDICAL PARK DR. LEXINGTON 27292 OHIO STATE U	IM AC 73 74 80 704 249-7051	CATHELL, EDWIN JENNINGS P. O. BOX 440 LEXINGTON 27292 EMORY U	GS L/RT 30 30 32 704 246-2745	GILLIAM, CHARLES FRANKLIN 200 ARTHUR DRIVE THOMASVILLE 27360 U OF MARYLAND	PD AC 52 52 54 919 475-2348
BLACK, JAMES FRANKLIN 200 W. CAROLINA AVE. LEXINGTON 27292 U OF NC	OBG AC 75 75 75 704 243-2431	CITRIN, KERRY ALAN 105 PINEYWOOD ROAD P. O. BOX 1187 THOMASVILLE 27360 HAHNEMANN	GS AC 70 75 78 919 475-7148	HARRIS, SAMUEL RANCHOR 7 MEDICAL PARK DRIVE LEXINGTON 27292 U OF NC	OBG AC 68 68 75 704 243-2431
BLACKWELL, OSCAR MOORE, III 309 PINEYWOOD ROAD THOMASVILLE 27360 EMORY U	IM /BE AC 74 75 78 919 475-8121	CRANFORD, HAROLD DAVIS 22 YOUNG DR. PO BOX 747 LEXINGTON 27292 DUKE	OPH AC 56 56 59 704 249-7544	HEDGPETH, JOSEPH ROWLAND 1302 LEXINGTON AVENUE THOMASVILLE 27360 BOWMAN GRAY	OBG AC 66 66 73 919 475-6139
BOLSTAD, KARL EDWARD 14 MEDICAL PARK DR. LEXINGTON 27292 U OF MICHIGAN	ORS AC 72 73 80 704 249-2978	CRAVEN, NICHOLAS SCOTT 123 EASTSIDE DR. LEXINGTON 27292 DUKE	FP /P AC 62 62 78 704 246-2253	HIGHSMITH, GEORGE PERRY 309 PINEYWOOD ROAD THOMASVILLE 27360 BOWMAN GRAY	IM AC 46 46 50 919 475-8121
BOSKEN, DONALD WILLIAM 400 RANDOLPH ROAD THOMASVILLE 27360 U OF KANSAS	FP AC 74 74 78 919 475-7163	DACUS, ROBERT MABRY, III 1302 LEXINGTON AVENUE THOMASVILLE 27360 BOWMAN GRAY	OBG AC 65 65 71 919 475-6139	HUNTER, JAMES EDWARD 1057 RANDOLPH ROAD THOMASVILLE 27360 CASE WESTERN RES	IM /BE AC 62 62 69 919 475-8121
BRODER, MICHAEL SYLVAN PO BOX 789 THOMASVILLE 27360 ALBERT EINSTEIN	DR AC 69 70 80 919 472-2000	DEANG, CEDRIC RODRIGUEZ 1300 LEXINGTON AVENUE THOMASVILLE 27360 FAR EAST U	GS AC 63 74 78 919 475-2376	HURST, DAVID MAURICE 1003 PINE NEEDLE LANE THOMASVILLE 27360 U OF TENNESSEE	R /NM AC 62 62 69 919 475-3056
BURCHEL, HAROLD CURTIS 201 W. HOLLY HILL ROAD THOMASVILLE 27360 SUNY-SYRACUSE	FP AC 67 67 73 919 475-2915	DIXON, DIRK STANCILL, SR. P. O. BOX 1532 LEXINGTON 27292 BOWMAN GRAY	R AC 65 65 80 919 249-1515	LENAHAN, DEBORAH S. 2 HOSPITAL DR. LEXINGTON 27292 U OF ALABAMA	OPH AC 78 79 84 704 243-2436
BURKE, JAMES OTIS, JR. 8 MEDICAL PARK DRIVE LEXINGTON 27292 U OF NC	PD AC 65 65 71 704 249-4911	DORTON, PHILLIP KEVIN 1302 LEXINGTON AVE. THOMASVILLE 27360 U OF NC	OBG AC 80 81 84 919 475-6139	LEONARD, JACOB C., JR. 119 W. SECOND AVE. LEXINGTON 27292 JEFFERSON	OTO /OPH L/RT 28 28 31 704 246-5295
BUSBY, WILLIAM JARVIS 105 PINEYWOOD ROAD THOMASVILLE 27360 U OF NC	ORS AC 70 72 81 919 475-8141			LOHR, DERMOT 20 VANCE CIRCLE LEXINGTON 27292 JEFFERSON	PH L/RT 34 34 38 704 246-2626

29. DAVIDSON COMPONENT SOCIETY (Continued)

LOHR, LLOYD DERMOT 7 MEDICAL PARK DRIVE LEXINGTON 27292 U OF NC	OBG AC 61 61 69 704 243-2431	SLYMAN, JAMES FRANCIS 2 HOSPITAL DR. LEXINGTON 27292 BOWMAN GRAY	OPH AC 77 78 82 704 243-2436	UPPIN, A. S. 400 E. CENTER STREET LEXINGTON 27292 BARODA U	GS AC 61 62 73 704 249-2991
MANDEL, DALE MASON 105 PINEYWOOD RD. BOX 1187 THOMASVILLE 27360 U OF BOLOGNA	GS/TRS AC 77 80 85 919 475-7148	SMITH, DAVID CLARK 102 WESTOVER DRIVE LEXINGTON 27292 BOWMAN GRAY	IM L/RT 43 44 48 704 246-2929	VOLKMER, DONALD DURHAM OLD 29-70 SOUTH P. O. BOX 579 LEXINGTON 27292	IM AC 72 79 84 704 249-7785
MOCK, DAVID CARLTON 208-C W. CENTER STREET LEXINGTON 27292 BOWMAN GRAY	GP L/RT 46 46 50 704 246-5826	STEPP, HESTLEY DANARD 200 ARTHUR DRIVE THOMASVILLE 27360 BOWMAN GRAY	PD AC 59 59 71 919 475-2348	WELBORN, JAMES TODD 17 E. SECOND AVENUE LEXINGTON 27292 U OF MARYLAND	FP AC 48 48 50 704 246-5625
PETERSEN, KENNETH MICHAEL 4 MEDICAL PARK DR. LEXINGTON 27292 DOWNSTATE ME CTR	GS/CDS AC 74 74 81 704 246-2487	STRADER, EUGENE RAY 901 E. CENTER STREET LEXINGTON 27292 BOWMAN GRAY	FP AC 56 56 58 704 249-1200	WILLIAMS, DAVID ROBERT 200 ARTHUR DRIVE THOMASVILLE 27360 U OF NC	PD AC 63 63 69 919 475-2348
PHELAN, JOHN WILLIAM J. 503 WILLOW DR. THOMASVILLE 27360 MED SCH-UMDNJ	P/IM AC 61 62 85 919 475-8184	STRADER, HUNTER G., JR. 2 CHERRY STREET LEXINGTON 27292 DUKE	FP AC 58 58 63 704 249-9626	WILLMOT, MICHAEL HENRY PO BOX 993 THOMASVILLE 27361 U OF MISSISSIPPI	GS AC 75 75 82 919 472-4433
PHILLIPS, MARVIN WORTH P. O. BOX 367 THOMASVILLE 27360 MED COLL OF VA	FP AC 45 45 49 919 472-7262	SUTTLE, EVELYN AMY 244 FAIRVIEW DRIVE LEXINGTON 27292 U OF TENNESSEE	PD AC 78 81 84 704 246-4333	WOLFBURG, BERNARD 17 CUB DR. THOMASVILLE 27360 CHICAGO MED SCH	P AC 69 69 84 919 475-8184
PLUMMER, CHARLES WAYNE 50 E. MAIN ST., STE. 111 THOMASVILLE 27360 DUKE	AN AC 78 81 85 919 472-2000	TEAM, ROBERT ALSTON 2 CHERRY STREET LEXINGTON 27292 BOWMAN GRAY	FP AC 52 52 57 704 246-4539	YORK, SHELLEY CLYDE, JR. 1300 LEXINGTON AVENUE THOMASVILLE 27360 U OF MARYLAND	GS AC 51 52 59 919 475-2376
REDWINE, JAMES DANIEL 6 WILLIAMS CIRCLE LEXINGTON 27292 EMORY U	GP L/RT 31 31 34 704 246-2658	THOMPSON, WILLIAM KEITH 200 ARTHUR DRIVE THOMASVILLE 27360 BOWMAN GRAY	PD AC 69 69 77 919 475-2348		
REID, JAMES EDWARD, JR. 103 W. 6TH AVE. LEXINGTON 27292 EAST CAROLINA U	AC 82 87 80 919 246-5161	TOLLIVER, JAMES BERT 510-A TURNER STREET THOMASVILLE 27360 U OF LOUISVILLE	FP AC 60 61 76 919 475-9171		

31. DUPLIN COMPONENT SOCIETY

OFFICERS—**President:** C. L. Quinn, M.D., 116 N. R.R. St., Magnolia 28453 (919 289-4165)**Secretary:** Corazon Ngo, M.D., P.O. Box 538, Kenansville 28349**Executive Secretary:** Alice Ross, P.O. Box 538, Kenansville 28349 (919 296-1811)

AMMAR, MOHAMED IBRAHIM P. O. BOX 468 KENANSVILLE 28349 U OF AIN SHAMS	OBG AC 65 80 82 919 296-1666	HAWES, CHARLES FOREST P. O. BOX 486 ROSE HILL 28458 NORTHWESTERN U	GP L/RT 33 32 39 919 289-2739	POPE, SAMUEL A. BEULAVILLE 28518 U OF PENN	IM L/RT 35 35 52 919 298-3193
BLAIR, JAMES SEABORN, JR. 400 E. MAIN STREET WALLACE 28466 U OF MARYLAND	FP AC 47 47 50 919 285-2134	HAYNES, CARL LEWIS, JR. PO BOX 850 ROSE HILL 28458 U OF NC	FP AC 80 81 85 919 289-3027	QUINN, CORBETT LATIMER 112-116 N. R.R. ST. MAGNOLIA 28453 U OF MARYLAND	FP/PH AC 53 53 55 919 289-4165
BOYETTE, EDWARD LEE CHINQUAPIN 28521 BOWMAN GRAY	FP/CD AC 54 54 56 919 285-3481	MATTHEWS, GEORGE POWERS P. O. BOX 609 ROSE HILL 28458 TEMPLE U	GP AC 43 43 47 919 289-2330	QUINN, MARSHALL K. PO BOX 189 MAGNOLIA 28453 BOWMAN GRAY	FP AC 83 83 83 919 289-4165
DIETRICK, RONALD BURTON KENANSVILLE SURGICAL CLINIC BOX 845 KENANSVILLE 28349 U OF PENN	GS/TS AC 53 53 85 919 296-0545	NAGA, AHMED HADY P. O. BOX 708 KENANSVILLE 28349 ALEXANDRIA U	DR AC 49 71 74 919 296-0701	RICCI, DANIEL MICHAEL 701 WARDS BRIDGE RD. WARSAW 28398 HAHNEMANN	IM AC 83 84 87 919 289-3086
EWERS, EDWIN PATTERSON P. O. BOX 487 WARSAW 28398 MED COLL OF VA	FP L/RT 35 36 39 919 293-4432	NGO, CORAZON PO BOX 538 KENANSVILLE 28349 U OF SANTO TOMAS	IM AC 65 65 74 919 296-1811	SUTTON, WILLIAM WAYNE 337 N. NORWOOD STREET WALLACE 28466 U OF NC	FP AC 59 59 60 919 285-2111
GOUDARZI-LANGROUDI, M. K. 219 E. MAIN ST. WALLACE 28466 U OF LONDON	GS/GP AC 78 78 88 919 285-7942	PATE, CARL DANIEL, JR. PO BOX 986 BEULAVILLE 28518 U OF NC	FP AC 82 83 84 919 757-4100		

32. DURHAM-ORANGE COMPONENT SOCIETY

OFFICERS—**President:** W. Woodrow Burns, M.D., 901 Willow Dr., Chapel Hill 27514 (919 967-8258)**Secretary:** William N. P. Herbert, M.D., UNC, CB #7570, 214 MacNider Bldg., 202-H, Chapel Hill 27599 (919 966-1601)**Executive Secretary:** Jerry H. Nance, 419 Dickson Mill Rd., Durham 27705 (919 383-2602)

ABRAMSON, MURRAY A. 3007 GLENDALE AVE. DURHAM 27704 DUKE	S 91 88 919 477-3869	ACKER, JEFFREY CHARLES 2209 MOREHEAD AVE., APT. #2 DURHAM 27707 DUKE	S 89 85 919 493-1678	ADAMS, B. JEANNE S. 1110 W. MAIN STREET DURHAM 27701 DUKE	PSF/HNS AC 76 77 80 919 682-9341
--	-----------------------------------	--	-----------------------------------	---	---

32. DURHAM-ORANGE COMPONENT SOCIETY (Continued)

ADAMSON, WM. TALBOT 3222 COACHMAN'S WAY DURHAM 27705 DUKE	90	S 87	ANDERSON, JAY ARTHUR UNC BURNETT-WOMACK 229H DEPT. OF ANES,CB #7010 CHAPEL HILL 27599 U OF NC	84	AN 85 AC 85	BAKER, MARK EARLY DUMC, BOX 3808 DURHAM 27710 LOYOLA U	78	DR 79 AC 83
ADER, OTTIS LADEAU PO BOX 507 WALKERTOWN 27051 U OF PENN	25	PH L/RT 25 51	ANDERSON, PAGE A. W. BOX 3218, DUKE MEDICAL CTR. DURHAM 27710 DUKE	64	PDC AC 65 80	BAKEWELL, WILLIAM ERNEST, JR. N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514 MCGILL U	49	P AC 60 61
AHLUWALIA, JASJIT S. 601 JONES FERRY RD. A-15 CARRBORO 27510 TULANE U	87	IM R 87 87	ANDERSON, W. BANKS, JR. DUKE UNIVERSITY EYE CTR. DURHAM 27710 HARVARD	56	OPH AC 56 60	BARADA, FRANC A., JR. 2609 N. DUKE ST. DURHAM 27704 U OF VIRGINIA	71	RHU /IM AC 71 82
AITKEN, MARY ELIZABETH 308 BRIARBRIDGE VALLEY RD. CHAPEL HILL 27514 U OF NC	88	S 85	ANDERSON, TERESA T. 104 SILO COURT CARY 27511 U OF NC	90	S 87	BARBEE, JOYCE E. 407 HILLSBOROUGH ST. CHAPEL HILL 27514 U OF NC	91	S 87
AKWARI, ANNE MICHEAUX IBM CORPORATION 657/205 P. O. BOX 12195 RESEARCH TRIANGLE PK 27709 HOWARD U	76	OM /IM AC 76 85	ANDRESEN, JEFFRY JOHN UNC, CB #7160, WING C. DEPT. OF PSYCHIATRY CHAPEL HILL 27599 U OF PENN	64	PYA /P AC 64 71	BARBORIAK, PETER N. 2748 MIDDLETON #14B DURHAM 27705 DUKE	89	S 87
AKWARI, ONYEKWERE E. BOX 3076, DUMC DURHAM 27710 U OF SOU CALIF	70	GS AC 70 87	ANDREWS, PAUL STEPHEN 2609 N. DUKE ST. STE. 204 DURHAM 27704 U OF NC	81	OBG AC 81 79	BARKER, RUDY WATKINS 2609 N. DUKE ST., STE. 204 DURHAM 27704 U OF NC	67	OBG AC 67 74
ALDRICH, HARRY RANDOLPH BOX 31264, DUMC DURHAM 27710 DUKE	86	R 00 83	ANDREWS, ROBERT WILLIAM 923 BROAD ST. DURHAM 27705 BOWMAN GRAY	80	U AC 85 85	BARRY, DAVID WALTER BURROUGHS WELLCOME CO. 3030 CORNWALLIS ROAD RESEARCH TRIANGLE PK 27709 YALE	69	IM /ID AC 70 84
ALLEN, ELIZABETH 3333 CHAPEL HILL BLVD. DURHAM 27707 U OF TENNESSEE	58	P AC 58 71	ANGELILLO, JOHN CHARLES DUKE MEDICAL CENTER DIV. OF PLASTIC SURGERY DURHAM 27710 DUKE	70	MFS AC 70 76	BARWICK, WILLIAM JAMES BOX 3098, DUMC DURHAM 27710 U OF TENNESSEE	71	PS AC 71 85
ALLEN, JAMES LATHAN 1821 GREEN STREET DURHAM 27705 EMORY U	65	OBG AC 65 74	ANLYAN, WILLIAM GEORGE BOX 3701, DUMC DURHAM 27710 YALE	49	GS AC 51 56	BASSETT, FRANK HOUSTON, III DUKE UNIV. MED. CTR. DURHAM 27710 U OF LOUISVILLE	57	ORS AC 58 64
ALLEN, LEE F. 5519 WESCOTT PLACE DURHAM 27712 MED SCH-UMDNJ	87	R 87 87	ANSCHER, MITCHELL S. BOX 3085, DUMC DURHAM 27710 MED COLL OF VA	81	TR /IM AC 82 87	BATTISTONE, MICHAEL J. 886 LOUISE CIR. APT. 26F DURHAM 27705 DUKE	91	GP /ID S 88
ALLEN, RODNEY H. 14736 VALIANT TERR. BURTONSVILLE, MD 20866 U OF NC	88	OBG /END S 88 84	ANTHONY, DOUGLAS C. BOX 3712, DUMC DURHAM 27710 DUKE	84	PTH AC 86 87	BAYLIN, GEORGE JAY CAROLINA MEADOWS I-305 CHAPEL HILL 27514 DUKE	37	DR /OTO L/RT 41 42
ALLF, BRYAN EWING 3120 OXFORD DR. DURHAM 27707 DUKE	87	OPH R 88 84	ANTOSZYK, ANDREW NICHOLAS 3116 STANFORD DRIVE DURHAM 27707 NEW YORK MED COL	83	OPH R 83 84	BECHTOLDT, ALBERT A., JR. UNC, DEPT. OF ANES. CHAPEL HILL 27514 YALE	61	AN AC 61 69
ALSPAUGH, JAMES A., II 211 MELVILLE LOOP #13 CHAPEL HILL 27514 DUKE	91	S 87	ARENA, JAY MORRIS DUKE HOSPITAL, BOX 3024 DURHAM 27710 DUKE	32	PD L 32 39	BECKWITH, MARY KRISTINE 1821 GREEN ST. DURHAM 27705 U OF IOWA	82	OBG AC 82 86
ALTSHULLER, LILLIS F. 1301 FAYETTEVILLE ST. DURHAM 27707 CASE WESTERN RES	54	PD AC 54 86	ARMSTRONG, MICHAEL, JR. 4335-B AMERICAN DR. DURHAM 27705 DUKE	89	S 85	BEDROSIAN, CAMILLE LUCIA 9-A TARAWA TERRACE DURHAM 27705 HARVARD	83	IM R 84 84
ALVA, JUAN 609 VICKERS AVENUE DURHAM 27701 ST LOUIS U	60	GE /IM AC 60 81	ATSTUPENAS, ELIOT ANTHONY STRATFORD HILLS APTS. 12-D CHAPEL HILL 27514 U OF NC	89	S 85	BELL, DOROTHY MCFARLAND 1110 W. MAIN ST. DURHAM 27701 U OF CHICAGO	75	OPH AC 75 80
ALVERSON, LISA KAY 101 HOMESTEAD RD. APT. 1107 CHAPEL HILL 27514 U OF NC	89	S 86	AYSCUE, LANIER HASTY 813 EMORY DR. CHAPEL HILL 27514 U OF NC	89	S 86	BELL, ELIZABETH ANNE 423 WHITEHEAD CIRCLE CHAPEL HILL 27514 U OF NC	90	S 85
ALYEA, EDWIN PASCAL, III 13 PINNACLE RD. DURHAM 27705 DUKE	89	S 86	BACON, DAVID SCOTT 4138 DEEPWOOD CIR. DURHAM 27707 DUKE	90	S 87	BELL, WILLIS HARVEY, II 2027 WAWA AVENUE DURHAM 27707 DUKE	64	IM /PUD RT 64 70
AMATO, MARY THERESA 822 LANCASTER ST. APT. #2 DURHAM 27701 DUKE	91	S 88	BAILEY, CLARENCE A., JR. 1824 HILLDALE ROAD DURHAM 27705 U OF NC	58	PD /AI AC 63 64	BERGANT, JAMES ALLEN 2609 N. DUKE ST., SUITE 302 DURHAM 27704 U OF KANSAS	69	U AC 70 76
AMAYA, MARCELINO 2928 FRIENDSHIP ROAD DURHAM 27705 NAT U OF MEXICO	54	CHP /P AC 65 66	BAKER, KRISTIN D. 516 CHATEAU APTS. CARRBORO 27510 U OF NC	89	S 85	BERGER, GARY STERLING 109 CONNER DR., STE. 2104 CHAPEL HILL 27514 U OF ROCHESTER	69	OBG /PH AC 73 76
ANDERSON, EDWARD EVERETT DUKE UNIV. MEDICAL CTR. DURHAM 27710 DUKE	58	U AC 59 65	BAKER, LENOX DIAL BOX 3706, DUMC DURHAM 27710 DUKE	34	ORS L/RT 35 37	BERGLUND, LAURA H. 5605 HIDEAWAY DR. CHAPEL HILL 27516 U OF NC	89	S 86
	919	684-3448		919	684-2628		919	967-1928

32. DURHAM-ORANGE COMPONENT SOCIETY (Continued)

BERNHARDT, PETER F. RT. #1 2505 HARDWOOD LN. HILLSBOROUGH 27278 DUKE	PTH R 86 86 86 919 471-8168	BOSWELL, JOHN IVERSON, JR. UNC, DEPT. OF PSYCHIATRY WING C, RM. 237, CB #7160 CHAPEL HILL 27599 U OF VIRGINIA	CHP /P AC 57 58 64 919 966-3379	BROMBERG, PHILIP ALLAN 724 CLI. SCI. BLDG. 229-H UNC, DIV. PULMONARY DISEASE CHAPEL HILL 27514 HARVARD	IM /PUD AC 53 68 81 919 966-2531
BERNSTEIN, ROSLYN JULIE 4617 HOPE VALLEY RD., APT. H DURHAM 27707 DUKE	IM R 85 00 82	BOWES, WATSON ALLEN, III 211 HUNTINGTON DR. CHAPEL HILL 27514 U OF NC	S 88 85 919 929-3323	BROSKIE, NANCY ELAINE K-12 THE VILLAGES APTS. CARRBORO 27510 U OF NC	S 91 85 919 966-0615
BEVIN, ABNER G., JR UNC, DIV. OF PLASTIC SURGERY CHAPEL HILL 27514 YALE	PS /GS AC 60 60 69 919 966-4446	BOWES, WATSON ALLEN, JR. UNC, DEPT. OF OBG 214 MACNIDER BLDG. 202-H CHAPEL HILL 27514 U OF COLORADO	OBG AC 59 60 86 919 966-1601	BROWN, DAVID WARREN 891 W. WILLOW DRIVE CHAPEL HILL 27514 U OF ROCHESTER	IM AC 67 68 81 919 942-5123
BIEHLER, DARREN FOSTER 816 E. 24TH ST. NEWTON 28658 U OF NC	S 88 86 919 942-9519	BOWLES, FRANCIS NORMAN 1019 FISH CROW ROAD SANIBEL, FL 33957 MED COLL OF VA	OBG L/RT 24 24 26 813 472-4436	BROWN, HOWARD RICHARD 4006 WESTFIELD DR. DURHAM 27705 U OF CA-IRVINE	ORS R 84 84 84 919 383-1617
BIGGERS, WILLIAM PAUL 610 BURNETT-WOMACK-229H UNC SCHOOL OF MEDICINE CHAPEL HILL 27514 U OF NC	OTO /A AC 63 63 69 919 966-3341	BOYD, WILLIAM MONROE, V #1 SPRING GARDEN APTS. CHAPEL HILL 27514 U OF NC	S 89 85 919 968-0106	BROWN, JOHN MARK BOX 93 POLKS LANDING STATION CHAPEL HILL 27516 U OF FLORIDA	IM /EM AC 84 85 87 919 929-4731
BILLICA, WILLIAM HARRY 2217 W. WINDSOR AVE. PHOENIX, AZ 85009 U OF NC	R 85 00 84 602 254-8052	BOZYMSKI, EUGENE MICHAEL UNC, DEPT. OF MEDICINE 324 CLINICAL SCI. BLDG. 229-H CHAPEL HILL 27514 M C OF WISCONSIN	GE /IM AC 60 60 69 919 966-2511	BROWN, SUSAN EVANS 5501 FORTUNE'S RIDGE, STE. A DURHAM 27713 GEORGETOWN U	FP AC 76 77 86 919 493-8877
BIRMINGHAM, LORRAINE FAITH 5035 HADRIAN DR. DURHAM 27703 DUKE	FP AC 81 84 86 919 596-0430	BRAASCH, ERNEST R. 4114 DEEPWOOD CIRCLE DURHAM 27707 DOWNSTATE ME CTR	P /PYA AC 70 73 87 919 493-2217	BROWN, TERRY MICHAEL 134 LOBLOLLY LANE CHAPEL HILL 27516 DES MOINES OST	P R 84 84 84 919 967-2590
BISCARDI, FRANK H. LAUREL RIDGE APTS. #29K 54 BYPASS CHAPEL HILL 27514 MED COLL OF VA	R 87 00 87 919 966-4131	BRAASCH, LESLEY KRIEGMAN 4114 DEEPWOOD CIRCLE DURHAM 27707 DOWNSTATE ME CTR	PYA /P AC 70 73 76 919 493-2217	BROWNEE, ROBERT CALVIN 111 SILVER CEDAR COURT CHAPEL HILL 27514 VANDERBILT U	PD AC 45 45 81 919 929-0461
BLAIR, JERRY RAY 14 GLEEWOOD PLACE, EAST DURHAM 27713 DUKE	S 90 86 919 544-5534	BRANTLEY, BERT ALTON, JR. 307 COLONY WOODS DRIVE CHAPEL HILL 27514 DUKE	ON AC 78 80 76 919 684-3695	BRUCH, RICHARD FRANKLIN TRIANGLE ORTHOPAEDIC ASSOC. 2609 N. DUKE STREET DURHAM 27704 U OF ILLINOIS	ORS /GER AC 72 73 77 919 471-8431
BLOCH, EDMOND CECIL BOX 3094, DUMC DURHAM 27710 U OF CAPE TOWN	AN AC 46 47 80 919 681-5737	BRANTLEY, INGRID JEAN 3510 UNIVERSITY DRIVE DURHAM 27707 DUKE	CHP /P AC 74 80 80 919 489-1884	BRYAN, JAMES ALEXANDER, II NC MEMORIAL HOSPITAL DEPT. OF MEDICINE CHAPEL HILL 27514 U OF PENN	IM /HEM AC 57 57 65 919 966-2268
BLOW, OSBERT 4800 UNIVERSITY DR. EXT. #20A DURHAM 27707 DUKE	R 87 00 87 919 490-1943	BRANTLEY, JEFFREY GARLAND 414 E. MAIN ST. DURHAM 27701 U OF NC	P AC 77 77 83 919 682-9296	BUCHANAN, ROBERT A., JR. 2609 N. DUKE ST., STE 403 DURHAM 27704 BOWMAN GRAY	CD /IM AC 69 69 74 919 471-8441
BLYTHE, WILLIAM BREVARD UNC, DEPT. OF MEDICINE CHAPEL HILL 27514 WASHINGTON U	IM /NEP AC 53 53 60 919 966-2565	BRASHEAR, HARRY ROBERT, JR. N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514 U OF CALIFORNIA	ORS L/RT 45 53 53 919 966-2030	BUCHANAN, SCOTT A. 2A CARSON CIRCLE DURHAM 27705 DUKE	S 91 87 919 383-8367
BOAT, THOMAS FREDERICK 2025 S. LAKESHORE DRIVE CHAPEL HILL 27514 U OF IOWA	PD /PUD AC 66 67 84 919 966-4427	BREAM, CHARLES ANTHONY N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514 TEMPLE U	DR L 40 52 52 919 966-1461	BUCKLEY, EDWARD GEORGE BOX 3802, DUKE EYE CENTER DURHAM 27705 DUKE	OPH /PD AC 77 78 79 919 684-6084
BOLESTA, MICHAEL JOSEPH 2074 ABINGTON RD. CASE WESTERN RESERVE UNIV. CLEVELAND, OH 44106 U OF MISSOURI	ORS R 81 81 81 216 844-3046	BRECHTLESBAUER, P. BRADLEY #6 HOLLAND DR. CHAPEL HILL 27514 U OF NC	S 90 88 919 968-1961	BUCKWALTER, JOHN D. RT. #7, BOX 60 DURHAM 27707 U OF NC	AN AC 82 85 87 919 470-4000
BOLLINGER, RALPH RANDAL BOX 2910, DUKE HOSPITAL DURHAM 27710 TULANE U	GS /IG AC 70 70 80 919 684-5209	BRENNER, WILLIAM E. 101 CONNER DR. STE. 402 CHAPEL HILL 27514 CASE WESTERN RES	OBG /NPM AC 62 62 69 919 942-0011	BUGG, EVERETT IRVING, JR. RT. #2, BOX 143 PITTSBORO 27312 JOHNS HOPKINS	ORS L 37 38 46 919 286-1249
BOMBERG, ROBERT BRYAN 2609 N. DUKE STREET DURHAM 27704 U OF COLORADO	IM AC 64 65 74 919 471-8446	BRESLIN, MARIANNE S. 500 EASTOWNE DR., STE. 115 CHAPEL HILL 27514 DUSSELDORF GER	P /PYM AC 46 60 61 919 493-2657	BUNCE, PAUL LESLIE ROUTE #7, BOX 646 CHAPEL HILL 27514 U OF CHICAGO	U L/RT 42 52 52 919 933-8766
BOND, PAMELA EATON 869 LOUISE CIRCLE DURHAM 27705 DUKE	S 89 85 919 383-8354	BRIGHT, ROBERT PAUL 2000 CONNECTICUT AVE., NW #716 WASHINGTON, DC 20008 U OF NC	S 90 86 919 968-6718	BURHANS, ROLLIN S., JR. 1830 HILLDALE ROAD DURHAM 27705 U OF LOUISVILLE	GS AC 63 63 71 919 383-5531
BONDURANT, STUART CB 7000, 125 MACNIDER BLDG. UNC SCHOOL OF MEDICINE CHAPEL HILL 27514 DUKE	IM AC 53 53 80 919 966-4161	BRINKHOUS, KENNETH MERLE UNC, DEPT. OF PATH., 228-H CHAPEL HILL 27514 U OF IOWA	PTH /HEM L 32 32 47 919 966-1061	BURNHAM, STEVEN JAMES UNC, DEPT. OF VS 229-H CLINICAL SCIENCE BLDG. CHAPEL HILL 27514 VANDERBILT U	GS AC 72 72 79 919 966-3391
BOSSEN, EDWARD HECHT BOX 3712, DUMC DURHAM 27710 DUKE	PTH AC 65 66 85 919 684-3300	BRODEUR, DAVID 4800 UNIVERSITY DR. #24B DURHAM 27707 DUKE	S 88 85 919 493-6718	BURNS, WALTER WOODROW, JR. 901 WILLOW DRIVE CHAPEL HILL 27514 U OF NC	GS AC 69 72 76 919 967-8258
		BRODIE, H. KEITH HAMMOND DUKE UNIV. ALLEN BLDG. RM 207 DURHAM 27706 COLUMBIA U	P AC 65 65 75 919 684-3220	BURT, JOSEPH MARK BOX 3889, DUMC DURHAM 27710 MICHIGAN ST U	R 83 87 87

32. DURHAM-ORANGE COMPONENT SOCIETY (Continued)

BURTON, CLAUDE SHREVE, III BOX 3511, DUMC DURHAM 27710 DUKE	D /IM AC 79 81 84 919 684-5037	CAVALLO, MARTYN J. 235 MCCAULEY ST. APT. C-6 CHAPEL HILL 27516 U OF NC	S 90 86 919 929-7786	CLARK, VIVIAN E. 120 CONNER DR., STE. 101 PO BOX 3317 CHAPEL HILL 27514 BOSTON U	GYN AC 81 82 86 919 942-8571
BUSER, STEVEN DONALD 534 MARSHALL WAY DURHAM 27705 DUKE	S 89 86 919 383-5653	CAZZANIGA, STEFANO L. 1611 DUKE UNIV. RD. APT. 1-E DURHAM 27701 DUKE	S 91 87 919 489-5105	CLEMENTS, DENNIS ALFRED, III 119 WISTERIA DR. CHAPEL HILL 27514 U OF ROCHESTER	PD /ID R 73 74 78 919 684-6610
BUSSE, EWALD WILLIAM BOX 2948, DUMC DURHAM 27710 WASHINGTON U	P /GER L 42 53 54 919 684-3416	CEFALO, ROBERT CHARLES 430 LAKESHORE LANE CHAPEL HILL 27514 TUFTS U	OBG /NPM AC 59 61 81 919 966-1601	CLENDENINN, NEIL J. 120 MEADOWBROOK DR. CHAPEL HILL 27514 NEW YORK U	AC 77 77 88
BUTTERLY, DAVID WM. 705 CROSSTIMBERS DR. DURHAM 27713 DUKE	R 87 87 87 919 684-8111	CHAMBERLIN, HARRIE ROGERS UNC, DEPT. OF PEDIATRICS CHAPEL HILL 27514 HARVARD	PD L/RT 45 53 53 919 966-5171	CLINE, JOHN WILLIAM 1110 W. MAIN STREET DURHAM 27701 MED COLL OF VA	OPH AC 58 63 68 919 682-9341
BUTTS, JOHN DAVIS, JR. OFF.OF CHIEF MED. EXAMINER CHAPEL HILL 27514 DUKE	FOP AC 72 73 79 919 966-2253	CHANDLER, ARTHUR CECIL, JR. 1830 HILLANDALE ROAD DURHAM 27705 DUKE	OPH AC 59 59 66 919 383-5531	CLIPPINGER, FRANK WARREN, JR. BOX 3935, DUMC DURHAM 27710 WASHINGTON U	ORS AC 52 54 58 919 684-4229
BYNUM, DONALD K., JR. 245 BURNETT-WOMACK BLDG. 229-H UNC SCHOOL OF MEDICINE CHAPEL HILL 27514 U OF TX-HOUSTON	ORS /HS AC 76 76 83 919 966-2030	CHANDLER, MARK C. N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514 U OF WISCONSIN	R 82 86 88 919 966-2025	CLYDE, WALLACE A., JR. UNC SCHOOL OF MEDICINE 229-H 535 BURNETT-WOMACK CLI SC BLDG CHAPEL HILL 27514 VANDERBILT U	PD /ID AC 54 55 63 919 966-2331
CALDWELL, DAVID STEWART BOX 2978, DUMC DURHAM 27710 BOWMAN GRAY	RHU /IM AC 71 71 77 919 684-3313	CHANG, YONG DAE ROYAL PARK - 2F CARRBORO 27510 U OF NC	S 91 87 919 945-4928	COBO, LIONEL MICHAEL BOX 3802, DUKE EYE CTR. DURHAM 27710 HARVARD	OPH AC 75 78 81 919 684-3799
CALLAWAY, JASPER LAMAR DUKE UNIV. MED. CTR. DURHAM 27710 DUKE	D L/RT 32 32 37 919 684-3432	CHAPMAN, SHELLEY J. 805-A W. MAIN ST. CARRBORO 27510 U OF NC	S 90 87 919 489-1241	CODY, RICHARD F., JR. 321 W. UNIVERSITY DR. CHAPEL HILL 27516 U OF NC	S 90 87 919 933-2056
CAMPBELL, JEFFREY PAUL 201 WESTBROOK DR., #D9 CARRBORO 27510 U OF NC	S 88 85	CHEEK, JOHN MERRITT, JR. 1414 KENT STREET DURHAM 27707 BOWMAN GRAY	GS L/RT 45 45 52 919 489-1241	COGGINS, DAVID ALLEN 1131-D SALEM DR. CHARLOTTE 28209 U OF NC	R 87 00 84 919 338-2000
CAMPBELL, PAUL THOMAS 3323 LASSITER ST. DURHAM 27707 TEMPLE U	R 85 85 85 919 471-9244	CHERRY, JEAN MICHELE 805-A W. MAIN ST. CARRBORO 27510 U OF NC	S 90 87	COHAN, RICHARD HARRIS 9 RABBITS GLEN TERRACE DURHAM 27713 NEW YORK U	DR AC 79 81 86 919 681-2711
CARNEY, CHARLES NOEL RT. #9, BOX 540-C CHAPEL HILL 27514 U OF ALABAMA	PTH AC 63 63 71 919 966-4676	CHOI, MINA NUI 805 JACKSON ST. DURHAM 27701 DUKE	S 91 88 919 688-7899	COHEN, KENNETH LEE UNC, DEPT. OF OPHTHALMOLOGY 617 CLINICAL SCI. BLDG. 229-H CHAPEL HILL 27514 U OF ILLINOIS	OPH AC 71 72 79 919 966-5296
CARR, JOHN FERGUSON, II 1200 BROAD ST. DURHAM 27705 U OF TENNESSEE	D AC 68 68 76 919 286-7903	CHOW, CAROLINE CHIA-LIN 501 DOWNING ST., APT. J DURHAM 27705 DUKE	S 89 86 919 383-2939	COHEN, MYRON SCOTT UNC, 547 BURNETT-WOMACK, 229-H CHAPEL HILL 27514 RUSH MED COLL	ID AC 74 74 85 919 966-2536
CARROLL, BARBARA ANNE P. O. BOX 1357 HILLSBOROUGH 27278 STANFORD U	R AC 72 73 85 919 684-2711	CHOW, GREGORY HENKUE #9 GEORGETOWN CT. DURHAM 27705 DUKE	S 88 84 919 383-6849	COHEN, NORMAN ALLEN 1512 KIRKWOOD DR. DURHAM 27705 JOHNS HOPKINS	R 85 86 88 919 684-8111
CARSON, CULLEY CLYDE, III BOX 3274, DUMC DURHAM 27710 GEO WASHINGTON U	U AC 71 72 79 919 684-2127	CHRISTAKOS, ARTHUR CHRIS BOX 2976, DUMC DURHAM 27710 MED U OF SC	GYN AC 55 64 65 919 684-4647	COLE, TOLLIE BOYCE BOX 3805, DUMC DURHAM 27710 U OF NC	OTO AC 62 62 69 919 684-6819
CARSON, SHANNON STEWART 42-A STRATFORD HILLS APTS. CHAPEL HILL 27514 U OF NC	S 89 86 919 968-8231	CHRISTENSEN, FRANK H. 109 CONNER DR., STE. 2207 CHAPEL HILL 27514 ST LOUIS U	OPH /PS AC 76 76 83 919 933-1294	COLEMAN, PETER R. 207 CONNER DR., APT. 22 CHAPEL HILL 27514 OTAGO MED SCH	FP /ALD R 80 86 86 919 929-2067
CARTER, JAMES HARVEY BOX 3106, DUMC DURHAM 27710 HOWARD U	P AC 66 66 79 919 684-6102	CHU, CHARLEEN T. BOX 2715, DUMC DURHAM 27710 DUKE	S 91 87 919 684-6164	COLEMAN, RALPH EDWARD DUMC, DEPT. OF RADIOLOGY DURHAM 27710 WASHINGTON U	NM AC 68 68 83 919 681-5454
CARVER, DONALD D. 4A COLLINS PARK APTS. 1212 COLLINS DR. BURLINGTON 27215 U OF NC	S 89 87 919 968-6403	CLAPP, JAMES ROBERT BOX 2991, DUMC DURHAM 27710 U OF NC	IM /NEP AC 57 57 82 919 684-6674	COLES, DEBRA LYNN 212 MCCAULEY ST. 1-B CHAPEL HILL 27514 U OF NC	IM S 88 85 919 968-1909
CARVER, GORDON MALONE, JR. 114 CRUTCHFIELD ST. DURHAM 27705 DUKE	TS /GS AC 48 50 56 919 286-1245	CLARK, CHARLES EDWARD, III 2609 N. DUKE ST. STE. 306 DURHAM 27704 U OF MICHIGAN	OTO /RHI AC 68 69 77 919 471-8700	COLEY, ELWOOD BROGDEN 2903 SHAW AVE. LUMBERTON 28358 U OF PENN	PD AC 52 52 55 919 739-3018
CASCIO, WAYNE E. CB 7075, BURNETT-WOMACK BLDG. 80 CHAPEL HILL 27599 U OF MARYLAND	CD /IM AC 80 82 88	CLARK, DOUGLAS WINSTON 306 S. GREGSON ST. DURHAM 27701 U OF NC	PD AC 83 85 86 919 688-6349	COLEY, SILAS BODIE, JR. 815 KENMORE ROAD CHAPEL HILL 27514 U OF NC	P /N AC 65 65 69 919 929-0326
CATO, ALLEN EASLEY, JR. RT. #2, BOX 470 HILLSBOROUGH 27278 DUKE	PD /PUD AC 69 69 77 919 248-2187	CLARK, RICHARD LEE ROUTE #4, BOX 529 CHAPEL HILL 27516 JOHNS HOPKINS	DR AC 66 66 74 919 966-4400	COLLIER, ALBERT MILFORD UNC, 535 CLI. SCIENCE BLDG CHAPEL HILL 27514 U OF MIAMI	PD /ID AC 63 63 72 919 966-2331

32. DURHAM-ORANGE COMPONENT SOCIETY (Continued)

COOK, PERRY FLETCHER 446 CENTRAL AVE. MERLO PARK, CA 94025 DUKE	88	S	D'ERCOLE, AUGUSTINE J. UNC CB 7220, BURNETT-WOMACK DEPT. OF PEDIATRICS #509 CHAPEL HILL 27514 GEORGETOWN U	PDE /NPM AC 69 69 79	DEJUAN, EUGENE, JR. BOX 3802, DUKE EYE CENTER DURHAM 27710 U OF SOU ALA	OPH AC 79 80 85
COOK, WESLEY ALLEN, JR. DUMC, DIV. OF NEURO-SURGERY DURHAM 27710 U OF OREGON	63 63 72	NS AC	DACEY, RALPH G., JR. UNC 148 BURNETT-WOMACK BLDG. DIV. OF NEUROSURGERY-229-H CHAPEL HILL 27514 U OF VIRGINIA	NS AC 74 79 87	DEMALLIE, DIANE A. 311 S. LASALLE ST. APT. 47B DURHAM 27705 DUKE	S 91 87
COONRAD, RALPH W. 1828 HILLANDALE ROAD DURHAM 27705 DUKE	47 50 55	ORS /HS AC	DAHNNERS, LAURENCE E. UNC, BURNETT-WOMACK BLDG. 229-H, CB #7055 CHAPEL HILL 27514 U OF ARIZONA	ORS AC 78 79 84	DENNY, FLOYD WOLFE, JR. BOX 3, WING D, CB #7240 UNC SCHOOL OF MEDICINE CHAPEL HILL 27599 VANDERBILT U	PD /ID AC 46 61 61
COOPER, HERBERT A. UNC, DB #7220 BURNETT-WOMACK BLDG. CHAPEL HILL 27599 U OF KANSAS	64 65 76	PHO /CLP AC	DALLDORF, FREDERIC GILBERT 308 WOODHAVEN RD. CHAPEL HILL 27514 CORNELL U	PTH AC 58 65 66	DERIAN, THOMAS C. 101 CONNER DR. STE. 200 CHAPEL HILL 27514 U OF MISSISSIPPI	ORS AC 81 85 87
COPPRIDGE, ALTON JAMES 923 BROAD STREET DURHAM 27705 U OF VIRGINIA	53 53 59	U AC	DALTON, JAMES D., JR. 311 S. LASALLE ST. APT. 5-E DURHAM 27705 DUKE	S 90 86	DEUTSCH, MARGARET ANN 605 JONES FERRY RD. #DD9 CARRBORO 27510 M C OF WISCONSIN	R 84 87 88
CORNISH, MARY HELD 903 GREEN ST. DURHAM 27701 MED U OF SC	83 84 88	R	DALY, JOHN T. P. O. BOX 15337 DURHAM 27704 CORNELL U	PTH /FOP AC 68 69 78	DEWALT, JOSEPH LEO IRIS LANE CHAPEL HILL 27514 U OF NC	IM /ORS AC 54 54 59
COUNDOURIOTIS, ANDREW 1408 WASHINGTON ST. DURHAM 27701 DUKE	87 00 85	R	DANFORD, JERRY LEE 1830 HILLANDALE ROAD DURHAM 27705 DUKE	GYN AC 67 67 72	DIMMIG, THOMAS A. 2609 N. DUKE ST. DURHAM 27704 DUKE	ORS AC 76 77 84
COVINGTON, DONALD SCOTT RT. #11, BOX 94 CHAPEL HILL 27514 U OF NC	89 85	S	DANIEL, JOHN THOMAS, JR. 415 DUNSTAN STREET DURHAM 27707 HOWARD U	GS AC 64 64 72	DINAPOLI, RAPHAEL JOSEPH, JR. 1985 UMSTEAD DR. RALEIGH 27603 DOWNSSTATE ME CTR	PH /AM AC 59 64 81
COX, JOHN BALDWIN 4511 ROLLINGWOOD DR. DURHAM 27713 GEO WASHINGTON U	83 86 86	PUD /IM R	DANIS, MARION UNC DEPT. OF MEDICINE 5025-A OLD CLINIC BLDG. CHAPEL HILL 27514 U OF CHICAGO	IM AC 75 78 86	DINGFELDER, JAMES RAY 700 EASTOWNE DR., STE. 200 CHAPEL HILL 27514 JEFFERSON	OBG AC 65 66 72
CRAIN, BARBARA JEAN 106 FOXRIDGE COURT CHAPEL HILL 27514 DUKE	79 79 85	PTH AC	DAVIS, CLINTON B., II 2609 N. DUKE ST. DURHAM 27704 DUKE	ORS AC 81 87 87	DONOHUE, JAMES FRANCIS UNC, 724 BURNETT-WOMACK CHAPEL HILL 27514 MED SCH-UMDNJ	PUD /IM AC 69 69 84
CRANE, GEORGE WILLIAM, JR. 1200 BROAD STREET DURHAM 27705 NORTHWESTERN U	46 49 49	D AC	DAVIS, CORNELIUS A., III 501-G DOWNING ST. DURHAM 27705 DUKE	S 89 87	DRAFFIN, RICHARD MARION 3643 N. ROXBORO STREET DURHAM 27704 DUKE	PTH AC 75 77 83
CRANE, LARRY MARTIN 24 CHANCERY PLACE DURHAM 27707 BAYLOR	68 68 74	DR AC	DAVIS, JAMES EVANS 2609 N. DUKE ST., STE. 402 DURHAM 27704 U OF PENN	GS /TS AC 43 43 51	DROEGEMUELLER, WILLIAM 908 WOODBINE DR. CHAPEL HILL 27514 U OF COLORADO	GYN AC 60 61 85
CRISCO, LARRY V. 1210 ROOSEVELT DR. CHAPEL HILL 27514 U OF NC	91 88	S	DAVIS, JAMES NORMAN V. A. MEDICAL CTR., NEUR. DURHAM 27705 CORNELL U	N AC 65 65 84	DROSSMAN, DOUGLAS A. UNC, 324 CLINICAL SCIENCE BLDG CHAPEL HILL 27514 ALBERT EINSTEIN	GE /PYM AC 70 71 79
CROMARTIE, WILLIAM JAMES 804 FLOB 23L-H/DEPT. MIC. & IMMU UNC SCHOOL OF MEDICINE CHAPEL HILL 27514 EMORY U	37 37 43	ID L	DAVIS, KEITH ALAN 102 RAINBOW DR. CARRBORO 27510 U OF NC	S 88 86	DUNN, LAWRENCE ANTHONY 600 COLGATE DURHAM 27704 U OF MICHIGAN	P R 84 84 85
CROOM, ROBERT DEVANE, III NCMH, DEPT. OF SURGERY CHAPEL HILL 27514 U OF NC	64 64 74	GS AC	DAVIS, WALTER ETHELLES 1830 HILLANDALE ROAD DURHAM 27705 DUKE	ON /HEM AC 66 66 75	DUNPHY, DONAL LEO UNC, DEPT. OF PEDIATRICS CHAPEL HILL 27514 YALE	PD AC 44 45 74
CROSS, ALAN WHITEMORE CLINICAL SCIENCES BLDG. UNC, DEPT. OF PEDIATRICS CHAPEL HILL 27514 COLUMBIA U	70 75 80	PD /GPM AC	DAWSON, ROBERT EDWARD 512 SIMMONS STREET DURHAM 27701 MEHARRY MED COLL	OPH L/RT 43 43 69	DUTTON, JONATHAN JOSEPH BOX 3802, DUKE EYE CENTER DURHAM 27710 WASHINGTON U	OPH /ON AC 77 77 83
CROW, LAURA LOMAX 202 TALLYHO TRAIL CHAPEL HILL 27514 U OF NC	85 85 84	R	DEANGELIS, WASHINGTON J. 1001 S. HAMILTON ROAD CHAPEL HILL 27514 U OF URUGUAY	FP /DIA AC 59 59 71	DYKES, JAMES RUSSELL 114 SWIFT AVE. DURHAM 27705 DUKE	FP AC 80 81 84
CULTON, YANCEY GOELET, JR. 2609 N. DUKE ST. STE. 503 DURHAM 27704 DUKE	56 56 68	GYN AC	DEES, JOHN ESSARY DUKE HOSPITAL DURHAM 27710 U OF VIRGINIA	U L/RT 33 33 40	EARNHARDT, RICHARD CRAIG 2836 CHAPEL HILL RD. APT. 30-B DURHAM 27707 DUKE	S 89 85
CURNES, JOHN TAYLOR BOX 3808, DUMC DEPT. OF RADIOLOGY DURHAM 27710 TULANE U	78 78 86	R /NUR AC	DEES, SUSAN COONS BOX 2913, DUMC DURHAM 27710 JOHNS HOPKINS	PDA /PD L 34 34 41	EARP, HENRY SHELTON, III UNC, DEPT. OF MEDICINE CHAPEL HILL 27514 U OF NC	END /IM AC 70 71 79
CUTSON, TONI MICHELE 9 GORHAM PL. DURHAM 27705 MED COLL OF VA	80 81 85	FP /GER R	DEGNORE, LISA TIFFANY 432 FEARRINGTON POST PITTSBORO 27312 U OF MICHIGAN	R 86 00 88	EASLEY, ELEANOR BEAMER 141 CAROL WOODS CHAPEL HILL 27514 DUKE	GYN /OBS L/RT 34 40 40

32. DURHAM-ORANGE COMPONENT SOCIETY (Continued)

EASTERLING, WILLIAM E., JR. UNC SCHOOL OF MEDICINE CHAPEL HILL 27599 U OF NC	GYN /END AC 56 56 64 919 966-5214	FEATHERSTON, MARK W. 134 LANDBURY DR. DURHAM 27707 DUKE	S 89 87 919 493-9264	FLICK, CONRAD L. BOX 2734, DUMC DURHAM 27710 DUKE	S 89 86 919 471-4905
EATON, LISLE A., JR. 8 WHITE OAK TR. CHAPEL HILL 27516 U OF VERMONT	PTH R 86 86 88 919 966-4334	FEESER, SCOTT ALAN 700 MORRENE RD. B7 DURHAM 27705 DUKE	S 90 87 919 383-7092	FLOYD, WALTER LAWRENCE BOX 2997, DUMC DURHAM 27710 JOHNS HOPKINS	CD /IM AC 54 56 59 919 684-2845
EBELING, JAMES GERARD 3742 SWARTHMORE RD. DURHAM 27707 DUKE	IM R 85 00 82 919 471-2044	FELDMAN, MARC DAVID 1315 MOREENE RD. APT. 21E DURHAM 27705 DARTMOUTH U	R 84 85 88 919 286-0411	FORDHAM, CHRISTOPHER C., III UNC, 103 SOUTH BLDG. 005-A CHAPEL HILL 27514 HARVARD	IM /NEP AC 51 51 56 919 962-1365
EDKINS, PATRICIA TEAGUE RT. #4, BOX 357 CHAPEL HILL 27516 U OF NC	TR AC 80 81 78 919 966-1101	FEREBEE, ANGELA 101 HOMESTEAD RD. #916 CHAPEL HILL 27516 U OF NC	S 91 88 919 929-6442	FORMAN, MARK STUART 803 GREEN ST. DURHAM 27701 DUKE	S 89 85
EHLE, ALBERT LAWRENCE UNC, 751 BURNETT-WOMACK CHAPEL HILL 27514 U OF WASHINGTON	N AC 67 72 83 919 966-3707	FERGUSON, BERRYLIN JUNE 1830 HILLDALE RD. DURHAM 27705 DUKE	OTO /A AC 80 81 85 919 383-5531	FOSTER, WILLIAM LEICESTER, JR. DUMC, DEPT. OF RADIOLOGY DURHAM 27710 DUKE	R AC 74 74 80 919 286-0411
EIFRIG, DAVID ERIC UNC, DEPT. OF OPHTHALMOLOGY CHAPEL HILL 27514 JOHNS HOPKINS	OPH AC 60 60 80 919 966-5296	FERGUSON, GEORGE BURTON 1110 W. MAIN STREET DURHAM 27701 JEFFERSON	OTO L 32 32 38 919 682-9341	FOULKS, GARY NEAL BOX 3802, DUKE UNIV. EYE CTR. DURHAM 27710 COLUMBIA U	OPH AC 70 71 78 919 684-6417
EISENBERG, EDWARD F. 600 DULUTH ST. DURHAM 27705 U OF MIAMI	R 82 00 88 919 966-5136	FERNALD, GERALD WALLACE N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514 U OF NC	PD /ID AC 60 60 68 919 966-2069	FOWLER, JOHN ALVIS 2721 SPENCER ST. DURHAM 27705 BOWMAN GRAY	PYA /CHP L/RT 46 46 54 919 489-5339
ELKORDY, MAHA ABDUL-HAFEZ 3144 MERRIANNE DR. RALEIGH 27607 U OF NC	S 88 84 919 942-7699	FETTER, BERNARD FRANK DUKE UNIV. MEDICAL CENTER DURHAM 27710 DUKE	PTH /DMP AC 44 44 53 919 684-3685	FOX, ELISABETH JUNE BOX 3083, DUMC DURHAM 27710 U OF LONDON	AN AC 55 67 78 919 681-3560
ENRIGHT, KATHERINE ANNE BOX 3492, DUMC DURHAM 27710 DUKE	IM AC 85 85 84 919 684-2675	FIGESTHALER, WM. MATTHEW 113 COLERIDGE COURT CARBORO 27510 U OF NC	S 91 87 919 942-2723	FOX, JONATHAN C. BOX 3163, DUMC DURHAM 27710 U OF CHICAGO	IM /CD R 87 00 88 919 684-8111
ESTES, EDWARD HARVEY, JR. 407 CRUTCHFIELD ST. DURHAM 27704 EMORY U	IM /CD AC 47 53 53 919 471-2571	FILLIPO, DREW CRAIG 311 E. PATTERSON PLACE CHAPEL HILL 27514 U OF NC	S 89 85 919 967-4626	FRANK, JAMES LAWRENCE 1828 HILLDALE ROAD DURHAM 27705 DUKE	ORS AC 65 65 73 919 286-1249
ETZOLD, VALERIE JEAN RT. #3, BOX 338 PITTSBORO 27312 U OF NC	S 91 87 919 542-2328	FILSTON, HOWARD CHURCH BOX 3815, DUMC DURHAM 27710 CASE WESTERN RES	PDS /GS AC 62 62 78 919 684-3478	FRANKLIN, SAMUEL C., JR. 4026 CHAPRA DR. WILMINGTON 28403 U OF NC	S 91 88 919 791-0484
EVANS, AVERY J. BOX 2841, DUMC DURHAM 27710 DUKE	S 88 87 919 688-5730	FINDLAY, JEAN MARJORIE HEY 14 CLEARWATER DR. DURHAM 27707 ABERDEEN U	PD AC 70 75 79 919 286-2202	FREEMAN, DAVID FRANKLIN ASHE PLACE CHAPEL HILL 27514 BOWMAN GRAY	PYA /CHP AC 51 61 61 919 942-4867
EVANS, JOSEPHINE ADAMSON 1010 DEMERIUS ST. DURHAM 27701 DUKE	S 89 86 919 688-5730	FISCHER, JANET JORDAN N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514 JOHNS HOPKINS	ID /IM AC 48 52 52 919 966-2536	FRICK, DONNA ELLIOTT 109 CONNER DR., BLDG #3, STE. 203 CHAPEL HILL 27514 U OF NC	P AC 74 74 85 919 933-5600
FAIRCHILD, KAREN DIANE 4012 HILLGRAND DR. DURHAM 27705 DUKE	S 89 85 919 383-5160	FISCHER, NEWTON D. UNC SCHOOL OF MEDICINE CHAPEL HILL 27514 U OF TEXAS	MFS /OTO AC 45 52 52 919 966-3341	FRIED, FLOYD ALAN UNC, DEPT. OF SURGERY CHAPEL HILL 27514 U OF CHICAGO	U AC 61 61 71 919 966-2571
FALK, RONALD JONATHAN 3034 OLD CLINIC BLDG./NEP. UNC SCHOOL OF MEDICINE CHAPEL HILL 27599 U OF NC	NEP /IM AC 77 77 88	FISHER, SAMUEL RANKIN BOX 3805, DUMC DURHAM 27710 DUKE	HNS /OTO AC 75 75 82 919 684-4201	FRIED, MICHAEL DAVID 120 CONNER DR., STE. 101 PO BOX 3317 CHAPEL HILL 27514 NEW YORK U	OBG AC 71 73 77 919 544-3591
FALLETTA, JOHN MATTHEW BOX 2916, DUMC DURHAM 27710 U OF KANSAS	PHO AC 66 67 79 919 684-3401	FITCH, ROBERT DOUGLAS BOX 2911, DUMC DURHAM 27710 DUKE	ORS /PDS AC 76 82 85 919 684-3104	FRIEDBERG, R. C. 718-A IREDELL ST. DURHAM 27705 DUKE	S 89 83 919 286-3909
FARMER, JOSEPH C., JR. DUKE, DEPT. OF SURGERY DURHAM 27710 DUKE	OTO /OT AC 62 62 70 919 684-6357	FLANAGAN, BRIAN FRANCIS 618 MOREHEAD AVE. APT. #1 DURHAM 27707 DUKE	S 89 86 919 383-7627	FRIEDMAN, ALLAN HOWARD BOX 3807, DUMC DURHAM 27710 U OF ILLINOIS	NS AC 74 80 81 919 681-6421
FARMER, THOMAS WOHLSEN UNC SCHOOL OF MEDICINE 751 BURNETT-WOMACK BLDG 229-H CHAPEL HILL 27514 HARVARD	N /IM L 41 42 52 919 966-2526	FLEMING, WILLIAM LEROY UNC, DEPT. OF FAMILY MED. CHAPEL HILL 27514 VANDERBILT U	GPM /IM L/RT 32 32 40 919 966-5744	FRIEDMAN, MITCHELL DIV. OF PULMONARY DISEASES UNC, DEPT. OF MEDICINE CHAPEL HILL 27514 U OF MIAMI	PUD /IM AC 69 69 77 919 966-2532
FARRIS, DAVID B. 311 S. LASALLE ST. APT. 4A DURHAM 27705 DUKE	S 91 87 919 383-6534	FLETCHER, JOHN DAVID 5244 INVERNESS DRIVE DURHAM 27712 U OF VIRGINIA	PH /PD AC 59 60 64 919 688-8018	FROHBOSE, FREDERICK A. RT. #1, BOX 93-E CHAPEL HILL 27514 U OF NC	S 89 85 919 929-3592
FASSERO, JEFFREY J. 8 PEDESTAL ROCK LANE DURHAM 27712 SOU IL MED SCH	R 86 00 88 919 479-0514	FLETCHER, ROBERT HILLMAN UNC, DEPT. OF MEDICINE CHAPEL HILL 27514 HARVARD	IM /PH AC 66 68 79 919 966-1274	FROTHINGHAM, THOMAS ELIOT BOX 3937, DUMC DURHAM 27710 HARVARD	IM /PH AC 51 55 74 919 684-6870

32. DURHAM-ORANGE COMPONENT SOCIETY (Continued)

FRUCHT, DAVID MARTIN 4138 DEEPWOOD CIRCLE DURHAM 27707 DUKE	90	87	GELOT, DEEPAK R. E-20 RIDGEWOOD APTS. 404 JONES FERRY RD. CARRBORO 27510 U OF NC	91	88	GOLBY, MARY BLUE 904 BROAD STREET DURHAM 27705 GEO WASHINGTON U	53	54	59
FRY, TERRY LENTZ UNC, 610 CLINICAL SCI. 229-H CHAPEL HILL 27514 U OF NC	OTO /HNS	AC	GEORGIAD, GREGORY S. BOX 3960, DUMC DURHAM 27710 DUKE	PS /GS	AC	GOLDBERG, JOEL STEVEN RT. #1, BOX 2602 HILLSBOROUGH 27278 DUKE	AN	AC	
FULP, CHARLES J., JR. 112 GREENFIELD RD. CHAPEL HILL 27516 U OF NC		R	GEORGIAD, NICHOLAS GEORGE BOX 3098, DUMC DURHAM 27710 DUKE		PS	GOLDBERG, MARC ANDREW BOX 2860, DUMC DURHAM 27710 DUKE		S	
FUNCIK, THOMAS 237-D JACKSON CIRCLE ODUM VILLAGE CHAPEL HILL 27514 U OF NC		S	GERATZ, JOACHIM DIETER UNC,DEPT. OF PTH, BBB 228-H CHAPEL HILL 27514 J.W.GOETHE UNIV.		PTH	GOLDMAN, JAMES O., JR. COASTAL GROUP, INC. PO BOX 15309 DURHAM 27704 U OF NC	EM /ADM	AC	
FURMAN, JEFFREY WILLIAM 110 S. ESTES DR. CHAPEL HILL 27514 U OF CINCINNATI	FP /HYP	AC	GERBE, RONALD WILLIAM 109 CONNER DR. CHAPEL HILL 27514 U OF NC	OTO /HNS	AC	GOLDNER, JOSEPH LEONARD BOX 3706, DUMC DURHAM 27710 U OF NEBRASKA	ORS /HS	AC	
GABRIEL, DON ALEXANDER UNC, DIV. OF HEM/ONCOLOGY CHAPEL HILL 27514 U OF NC	HEM /IM	AC	GESZLER, GERIANNE 5238 N. WILLOWHAVEN DR. DURHAM 27712 DUKE		OBG	GOLDNER, RICHARD DOUGLAS BOX 3480, DUMC DURHAM 27710 DUKE	ORS /HS	AC	
GAGLIANO, MARTHA ELLEN 306 S. GREGSON ST. DURHAM 27705 DUKE	PD	AC	GIANTURCO, DANIEL THOMAS 2925 FRIENDSHIP ROAD DURHAM 27705 ST U OF NY-BUFF		P	GOTTLIEB, JUSTIN L. 3222 COACHMAN'S WAY DURHAM 27705 DUKE		S	
GALL, STANLEY ADOLPH, JR. 2907 MONROE AVE. DURHAM 27707 DUKE	GS /CDS	R	GIDUZ, THOMAS TRACY 323 BLUE RIDGE RD. CARRBORO 27510 U OF NC		P	GOTTSCALK, CARL WILLIAM N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514 U OF VIRGINIA	IM /NEP	AC	
GALLIS, HARRY ANTHONY BOX 3306, DUKE HOSPITAL DURHAM 27710 DUKE	ID /IM	AC	GIFFORD, ALLEN LOTHROP 615-A HIBBARD DR. CHAPEL HILL 27514 U OF NC		S	GOUBRAN, MICHEL 4007 N. ROXBORO ST. DURHAM 27704 EIN SHAMS U	OBG /END	AC	
GAMMON, WALTER RAY 404 WHITEHEAD CIRCLE CHAPEL HILL 27514 U OF NC		D	GILGOR, ROBERT SAMUEL 891 WILLOW DRIVE CHAPEL HILL 27514 U OF PENN		D	GOULSON, DAN T. 20-B DAVIE CIRCLE CHAPEL HILL 27514 U OF NC		S	
GANCHI, PARHAM AMIR 1911 ERWIN RD. APT. B DURHAM 27705 DUKE		S	GILLIAM, FRANCIS R., III 603 DUNBAR ST. DURHAM 27701 DUKE		IM /CD	GRAHAM, JOHN BORDEN UNC SCHOOL OF MEDICINE CHAPEL HILL 27514 CORNELL U	PTH /HEM	L/RT	
GANGAROSA, LISA M. 1713 JAMES ST. DURHAM 27707 DUKE		S	GILMER, PETER WINSTON 2609 N. DUKE ST. DURHAM 27704 U OF VIRGINIA		ORS	GRAHAM, WILLIAM ALEXANDER 2247 CRANFORD ROAD DURHAM 27706 U OF PENN	OBG	L/RT	
GARFUNKEL, JOSEPH MORRIS 229 HUNTINGTON DR. CHAPEL HILL 27514 TEMPLE U	PD	AC	GIOANNINI-BROWN, CAROL ANN 5009 N. GLEN DRIVE RALEIGH 27609 ST LOUIS U		PTH	GRANGER, RONALD EUGENE 1821 GREEN STREET DURHAM 27705 U OF CA-IRVINE		AC	
GARRETT, CATHERINE GAELYN 42-J STRATFORD HILLS APTS. CHAPEL HILL 27514 U OF NC		S	GIRAGOS, JOHN G. 20 W. COLONY PLACE APT. 260 DURHAM 27705 AMER.U OF BEIRUT		P /PYA	GRANT, JOHN PALMER BOX 3105, DUMC DURHAM 27710 U OF CHICAGO	GS /NTR	AC	
GARRETT, WILLIAM ELWOOD, JR. BOX 3435, DUMC DURHAM 27710 DUKE	ORS	AC	GITELMAN, HILLEL JONATHAN N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514 U OF ROCHESTER		NEP /IM	GRAY, MARY JANE UNC STUDENT HEALTH SERVICE CAMPUS BOX 7470 CHAPEL HILL 27599 WASHINGTON U	OBG /GYN	AC	
GARSIDE, WM. B., JR. D-8 VILLAGE GREEN CHAPEL HILL 27514 U OF NC		S	GLASS, PETER STANLEY A. BOX 3094, DUMC DURHAM 27710 U-WITWATERSRAND		AN	GRAY, TIMOTHY KENNEY UNC, DEPT. OF MEDICINE CB #7005, OLD CLINIC BLDG. CHAPEL HILL 27599 U OF MARYLAND	END /IM	AC	
GATES, LAWRENCE KEITH, JR. 1710 VISTA DURHAM 27701 DUKE		IM	GLASSON, JOHN 2609 N. DUKE ST. DURHAM 27704 CORNELL U		ORS	GREEN, ROBERT LEE, JR. FALSTAFF ROAD HOLLY HILL HOSPITAL RALEIGH 27610 HAHNEMANN	P /N	AC	
GAULT, JANICE ANN 910 CONSTITUTION, APT. 1007 DURHAM 27705 DUKE		S	GO, JOAN MAYCHU 4 RIVER BIRCH RD., APT. K DURHAM 27705 DUKE			GREENE, WALTER BLAIR UNC, 237 BURNETT-WOMACK CHAPEL HILL 27514 U OF NC	ORS	AC	
GEARY, LEON WALLACE 2609 N. DUKE ST., STE. 504 DURHAM 27704 TEXAS TECH U	PUD /A	AC	GOCKERMAN, JON PAUL DUKE COMP. CARE CTR. P. O. BOX 3877 DURHAM 27710 U OF CHICAGO		ON /HEM	GREENFIELD, JOS. C., JR. BOX 3246, DUMC DURHAM 27710 EMORY U	IM /CD	AC	
GEERTGENS, PAMELA A. 311 S. LASALLE ST. APT. 47B DURHAM 27705 DUKE		S	GOETZL, UGO 1830 HILLANDALE ROAD DURHAM 27705 NEW YORK MED COL		N /P	GREENWOOD, ROBERT S. UNC, 751 CLINICAL SCI. 229-H CHAPEL HILL 27514 U OF TEXAS	CHN /PD	AC	

32. DURHAM-ORANGE COMPONENT SOCIETY (Continued)

GREGANTI, MAC ANDREW UNC, DEPT. OF IM CHAPEL HILL 27514 U OF MISSISSIPPI	IM AC 72 72 79 919 966-2276	GWYNNE, JOHN THOMAS 234 HUNTINGTON DRIVE CHAPEL HILL 27514 DUKE	END AC 70 72 81 919 966-3338	HARNED, HERBERT S., JR. 803 SPRING DELL LANE CHAPEL HILL 27514 YALE	PDC L/RT 45 58 58 919 966-4601
GRIGGS, THOMAS RUSSELL UNC, DEPT. OF MED. & PTH CHAPEL HILL 27514 U OF NC	CD /IM AC 69 69 77 919 966-5207	HAAS, ALI EKREM 6 BLUEBERRY HILL PITTSBORO 27312 U OF FLORIDA	PS R 84 85 86 919 966-4131	HARPER, JAMES ROBINSON 891 W. WILLOW DRIVE CHAPEL HILL 27514 U OF NC	IM /CD AC 60 60 67 919 942-5123
GRIM, KENNETH BOYD 124 FIRST ST. NW LONG BEACH 28461 U OF VIRGINIA	PTH /CLP L/RT 37 37 53 919 278-9424	HABEL, DAVID CHRISTOPHER 3 LANDOVER COURT DURHAM 27713 U OF NC	S 88 85 919 489-8161	HARRISON, JOHN MILES BOX 3023, DUMC DURHAM 27710 DUKE	ORS /PTH AC 65 65 74 919 684-5304
GRIMES, JOHN HARLIN 2609 N. DUKE ST., STE. 302 DURHAM 27704 NORTHWESTERN U	U AC 65 65 71 919 471-8423	HADLER, NORTIN MARVIN UNC, DEPT. OF MEDICINE CHAPEL HILL 27599 HARVARD	RHU /IM AC 68 69 75 919 966-4191	HARRIS, CHARLES ODELL 400 CRUTCHFIELD ST. STE. B DURHAM 27704 U OF NC	OBG AC 79 80 83 919 471-1573
GRIMSON, BAIRD SANFORD CB #7040, UNC 733 BURNETT-WOMACK CHAPEL HILL 27599 DUKE	OPH AC 69 69 77 919 966-5296	HALE, LAURA POPE 6512 CRAIG ROAD DURHAM 27712 DUKE	S 88 84 919 471-0865	HARRIS, TYNDALL PEACOCK P. O. BOX 3118 CHAPEL HILL 27514 DUKE	IM L/RT 50 51 57 919 489-7371
GRIMSON, KEITH SANFORD 3313 DEVON ROAD DURHAM 27707 RUSH MED COLL	GS L 34 42 42 919 489-2241	HALE, LESLIE MORGAN 110 CONNER DR. STE. #2 CHAPEL HILL 27514 U OF NC	OPH AC 61 61 68 919 942-8701	HART, ROBERT ERIC C-5 211 CHURCH ST. CHAPEL HILL 27514 U OF NC	S 89 87 919 967-0370
GRISHAM, JOE WHEELER UNC, DEPT. OF PTH-228H CHAPEL HILL 27599 VANDERBILT U	PTH /GE AC 57 57 74 919 966-4678	HALE, ROBERT VERNON 110 CONNER DR. STE. #2 CHAPEL HILL 27514 U OF NC	OPH AC 67 67 75 919 942-8701	HAWKINS, SARALYN REID BOX 2793, DUMC DURHAM 27710 DUKE	S 90 87 919 490-5561
GROSSMAN, HERMAN LEWIS BOX 3834, DUMC DURHAM 27710 COLUMBIA U	PDR /PD AC 53 71 74 919 681-2711	HALL, COLIN DAVID UNC, DEPT. OF NEUROLOGY CHAPEL HILL 27514 U OF ABERDEEN	N AC 66 73 75 919 966-5522	HAYNES, WILLIAM LEE 5639 CHAPEL HILL RD. APT. 604 DURHAM 27707 DUKE	AC 87 00 88 919 684-8111
GROSSNICKLE, MARK EARL 3603 CRYSTAL COURT DURHAM 27705 DUKE	DR S 88 84 919 477-8535	HALPERIN, EDWARD CHARLES BOX 3085, DUMC DURHAM 27710 YALE	TR AC 79 80 84 919 684-3196	HAYWARD, JAMES NEIL UNC, 751 CLINICAL SCI. BLDG. CHAPEL HILL 27514 TUFTS U	N AC 54 55 76 919 966-2526
GRUBB, STEPHEN ALLEN 101 CONNER DR. STE. 200 CHAPEL HILL 27514 NORTHWESTERN U	ORS AC 74 75 83 919 929-7796	HALPERN, EMILY ALYSSA 304 CEDARWOOD LN. CARRBORO 27510 U OF NC	S 88 85 919 933-9037	HAZZARD, SUSAN L. 106 N. BUCHANAN BLVD. APT. #4 DURHAM 27701 DUKE	IM /PD S 91 87 919 682-0819
GUAJARDO, CESAR 20 W. COLONY PL., STE. 160 DURHAM 27705 U DE NUEVO LEON	PYA /P AC 61 68 78 919 489-2878	HAMBY, GEORGE WALTERS DOCTOR'S BUILDING, WILLOW DR. CHAPEL HILL 27514 U OF NC	P AC 58 58 65 919 929-6155	HEBERT, MARY ELIZABETH 311 S. LASALLE ST. APT. 8-I DURHAM 27705 U OF NC	S 89 85 919 383-8780
GUALTIERI, CAMILLO THOMAS UNC, DEPT. OF PSYCHIATRY CHAPEL HILL 27514 COLUMBIA U	P /CHP AC 69 70 77 919 966-5161	HAMMES, STEPHEN R. 3611 UNIV. DR. 6E DURHAM 27707 DUKE	S 91 88 919 684-8243	HEDGPETH, EDWARD M., JR. 1110 W. MAIN STREET DURHAM 27701 U OF NC	OPH AC 62 62 69 919 682-9341
GUIERAS, GEORGE PATRICK 110 S. ESTES DR., SUITE 205 CHAPEL HILL 27514 U OF NC	FP AC 69 69 75 919 967-8291	HAMILTON, BRIAN HUGH LAUREL RIDGE APTS. #32 HIGHWAY 54 BYPASS CHAPEL HILL 27516 U OF NC	S 91 88 919 967-9462	HEDRICK, HOLLY LEE 910 CONSTITUTION DR. APT. 804 DURHAM 27705 DUKE	S 91 87 919 383-1708
GUNNELLS, JAMES CAULIE BOX 2991, DUMC DURHAM 27710 MED U OF SC	NEP /IM AC 56 56 79 919 684-5038	HAMMETT, ELLIOTT BRIAN V. A. HOSPITAL DURHAM 27701 DUKE	P AC 66 66 73 919 286-0411	HEINDEL, STEPHANIE W. SPRING GARDEN APT. #22 HOLLAND DR. CHAPEL HILL 27514 U OF NC	S 91 88 919 968-9494
GUNTER, JUNE U. 1411 N. MANGUM STREET DURHAM 27701 JEFFERSON	PTH L/RT 36 36 47 919 688-3457	HAMMOND, CHARLES B. BOX 3853, DUMC DURHAM 27710 DUKE	OBG /END AC 61 61 69 919 684-3008	HEIZER, WILLIAM DAVID UNC, DEPT. OF MEDICINE CHAPEL HILL 27514 JOHNS HOPKINS	IM /GE AC 63 63 71 919 966-2511
GUNTER, WM. B., JR. 1821 GREEN ST. DURHAM 27705 EMORY U	OBG AC 82 83 87 919 286-1258	HANSEN, ALFRED ROY UNC, BURNETT-WOMACK, 229H CHAPEL HILL 27514 U OF IOWA	EM /FP AC 77 77 82 919 966-5643	HENDERSON, RICHARD C. UNC, 237 BURNETT-WOMACK DIV. OF ORS, 229H CHAPEL HILL 27514 U OF CHICAGO	ORS AC 80 81 86 919 966-3691
GUPTA, AMIT GIRISH BOX 2763, DUMC DURHAM NC 27710 DUKE	S 91 88 919 489-5105	HARDAKER, WILLIAM T., JR. BOX 3956, DUMC DURHAM 27710 DUKE	ORS AC 73 73 84 919 684-5334	HENDRICKSON, STEVEN CRAIG BOX 2743, DUMC DURHAM 27710 DUKE	S 89 86 919 471-0258
GURLEY, JUDITH M. 5002 MCCORMICK RD. DURHAM 27713 U OF NC	S 90 87 919 967-0440	HARDY, JAMES JOSEPH 130 RIDGE TRAIL CHAPEL HILL 27516 U OF NC	R 85 88 82 919 942-7438	HENLEY, NANCY S. 3500 WESTGATE DR., STE. 705 DURHAM 27707 U OF NC	IM AC 82 83 84 919 493-8600
GUTMAN, ROBERT ALLAN 2609 N. DUKE ST., STE. 604 DURHAM 27704 U OF FLORIDA	NEP /IM AC 62 73 83 919 477-3005	HARE, ROY ALLEN 2609 N. DUKE STREET DURHAM 27704 BOWMAN GRAY	IM AC 45 45 50 919 471-8481	HERBERT, WILLIAM, N.P. UNC, CB #7570 214 MCNIDER BLDG. CHAPEL HILL 27599 BOWMAN GRAY	OBG /NPM AC 72 74 79 919 966-1601
GUTTER, GUIDO PETER 300 CRUTCHFIELD RD. DURHAM 27704 U OF ZURICH	PS AC 77 81 87 919 471-3406	HARMEL, MEREL HILBER BOX 3094, DUMC DURHAM 27710 JOHNS HOPKINS	AN AC 43 43 71 919 684-2945	HERBST, CHARLES ARTHUR, JR UNC, 136 BURNETT-WOMACK 229-H CHAPEL HILL 27514 U OF MISSISSIPPI	GS /CRS AC 67 67 74 919 966-5231

32. DURHAM-ORANGE COMPONENT SOCIETY (Continued)

HERFKENS, ROBERT JOHN	DR AC	HORTON, KEITH M.	R	IZLAR, HENRY LEROY, JR.	IM /CD AC
BOX 3808, DUMC	74 75 87	5500 FORTUNES RIDGE DR. 79C	85 00 87	306 S. GREGSON STREET	48 53 55
MRI SECTION		DURHAM 27713		DURHAM 27701	
DURHAM 27710		U OF NC		DUKE	919 682-5562
LOYOLA U	919 681-2711	HORVATH, LAURA JEAN	R AC	JABLONOVER, ROBERT STEPHAN	S
HERION, JOHN CARROLL	HEM /IM AC	2609 N. DUKE ST.	81 86 87	136-A PUREFOY RD.	89 86
N. C. MEMORIAL HOSPITAL	53 53 57	DURHAM RADIOLOGY ASSOC.		CHAPEL HILL 27514	
CHAPEL HILL 27514		DURHAM 27704		U OF NC	919 968-0098
HARVARD	919 966-4555	TEMPLE U	919 471-8411	JANOWSKY, DAVID S.	P AC
HERLONG, JAMES RENE	S	HOWARD, JAMES FRANCIS, JR.	N AC	UNC, DEPT. OF PSYCHIATRY	64 64 87
618 MOREHEAD AVE. #1	89 85	UNC, 751 CLINICAL SCI. CB #7025	74 74 80	231 MEDICAL SCH. WING B 207H	
DURHAM 27707		CHAPEL HILL 27599		CHAPEL HILL 27514	
DUKE	919 688-8011	U OF VERMONT	919 966-5522	U OF CALIFORNIA	919 966-4738
HERRINGTON, ROBERT T.	PD /PDC AC	HOWELL, MARY LEE	OBG R	JANSON, JAN ALBERT	IM /GE R
N. C. MEMORIAL HOSPITAL	57 59 68	3037 CARVER ST., APT. A-9	84 86 88	4818 NORTHBURY CIRCLE	84 85 87
CHAPEL HILL 27514		DURHAM 27705		DURHAM 27712	
U OF WASHINGTON	919 966-4601	VANDERBILT U	919 684-2484	NEW YORK U	919 684-8111
HERTZBERG, BARBARA S.	R AC	HUBBERT, LEROY KARL	S	JARRELL, JOHN ARTHUR, JR.	AN AC
BOX 3808, DUMC	80 83 88	3253-G CALUMET DR.	90 87	BOX 3802, DUKE EYE CENTER	49 50 73
DURHAM 27710		RALEIGH 27610		DURHAM 27710	
DUKE	919 684-2711	U OF NC	919 755-0348	JOHNS HOPKINS	919 684-2368
HERZOG, WILLIAM RAYMOND, JR.	CD /IM R	HUDSON, EDWARD VALENTINE	OTO AC	JECK, LIDA MORAWETZ	P /PYA AC
11671 FREDERICK RD.	82 85 85	1830 HILLDALE ROAD	62 62 73	800 EASTOWNE DR., STE. 204	77 81 82
ELLICOTT CITY, MD 21043		DURHAM 27705		CHAPEL HILL 27514	
DUKE	202 994-3321	BOWMAN GRAY	919 383-5531	DUKE	919 493-5329
HEYMAN, ALBERT	N /IM L	HUDSON, WILLIAM RUCKER	OTO AC	JENNINGS, ROBERT B.	PTH /CLP AC
BOX 3203, DUMC	40 54 55	DUKE UNIV. MED. CTR.	51 51 53	BOX 3712, DUMC	50 50 76
DURHAM 27710		DURHAM 27710		DURHAM 27710	
U OF MARYLAND	919 684-2682	BOWMAN GRAY	919 684-3834	NORTHWESTERN U	919 684-3528
HIDALGO, HECTOR JESUS	DR AC	HUFFINES, WILLIAM DAVIS	PTH /GP AC	JOHNSON, ANN RHAMY	S
2609 N. DUKE ST.	76 77 85	UNC, 314 BERRYHILL HALL 219-H	55 55 60	44 LAUREL RIDGE APTS.	91 87
DURHAM 27704		CHAPEL HILL 27514		NC 54 BYPASS	
GEO WASHINGTON U	919 471-8411	U OF NC	919 966-1134	CHAPEL HILL 27516	
HOBART, SETH G., JR.	HNS /MFS AC	HUGHES, JACK	U AC	U OF NC	919 968-8850
1830 HILLDALE ROAD	50 55 55	30 KIMBERLY DR.	43 43 50	JOHNSON, CHERYL	S
DURHAM 27705		DURHAM 27707		4800 UNIVERSITY DR., APT. 3M	91 88
U OF VIRGINIA	919 383-5531	U OF PENN	919 489-9504	DURHAM 27707	
HODGINS, LEWIS ROGER	AN R	HULKA, GREGORY F.	OTO S	DUKE	919 286-1760
33 LANSGATE COURT	85 86 86	BOX 2875, DUMC	88 87	JOHNSON, GEORGE, JR.	VS /CDS AC
DURHAM 27713		DURHAM 27710		UNC, DEPT. OF SURGERY	52 52 59
DOWNSTATE ME CTR	919 544-2781	DUKE	919 493-8258	CB #7050	
HOFFMAN TED	AN AC	HULKA, JAROSLAV FABIAN	OBG /OBS AC	CHAPEL HILL 27599	919 966-3391
ROUTE #4, BOX 286	78 81 83	UNC, DEPT. OF OB-GYN	56 67 67	CORNELL U	
HILLSBOROUGH 27278		CHAPEL HILL 27514		JOHNSON, KEVIN M.	DR AC
U OF NC	919 470-6180	COLUMBIA U	919 966-5287	2609 N. DUKE ST.	81 81 88
HOFFMAN, ERIC D.	S	HULL, DIANA MILLER	R	DURHAM RADIOLOGY ASSOCIATES	
BOX 2747, DUMC	91 88	200 WOODCROFT PARKWAY #430	86 00 88	DURHAM 27704	
DURHAM 27710		DURHAM 27713		TEMPLE U	919 471-8411
DUKE	919 383-1448	ALBERT EINSTEIN	919 684-1046	JOHNSON, MICHAEL DONALD	S
HOFFMAN, JEFFREY DALE	S	HURWITZ, BARRIE J.	N /IM AC	428 TOWN COLONY	88 86
214 HAMLIN PARK	89 85	BOX 3184, DUMC	68 69 84	MIDDLETOWN, CT 06457	
CHAPEL HILL 27514		DURHAM 27710		U OF NC	JOHNSTON, WILLIAM WEBB
U OF NC	919 968-7604	U-WITWATERSRAND	919 684-4126	BOX 3712, DUMC	PTH AC
HOFFMAN, RUTH STERLING	IM AC	IBRAHIM, GEORGE KAISSAR	U S	DURHAM 27710	59 59 71
UNC STUDENT HEALTH SERVICE	58 58 77	11 WILLOWBRIDGE DR. #80	88 85	DUKE	919 684-3587
CAMPUS BOX 7470		DURHAM 27707		JONES, JAMES DAVID	CHP /PD AC
CHAPEL HILL 27599		DUKE	919 493-3695	BOX 3115, DUMC	54 55 63
TULANE U	919 966-6551	IGLEHART, JAMES DIRK	GS /TS AC	DURHAM 27710	
HOLLAND, GEORGE THOMAS	S	BOX 3873, DUMC	75 78 86	DUKE	919 684-2372
1511 ROBINHOOD ROAD	89 85	DURHAM 27710		JONES, JOSEPH KEMPTON	FP AC
DURHAM 27701		HARVARD	919 684-6133	1001 S. HAMILTON ROAD	46 50 50
U OF NC	919 682-8733	INGE, WELLFORD W., III	S	CHAPEL HILL 27514	
HOLLISTER, WILLIAM GRAY	P /GPM L/RT	311 S. LASALLE ST. APT. 37B	90 86	DUKE	919 968-4551
2008 N. LAKESHORE DRIVE	41 65 67	DURHAM 27705		JONES, MORRIS ALEXANDER, JR.	R AC
CHAPEL HILL 27514		DUKE	919 286-3311	3643 N. ROXBORO ST.	59 59 65
U OF NEBRASKA	919 966-5277	IRANI, WALEED NABIL	S	DURHAM 27704	
HONKANEN, FRANK A.	R	12-D STRATFORD HILLS APTS.	90 86	U OF NC	919 471-3411
BOX 3712, DUMC	86 87 88	CHAPEL HILL 27514		JONES, THOMAS THWEATT	GP L/RT
DURHAM 27710		U OF NC	919 929-9907	1202 ARNETT	32 34 35
MED COLL OF GA	919 684-3300	IRIGARAY, PETER JOSEPH	P AC	DURHAM 27707	
HOOLE, AXALLA JOHN	IM AC	JOHN UMSTEAD HOSPITAL	55 57 64	JOHNS HOPKINS	919 489-2115
UNC, BOX #2, BLDG. 226-H	64 64 73	BUTNER 27509		JORDAN, THOMAS E.	OTO R
CHAPEL HILL 27514		NAT U OF MEXICO	919 575-7233	39 GEORGETOWN COURT	84 84 87
MED U OF SC	919 966-2276	ISAACS, KIM LUISE	IM R	DURHAM 27705	
HOOTEN, JAMES PHILMON, JR.	ORS R	103 POLK'S TRAIL	84 85 84	U OF MARYLAND	919 684-6968
3535 APOLLO DR. APT. J-213	87 00 85	CHAPEL HILL 27514		JOSEPH, MICHAEL C.	PD AC
METAIRE, LA 70003		U OF NY-ST BROOK	919 968-1597	5716 GENESSEE DR.	76 77 86
U OF NC	504 588-5337	IVES, DONALD LELAND	S	DURHAM 27712	
HORNSBY, RAE LYNNE	S	303-B MASON FARM RD.	89 85	U OF CALIFORNIA	919 471-3278
C-9 CAROLINA APTS.	90 88	CHAPEL HILL 27514		JOYNER, RAYMOND EDWARD	U AC
CARRBORO 27510		U OF NC	919 933-6766	923 BROAD STREET	68 68 76
U OF NC	919 942-2517			DURHAM 27705	
				BOWMAN GRAY	919 286-1297

32. DURHAM-ORANGE COMPONENT SOCIETY (Continued)

JOYNER, WILLIAM STAFFORD 1001 S. HILLTOP ROAD CHAPEL HILL 27514 HARVARD	FP AC 52 52 54 919 968-4551	KIM, JEROME HAHN 202-11 PINEGATE CIRCLE CHAPEL HILL 27514 YALE	IM /ID R 84 84 87 919 684-8111	LASSITER, TALLY EDWARD, JR. 2100 N. PLEASANTBURG DR. GREENVILLE SHRINER'S HOSP. GREENVILLE, SC 29609 HARVARD	ORS /EM R 82 83 86 919 688-4609
KALAYJIAN, ROBERT WAYNE DUMC, DEPT. OF AN, BOX AA3061 DURHAM 27710 U OF CALIFORNIA	AN AC 71 73 85 919 684-5265	KING, LOWELL RESELL BOX 3831, DUMC DURHAM 27710 JOHNS HOPKINS	U /PD AC 56 56 82 919 684-6994	LASSITER, WILLIAM EDMUND UNC, DEPT. OF MED. CB #7005 CHAPEL HILL 27599 HARVARD	NEP /IM AC 54 54 60 919 966-4275
KAPLAN, ANDREW JON 14 WESTRIDGE DR. DURHAM 27713 U OF TEXAS-SW	R 87 00 88 919 490-1158	KINNEY, ROBERT BRUCE 1419 DENNBRIAR DR. CONCORD 28025 DUKE	PTH R 81 85 79 919 684-3300	LECROY, CHARLES M., JR. 4600 UNIVERSITY DR., APT. 602 DURHAM 27707 DUKE	S 89 85 919 490-5345
KAPLAN, TODD M. 1702 WOODBURN RD. DURHAM 27705 DUKE	S 89 86 919 493-5007	KIRKPATRICK, JOHN STEWART 704 W. CORNWALLIS RD. DURHAM 27707 BOWMAN GRAY	R 85 85 84 919 493-6525	LEE, EDWARD I. 702 N. COLUMBIA ST. CHAPEL HILL 27514 U OF NC	S 90 87 919 942-8828
KARIS, JOANNES HUBERTUS BOX 3094, DUMC DURHAM 27710 U OF UTRICHT	AN AC 52 56 60 919 681-6944	KOEHLER, LISA ANN 1521 E. FRANKLIN ST. B-211 FRANKLIN WOODS CHAPEL HILL 27514 U OF NC	S 89 86 919 933-7515	LEE, YI-SHENG 2920 ERWIN RD. DURHAM 27705 NATL TAIWAN U	R 81 00 88 919 684-8111
KATZ, SAMUEL LAWRENCE BOX 2925, DUMC DURHAM 27710 HARVARD	PD /ID AC 52 54 69 919 684-3734	KOON, CRAWFORD BRYAN 2609 N. DUKE ST. DURHAM 27704 U OF NC	DR AC 70 70 79 919 471-8411	LEFKOWITZ, JERRY BRUCE 207-10 MELVILLE LOOP CHAPEL HILL 27514 MED COLL OF VA	R 83 88 88 919 966-3311
KAUFMAN, JEFFREY 311 S. LASALLE ST. APT. 50B DURHAM 27705 DUKE	S 90 84 919 286-3719	KOOPERSMITH, TINA BETH BOX 2764, DUMC DURHAM 27710 DUKE	S 89 86 919 966-5063	LEIDY, LUANN 4322 BEECHNUT LANE DURHAM 27707 DUKE	P /CHP R 82 82 81 919 489-1491
KEAGY, BLAIR ALLEN UNC, CB 7065 108 BURNETT-WOMACK BLDG. CHAPEL HILL 27599 U OF PITTSBURGH	TS /CDS AC 70 70 83 919 966-3381	KRAYBILL, ERNEST NISSLEY CB #7220, UNC, DEPT. OF PED. CHAPEL HILL 27599 U OF PENN	PD /NPM AC 62 62 73 919 966-5063	LEIGHT, GEORGE STAPLES, JR. 2 SURREY LANE DURHAM 27707 DUKE	GS AC 72 79 81 919 684-6849
KEITHAHN, STEPHEN TIMOTHY BOX 2760, DUMC DURHAM 27710 DUKE	S 89 86 919 493-1678	KRYSTAL, ANDREW DARRELL DUKE UNIV. MEDICAL CENTER DURHAM 27710 DUKE	R 87 00 85 919 684-8111	LESENE, HENRY ROBY N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514 VANDERBILT U	GE /IM AC 67 67 74 919 966-2511
KELLY, JAMES REGINALD 306 S. GREGSON STREET DURHAM 27701 DUKE	IM AC 70 71 76 919 682-5561	KU, ANDREW 311 S. LASALLE ST. APT. 36-F DURHAM 27705 COLUMBIA U	DR R 84 87 85 919 681-2711	LESLIE, JOHN BRUCE BOX 3094, DUMC DURHAM 27710 DUKE	AN AC 76 78 86 919 684-6931
KEMPNER, WALTER BOX 3099, DUMC DURHAM 27710 U OF HEIDELBERG	IM L/RT 26 43 43 919 684-2675	KYLSTRA, JOHANNES ARNOLD BOX 2958, DUMC DURHAM 27710 U OF LEIDEN	PUD /A AC 52 66 79 919 684-3069	LEVIN, LAWRENCE SCOTT 4326 TALCOTT DR. DURHAM 27705 TEMPLE U	R 82 82 83 919 684-8111
KENAN, PATRICK DAN DUKE, DIV. OF OTOL. DURHAM 27710 DUKE	OTO AC 59 59 65 919 684-5238	LAMBERTSEN, CHRISTIAN J., JR. PO BOX 12833 22 PARK PLAZA RESEARCH TRIANGLE PK 27709 U OF PENN	FP AC 76 79 88 919 549-9321	LEVIN, STUART JEFFREY 441 CAHABA, FOREST COVE BIRMINGHAM, AL 35292 U OF NC	S 88 84 919 942-5123
KENNEDY, REBECCA S. 315-A BLUERIDGE RD. CARRBORO 27510 U OF NC	R 86 00 84 919 929-9861	LAMBETH, WILLIAM RICK 2609 N. DUKE STREET, STE. 204 DURHAM 27704 BOWMAN GRAY	OBG AC 74 74 79 919 471-8402	LEVINSON, SIDNEY LEONARD 891 W. WILLOW DRIVE CHAPEL HILL 27514 CORNELL U	GE /IM AC 74 75 81 919 942-5123
KERNS, THOMAS C., JR. 1110 W. MAIN ST. DURHAM 27701 DUKE	AC 50 50 57	LAMM, KENNETH RAND 105 FIDELITY ST. A-4 CARRBORO 27510 U OF NC	S 91 87	LEVITT, STEPHEN ROBERT 500 EASTOWNE DRIVE CHAPEL HILL 27514 CASE WESTERN RES	P AC 76 77 80 919 942-8761
KHAWLY, JOSEPH A. 311 S. LASALLE ST. APT. 44L DURHAM 27705 DUKE	S 91 88 919 286-4491	LANE, JOHN WESTON 120 CONNER DR., STE. 101 PO BOX 3317 CHAPEL HILL 27514 DUKE	OBG AC 72 76 80 919 942-8571	LEVY, STANLEY BENJAMIN 891 WILLOW DRIVE CHAPEL HILL 27514 GEORGETOWN U	D AC 71 72 81 919 942-3106
KIFFNEY, GUSTIN THOMAS, JR. 1106 HILLANDALE ROAD DURHAM 27705 ALBANY MED COLL	OPH AC 55 60 61 919 286-9663	LANG, STEPHEN NORMAN BOX 2919, DUMC DURHAM 27710 U OF ILLINOIS	ORS AC 65 65 72 919 684-3949	LILLY, R. ERIC PO BOX 2761, DUMC DURHAM 27710 DUKE	S 91 88 919 286-2716
KIHLSTROM, BRUCE LEE 1830 HILLANDALE ROAD DURHAM 27705 U OF NC	NS /GS AC 72 73 75 919 383-5531	LANGDELL, ROBERT DANA UNC SCHOOL OF MEDICINE, 228-H CHAPEL HILL 27514 GEO WASHINGTON U	PTH /BLB AC 48 51 53 919 966-4333	LINCOLN, CLINTON ROBERT 1828 HILLANDALE ROAD DURHAM 27705 MED COLL OF VA	ORS AC 60 63 68 919 286-1249
KILEFF, MOYRA ELEANOR 403 CLAYTON ROAD CHAPEL HILL 27514 HUGGINS MED SCH	AN AC 73 74 83 919 470-4000	LANIER, VERNE CLIFTON, JR. 300 CRUTCHFIELD ST. DURHAM 27704 VANDERBILT U	PS /GS AC 66 66 78 919 471-3406	LINFORS, EUGENE WILLIAM 306 S. GREGSON ST. DURHAM 27701 DUKE	IM AC 71 71 84 919 682-5561
KILGORE, WM. R., III 502 THE OAKS CHAPEL HILL 27514 U OF OKLAHOMA	IM /GE R 84 85 87 919 684-3527	LASKOWITZ, DANIEL 2A CARSON CIRCLE DURHAM 27705 DUKE	S 91 87 919 383-8367	LIPTON, BARBARA STEINER 2004 N. LAKESHORE DRIVE CHAPEL HILL 27514 U OF ILLINOIS	P AC 43 59 60 919 942-2453
KILLAM, ALLEN PAGE 4044 NOTTAWAY DURHAM 27707 U OF TEXAS	OBG /NPM AC 60 60 83 919 684-2876	LASSITER, RICHARD EDWARD 120 CONNER DR., STE. 101 PO BOX 3317 CHAPEL HILL 27514 U OF NC	OBG AC 65 65 71 919 942-8571	LIPTON, MORRIS ABRAHAM 2004 N. LAKESHORE DR. CHAPEL HILL 27514 U OF CHICAGO	P /IM L 48 59 60 919 966-1456

32. DURHAM-ORANGE COMPONENT SOCIETY (Continued)

LIPTZIN, MYRON BENNETT UNC STUDENT HEALTH SERV. 469H CHAPEL HILL 27599 U OF ROCHESTER	P AC 59 65 65 919 966-3658	MACHEMER, ROBERT BOX 3802, DUMC DURHAM 27710 U FREIBURG, GERM	OPH AC 59 68 79 919 684-5846	MAURO, PATRICIA MARCHASE 2609 N. DUKE ST. STE. 505 DURHAM 27704 CORNELL U	D AC 77 78 84 919 477-2121
LIST, NOEL DAVID BOX 3003, DUMC DURHAM 27710 DOWNSTATE ME CTR	GER /GPM AC 65 67 85 919 684-2248	MALEK, NABIL S. BOX 3094, DUMC DURHAM 27710 U OF AIN SHAMS	AN AC 61 62 86 919 684-3026	MAVROS, SHARON 411-I DOWNING ST. DURHAM 27705 DUKE	S 89 85 919 286-4617
LITCHFIELD, JAY ROBERT 212 MCCAULEY ST. APT. 1-B CHAPEL HILL 27516 U OF NC	S 89 86 919 968-1909	MALOUF, NADIA UNC, BRINKHOUS-BULLITT BLDG. #228, ROOM 801 CHAPEL HILL 27514 AMER. U OF BEIRUT	AC 62 00 76 919 966-4511	MAXFIELD, STEVEN RONALD 2908 ERWIN RD. DURHAM 27705 DUKE	S 89 86
LLEWELLYN, CHARLES E., JR. 3308 CHAPEL HILL BLVD. #110 DURHAM 27707 MED COLL OF VA	P AC 46 55 56 919 493-7298	MALTBIE, ALLAN ARMSTRONG BOX 3837, DUMC DURHAM 27710 EMORY U	P /PYA AC 69 70 73 919 684-5217	MAXWELL, GEORGE L. 601 BROOKSTONE APTS. 101 HOMESTEAD RD. CHAPEL HILL 27514 U OF NC	S 91 87 919 968-4868
LLOYD, KERMIT ALVIN 2217 OLD GREENSBORO RD. CHAPEL HILL 27516 U OF NC	S 89 86 919 929-1911	MANDEL, STANLEY ROBERT UNC, DEPT. OF SURGERY 229H CHAPEL HILL 27514 U OF VIRGINIA	GS /TS AC 62 62 69 919 966-3391	MAY, DAVID ALAN 100-D BERNARD ST. CHAPEL HILL 27514 U OF NC	S 88 84 919 929-3078
LODA, FRANK A. UNC, DEPT. OF PEDIATRICS CHAPEL HILL 27514 VANDERBILT U	PD /ID AC 60 60 71 919 966-2504	MANGEL, ALLEN WAYNE 534 FINLEY ST. DURHAM 27705 GEORGETOWN U	R 88 88 88 919 383-9730	MAYER, EUGENE STEPHEN UNC, CB 7165, WING C, BOX 3 CHAPEL HILL 27599 COLUMBIA U	GPM AC 64 64 73 919 966-2461
LODEN, GARY B. 114-A HIGH ST. CARRBORO 27510 U OF NC	S 90 87 919 967-2638	MANN, CHARLES HAYES 1110 S. MAIN STREET DURHAM 27701 WEST VA U	OTO AC 66 68 82 919 682-9341	MAYNOR, CAROLYN CHANG BEECHWOOD APTS. 24-A 4800 UNIVERSITY DR. EX. DURHAM 27707 DUKE	S 89 85 919 286-1409
LOEHR, WALTER JOSEPH 2609 N. DUKE ST., STE. 402 DURHAM 27704 CORNELL U	GS AC 63 64 75 919 471-8439	MANN, JOHN DOUGLAS 751 CLINICAL SCI. BLDG. 229-H UNC SCHOOL OF MEDICINE CHAPEL HILL 27514 CORNELL U	N /IM AC 69 72 76 919 966-2526	MCALLISTER, RUSSELL G., JR. 3712 DOVER RD. DURHAM 27707 MED COLL OF VA	CD /PA AC 67 68 86 919 248-2598
LONDON, WILLIAM LORD 306 S. GREGSON STREET DURHAM 27701 U OF NC	PD /PHO AC 55 55 61 919 688-6349	MANNING, ISAAC HALL, JR. 3901 HOPE VALLEY RD. DURHAM 27707 HARVARD	IM L/RT 35 38 39 919 286-7635	MCBRIDE, ALLEN JOSEPH BLUE CROSS/BLUE SHIELD OF NC PO BOX 2291 DURHAM 27702 MED COLL OF VA	FP /ADM AC 78 79 83 919 490-2585
LOWE, JAMES EDWARD BOX 3954, DUMC DURHAM 27710 U OF CALIF-LA	CDS /GS AC 73 74 84 919 684-3235	MANNING, STUART HALL 2609 N. DUKE ST., STE. 604 CENTRAL MEDICAL PARK DURHAM 27704 DUKE	IM AC 76 77 79 919 477-1054	MCCANN, RICHARD LUCAS BOX 2990, DUMC DURHAM 27710 CORNELL U	GS /CDS AC 74 83 84 919 684-2620
LUH, ALBERT HUNG-PEI 1481 ASHBORNE DR. LYNCHBURG, VA 24501 U OF NC	R 87 00 87 804 384-1731	MARGOLIS, PETER ADAM UNC, CLI. SCHOLARS PROGRAM 5034 OLD CLINIC BLDG. CHAPEL HILL 27514 NEW YORK U	R 80 83 88 919 966-1274	MCCARTHY, JAMES J. 118 ESTES DR. EXT. CARRBORO 27510 U OF NC	S 90 88 919 942-5517
LUMB, PHILIP DENNETT BOX 3094, DUMC DURHAM 27710 U OF LONDON	AN AC 74 75 79 919 681-3883	MAROOF, MOHAMMAD BOX 3094, DUMC DURHAM 27710 LIAQUAT MED COLL	AN AC 64 78 82 919 684-3591	MCCARTNEY, CHERYL FAINTUCH UNC, WING D, 208-H CB #7160 CHAPEL HILL 27599 NORTHWESTERN U	P AC 71 72 80 919 966-4551
LURIE, SCOTT NORD 1711 SHAWNEE ST. DURHAM 27701 DUKE	R 87 00 85 919 682-0582	MARSDEN, MARGARET E. F. 200 WOODCROFT PARKWAY, #40-B DURHAM 27713 U OF NC	S 89 85 919 489-8433	MCCARTNEY, WILLIAM HUGH NCMH, DEPT. OF RADIOLOGY CHAPEL HILL 27514 NORTHWESTERN U	DR /NM AC 69 70 81 919 966-4384
LYERLY, MARK ANDREW 645 BALFOUR RD. WINSTON-SALEM 27104 DUKE	S 88 86 919 760-0865	MARTIN, HAROLD LUTHER, JR. 1200 N. GREENSBORO ST. CARRBORO 27510 U OF NC	S 88 85 919 929-8334	MCCOLLUM, DONALD EUGENE BOX 2919, DUMC DURHAM 27710 BOWMAN GRAY	ORS AC 53 53 62 919 684-4055
LYLE, CARL BLACKBURN, JR. 145-A MACNIDER BLDG. 202-H UNC SCHOOL OF MEDICINE CHAPEL HILL 27514 COLUMBIA U	IM AC 57 62 64 919 966-5945	MARTIN, TERRI REGINA 331 W. ROSEMARY ST. #21 CHAPEL HILL 27514 U OF NC	S 91 88	MCCRACKEN, JOSEPH STUART 2609 N. DUKE ST. #203 DURHAM 27704 DUKE	OPH AC 75 77 82 919 471-8495
LYNCH, SUE ANN 129 WINDSOR CIR. CHAPEL HILL 27514 U OF UTAH	N R 84 84 86 919 942-8097	MARTINEZ, SALUTARIO DUMC, DEPT. OF RADIOLOGY DURHAM 27710 U OF HABANA	R AC 60 71 76 919 684-2711	MCCRORY, MICHAEL ELLIOTT 2609 N. DUKE ST. STE. 303 DURHAM 27704 TUFTS U	DR AC 73 74 79 919 471-8411
LYTH, WM. MICHAEL 200 WESTMINSTER DR., APT. 132K CHAPEL HILL 27514 U OF PITTSBURGH	R 85 86 88 919 684-8111	MARX, MARILYN UTMB STATION 1, BOX 45 GALVESTON, TX 77550 RUSH MED COLL	GS R 80 80 81 409 761-1875	MCCUEN, BROOKS WALTON, II BOX 3802, DUMC DURHAM 27710 COLUMBIA U	OPH AC 74 75 80 919 684-6749
MACDONALD, JOEL DOUGLAS 308 CAROL ST. CARRBORO 27510 U OF NC	S 89 85 919 967-6776	MASON, THOMAS LEE 20-H UNIVERSITY LAKE APTS. CARRBORO 27510 U OF NC	S 91 87 919 942-0819	MCCULLEN, BOBBY K., JR. 207 CONNER DR. APT. 17 CHAPEL HILL 27514 U OF NC	OPH /OALR S 88 84 919 942-4623
MACFARLAND, JOSEPH ALFRED UNC STUDENT HEALTH SERVICE CAMPUS BOX 7470 CHAPEL HILL 27599 COLUMBIA U	GP AC 67 68 72 919 966-2281	MATERN, WILLIAM DOUGLAS N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514 COLUMBIA U	NEP /IM AC 65 65 74 919 966-2561	MCCUTCHAN, JAMES HUTTON UNC STUDENT HEALTH-BOX 7074 CHAPEL HILL 27599 JOHNS HOPKINS	IM /ID AC 61 61 69 919 966-2281
MACHEMER, CHRISTINE ANNA BOX 3125, DUMC DURHAM 27710 U FREIBURG, GERM	P AC 59 61 79 919 684-5772	MAURO, MATTHEW ANTHONY 101 CATAWBA COURT CHAPEL HILL 27514 CORNELL U	DR AC 77 78 83 919 966-1461	MCCUTCHEON, WILLIAM B., JR. 1830 HILLDALE ROAD DURHAM 27705 MED COLL OF VA	TS /CDS AC 52 55 58 919 383-5531

32. DURHAM-ORANGE COMPONENT SOCIETY (Continued)

[illegible]

32. DURHAM-ORANGE COMPONENT SOCIETY (Continued)

NELIUS, SIGRID J. V. WEST DURHAM STATION BOX 2899 DURHAM 27705 LUDWIG MAXIMILLI	IM /GPM AC 49 61 64 919 383-6289	OLATIDOYE, BABATLINDE A. PO BOX 187 CHAPEL HILL 27514 U OF NC	S 90 86 919 933-6346	PAOLINI, JOHN FRANK BOX 2832, DUMC DURHAM 27710 DUKE	S 90 86
NEMEROFF, CHARLES BARNET BOX 3859, DUMC DURHAM 27710 U OF NC	P AC 81 81 78 919 684-6562	OLDER, ROBERT ALAN 3104 DEVON RD. DURHAM 27707 DUKE	DR AC 68 68 77 919 383-6984	PAPADOPOULOS, SPYRIDON G. 3700-205 CHIMNEY RIDGE PL. DURHAM 27713 DUKE	S 90 86 919 493-0718
NEWBORG, BARBARA BOX 3385, DUMC DURHAM 27710 JOHNS HOPKINS	IM AC 49 49 64 919 684-3418	OLDHAM, H. NEWLAND, JR. DUKE UNIV. MED. CTR. DURHAM 27710 BAYLOR	CDS /GS AC 61 61 72 919 684-3243	PARKE, CHARLES EDWARD 614 CASWELL RD. CHAPEL HILL 27514 U OF NC	S 88 85 919 942-6631
NEWSOM, GEORGIA L. 101 ASHEVILLE HIGHWAY SYLVA 28779 U OF INNSBRUCK	IM AC 78 82 85 704 586-2132	OLESON, JAMES ROBERT BOX 3085, DUMC DURHAM 27710 U. OF ARIZONA	TR /ON AC 76 76 85 919 684-3742	PARKER, JENNIFER L. 4800 UNIVERSITY DR. APT. 6-O DURHAM 27707 DUKE	S 91 88 919 490-1576
NG, KHYE WENG 1830 HILLDALE ROAD DURHAM 27705 U OF SINGAPORE	N /IM AC 56 68 72 919 383-5531	OLIVER, WILLIAM RUSSELL 114-B FIDELITY STREET CARRBORO 27510 VANDERBILT U	PTH R 82 82 84 919 929-7120	PARKER, JOHN CURTIS N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514 YALE	HEM /IM AC 61 67 68 919 966-2467
NICHOLSON, WANDA KAY 647 CRAIGE DORM, UNC CHAPEL HILL 27514 U OF NC	S 90 88 919 933-3545	OLSEN, ELISE ARLINE BOX 3294, DUMC DURHAM 27710 BAYLOR	D /IM AC 78 78 79 919 684-6844	PARKER, JOSEPH B., JR. 24 STONERIDGE CIR. DURHAM 27705 U OF TENNESSEE	P /PYM L/RT 41 41 65 919 684-2415
NIX, JERRY DALE B-5 TAR HEEL MANOR CARRBORO 27510 U OF NC	S 91 87 919 942-3947	ONTJES, DAVID AINSWORTH UNC SCHOOL OF MEDICINE CHAPEL HILL 27514 HARVARD	END /IM AC 64 64 70 919 966-4468	PARKER, PAUL EDWIN N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514 EASTERN VA	AN R 86 86 86 919 477-2475
NOECKER, ROBERT J. PO BOX 884 CHAPEL HILL 27514 U OF NC	S 90 87 919 781-0707	ORGAIN, EDWARD STEWART 3321 DEVON ROAD DURHAM 27707 U OF VIRGINIA	CD /IM L/RT 30 30 36 919 489-2111	PARKER, ROY TURNAGE BOX 3097, DUMC DURHAM 27710 MED COLL OF VA	OBG AC 44 47 50 919 684-2626
NOEL, ROBERT F., JR. RT. #11, BOX 94 CHAPEL HILL 27516 U OF NC	S 89 87 919 968-6454	ORLANDO, ROY CHARLES 324 CLINICAL SCIENCES BLDG. UNC DEPT. OF MEDICINE 229-H CHAPEL HILL 27514 GEORGETOWN U	GE /IM AC 68 68 77 919 966-2511	PARKERSON, GEORGE R., JR. BOX 2914, DUMC DURHAM 27710 DUKE	FP AC 53 55 75 919 286-9896
NORINS, MICHAEL ELLIOTT 122 WINDSOR PLACE CHAPEL HILL 27514 U OF NC	R 86 00 83 919 933-0367	ORRINGER, EUGENE PAUL UNC, DIV. OF HEM, DEPT. OF MED. 340 MACNIDER BLDG. 202-H CHAPEL HILL 27514 U OF PITTSBURGH	HEM /IM AC 69 71 81 919 966-2467	PATTERSON, CARL NORRIS 1110 W. MAIN STREET DURHAM 27701 U OF MARYLAND	HNS /MFS AC 44 48 48 919 682-9341
NOVEK, STEVEN JAI STRATFORD HILLS 36-E CHAPEL HILL 27514 U OF NC	S 89 85 919 929-8823	OSTERHOUT, SHIRLEY K. BOX 3007, DUMC DURHAM 27710 DUKE	PD AC 57 57 84 919 684-2498	PATTERSON, HUBERT CLIFTON 602 S. COLUMBIA STREET CHAPEL HILL 27514 HARVARD	GS L/RT 37 47 47 919 968-3051
NUGENT, RICHARD RECHER DIV. OF HEALTH SERVICES P. O. BOX 2091 RALEIGH 27602 U OF PENN	GPM /OBG AC 66 67 80 919 733-3816	OTLEY, CLARK C. 223-A W. WOODRIDGE DR. DURHAM 27707 DUKE	S 91 87 919 490-0199	PATTERSON, JAN LOUISE PO BOX 513 N. C. MEMORIAL HOSP. CHAPEL HILL 27514 PENN STATE U	R 87 87 88 919 966-2491
NUNEZ, MICHAEL J. 311 S. LASALLE ST., APT. 14A DURHAM 27705 DUKE	S 91 88 919 383-1448	OVERCASH, WILLIAM TODD PO BOX 1694 ALBEMARLE 28002 U OF NC	S 88 84 704 982-8650	PATTON, SUZANNE ELIZABETH 2808 ERWIN RD., APT. 6A DURHAM 27705 DUKE	S 88 85 919 383-0446
NUNLEY, JAMES ALBERT, II BOX 2919, DUMC DURHAM 27710 TULANE U	ORS /HS AC 73 73 82 919 684-4033	OZER, HOWARD UNC 3019 OLD CLINIC BLDG. 226H CHAPEL HILL 27514 YALE	ON /IG AC 75 77 86 919 966-4431	PAULSON, DAVID FREEMAN BOX 2977, DUMC DURHAM 27710 DUKE	U AC 64 64 72 919 684-5057
NYCUM, LAWRENCE ROSS 43 LAUREL RIDGE APTS. CHAPEL HILL 27516 U OF NC	S 90 88 919 929-3225	PACT, VIRGINIA W. HENDERSON NEUROLOGY CTR. MARIA PARHAM HOSP. HENDERSON 27536 KAROLINSKA INST	N AC 77 78 88 919 492-0606	PAYNE, THOMAS ARTHUR 405-A COOLRIDGE ST. CHAPEL HILL 27514 U OF NC	S 89 85 919 929-4291
NYE, MARY JANE LOVE 1919 WILSHIRE DRIVE DURHAM 27707 DUKE	PD /ADL AC 61 61 64 919 489-9534	PADDISON, GEORGE MARION 3920 REGENT ROAD DURHAM 27707 U OF NC	R AC 66 66 73 919 489-0272	PEACOCK, ERLE EWART, JR. 109 CONNER DR., STE. 2204 CHAPEL HILL 27514 HARVARD	PS /GS AC 49 53 56 919 933-0005
O'BRIEN, JAMES W. 311 S. LASALLE ST. APT. 22K DURHAM 27705 DUKE	S 91 88 919 383-4871	PADGETT, RICHARD CAMERON 411 MCCAULEY ST. CHAPEL HILL 27514 U OF NC	IM S 88 84 919 942-5518	PEARCE, PHILIP HENDERSON 1821 GREEN STREET DURHAM 27705 DUKE	OBG AC 60 60 67 919 286-1258
OAKES, WALTER JERRY BOX 3272, DUMC DURHAM 27710 DUKE	NS AC 72 72 78 919 684-5013	PAGANO, JOSEPH STEPHEN UNC, LINEBERGER CANCER RES. CHAPEL HILL 27514 YALE	IM /ID AC 57 65 65 919 966-3036	PEARSE, RICHARD LEHMER 154 MONTROSE DR. DURHAM 27707 HARVARD	OBG /HYP L/RT 31 38 38 919 493-3995
ODERE, FRED GORDON DURHAM CO. HOSP-PTH DURHAM 27704 GEO WASHINGTON U	PTH AC 70 74 79 919 470-5243	PALMER, JEFFRESS GARY N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514 EMORY U	IM /HEM AC 44 52 52 919 966-3311	PEDERSON, WM. CHRISTOPHER BOX 3974, DUMC DURHAM 27710 U OF TEXAS-SW	PS /HS AC 78 78 87 919 684-4114
ODOM, GUY LEARY 2812 CHELSEA CIRCLE DURHAM 27707 TULANE U	NS L/RT 33 33 44 919 489-2206	PANZA, WILLIAM SEBASTIAN 1800 WILLIAMSBURG RD. APT. 8-E DURHAM 27707 DUKE	S 88 84 919 489-4104	PEETE, CHARLES HENRY, JR. BOX 3192, DUMC DURHAM 27710 HARVARD	OBG AC 47 47 58 919 684-2346
				PEETE, WILLIAM P.J. BOX 3506, DUMC DURHAM 27710 HARVARD	GS AC 47 49 56 919 684-3727

32. DURHAM-ORANGE COMPONENT SOCIETY (Continued)

PEREZ-REYES, MARIO 107 HUNTER HILL PLACE CHAPEL HILL 27514 NAT U OF MEXICO	P AC 52 67 67 919 933-9829	POWELL, DON WATSON UNC BURNETT-WOMACK BLDG. CB #7080, RM. 326 CHAPEL HILL 27599 U OF ALABAMA	GE /IM AC 63 63 71 919 966-2511	RECKLESS, JOHN BRIAN 1816 FRONT ST., STE. 310 DURHAM 27705 U BIRMINGHAM ENG	P /PYM AC 54 60 62 919 383-1502
PERNO, JOSEPH R. BOX 2809, DUMC DURHAM 27710 DUKE	S 91 88 919 684-1306	POWERS, STEPHEN KENT UNC, 148 CLINICAL SCI. BLDG. CHAPEL HILL 27514 OHIO STATE U	NS AC 77 78 84 919 966-1374	REDDY, PARVATA CHINNA P. DURHAM CO. GENERAL HOSP. DURHAM 27704 KURNOL MED COLL	AN AC 61 63 85 919 471-3411
PERONA, BARBARA PIEZ 1022 GREEN ST. DURHAM 27701 DUKE	S 90 86 919 682-3942	PRACYK, JOHN BRADFORD 610 DOUGLAS ST., APT. 312-B DURHAM 27705 DUKE	S 89 85 919 286-7365	REDICK, LLOYD FRANKLIN BOX 3094, DUMC DURHAM 27710 OHIO STATE U	AN AC 58 58 74 919 684-6736
PERRY, DWIGHT DEAN 512 SIMMONS ST. DURHAM 27707 U OF NC	OPH AC 80 81 85 919 682-7175	PRANGE, ARTHUR JERGEN, JR. NCMH, DEPT. OF PSYCHIATRY CHAPEL HILL 27514 U OF MICHIGAN	P AC 50 58 58 919 966-1480	REISER, HARVEY J. 9TH AND WALNUT STREETS PHILADELPHIA, PA 19107 DUKE	OPH R 85 00 84
PETERSEN, MARTA JEAN NC MEMORIAL HOSP. ROOM 137 CHAPEL HILL 27514 U OF UTAH	D AC 79 81 88 919 966-3321	PRATHER, DONNA LYNN 311 BLUERIDGE RD. CARRBORO 27510 U OF NC	P AC 78 79 78 919 929-6519	RENUART, ADHEMAR W., III 1830 HILLDALE ROAD DURHAM 27705 DUKE	N/PD AC 56 58 78 919 383-5531
PETERSON, HUGH DUANE UNC, BURNETT-WOMACK BLDG. CHAPEL HILL 27514 NORTHWESTERN U	PS AC 62 65 83 919 966-3693	PRATT, REBECCA ANN 209 ALEXANDER ST. APT. D DURHAM 27705 DUKE	S 90 87 919 684-7590	REVES, JOS. GERALD BOX 3094, DUMC DURHAM 27710 MED U OF SC	AN AC 69 69 87 919 681-6646
PETERSON, JEFFREY M. 2 SPRING GARDEN, HOLLAND DR. CHAPEL HILL 27514 U OF NC	S 89 85 919 933-0153	PRENTICE, ROBERT DEREK 3500 WESTGATE DR., STE. 705 DURHAM 27707 U OF EDINBURGH	FP AC 70 70 85 919 493-8600	RHOADS, JOHN MCFARLANE BOX 3903, DUMC DURHAM 27710 TEMPLE U	P /PYA AC 43 56 57 919 684-6224
PHILLIPS, HARRY RISSLER, III BOX 3126, DUMC DURHAM 27710 DUKE	CD /IM AC 75 78 72 919 681-5816	PRESTON, EDWIN THORNTON 110 S. ESTES DRIVE CHAPEL HILL 27514 DUKE	ORS AC 60 60 70 919 942-3171	RICE, A. DOUGLAS 2919 COLONY ROAD DURHAM 27705 DUKE	PD L/RT 51 54 55 919 489-9158
PHILLIPS, KATHRYN ELIZABETH 200 BLUERIDGE RD. CARRBORO 27510 U OF NC	S 88 86 919 967-1058	PRICE, ROBERT EDWIN, JR. 1830 HILLDALE ROAD DURHAM 27705 U OF NC	NS AC 64 64 72 919 383-5531	RICE, JOHN RUSSELL BOX 3383, DUMC DURHAM 27710 U OF MIAMI	RHU AC 68 69 78 919 684-3313
PICKARD, CARL GLENN, JR. N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514 U OF NC	IM AC 62 62 69 919 966-4205	PROIA, ALAN DAVID 4118 DEEPWOOD CIRCLE DURHAM 27707 CORNELL U	PTH AC 80 80 81 919 489-3161	RICE, REED PORTER DUKE HOSPITAL DURHAM 27710 INDIANA U	DR AC 55 61 61 919 684-2711
PILLSBURY, HAROLD C., III UNC, CB #7070 BURNETT-WOMACK BLDG. CHAPEL HILL 27599 GEO WASHINGTON U	OTO /HNS AC 72 72 75 919 966-3341	PROSNITZ, LEONARD R. BOX 3085, DUMC DURHAM 27710 DOWNSTATE ME CTR	TR AC 61 65 84 919 684-3805	RICHARDSON, WM. JAMES BOX 3077, DUMC DURHAM 27710 EASTERN VA	ORS AC 77 77 88 919 684-5711
PLESCIA, MARCUS 106 STINSON ST. CHAPEL HILL 27516 U OF NC	S 89 85 919 967-8905	PRUTHI, ASIT SOM 2752 MIDDLETON AVE. 31-I DURHAM 27705 DUKE	S 90 87 919 286-2615	RICHMOND, GLENN HICKAM, JR. CAMELOT VILLAGE, J-4 CHAPEL HILL 27514 U OF NC	S 88 84 919 929-4483
PODGER, KENNETH ARTHUR 7701 BEACH DRIVE MYRTLE BEACH, SC 29577 DUKE	GYN L/RT 40 48 49 803 449-3459	PRYOR, ROBERT E. 500 WOODCROFT PKWY. #7-D DURHAM 27713 BAYLOR	IM R 86 87 87 919 684-8111	RIEFKOHLE, RONALD DUMC, DIV. OF PLASTIC SURGERY DURHAM 27710 TULANE U	PS/GS AC 72 72 81 919 684-2854
POLLARD, RICHARD J. 124 FIDELITY ST., #20 CARRBORO 27510 U OF NC	S 91 87 919 942-9470	PURUT, CEMIL M. 500 N. DUKE ST. APT. 53-202 DURHAM 27701 DUKE	R 87 00 86 919 684-8111	RIRIE, DOUGLAS G. 130 #M E. LONGVIEW CHAPEL HILL 27514 U OF NC	S 90 87 919 967-0746
PONDER, PHILIP WADE 405-A COOLIDGE ST. CHAPEL HILL 27516 U OF NC	S 90 86 919 968-6926	PURVIS, JOSEPH D., III 3030 CORNWALLIS RD. RESEARCH TRIANGLE PK. 27709 JEFFERSON	ON AC 76 81 87 919 248-4642	RISKA, PAUL FRANK NATL. INST. MEDICAL RESEARCH THE RIDGEWAY MILL HILL, LONDON 00000 DUKE	S 89 86 919 383-5620
PORTER, DEAN PRIEST 250 S. ESTES DR. #34 CHAPEL HILL 27514 U OF NC	S 89 85 919 933-7840	PUTMAN, CHARLES EDGAR BOX 3808, DUMC DURHAM 27710 U OF TEXAS	R /IM AC 67 67 78 919 684-3403	RITCH, KARL ANDREW 2907 SHAFTSBURY ST. DURHAM 27704 DUKE	S 91 87 919 477-2977
PORTER, LIS A ELLEN 2681 HITCHCOCK DR. DURHAM 27705 DUKE	S 89 87 919 471-9289	RAFT, ELIZABETH VANCE 33 KIMBERLY DRIVE DURHAM 27707 U OF NC	CHP /P AC 60 60 71 919 489-7011	ROBBINS, JACK GUYES 823 BROAD STREET DURHAM 27705 DUKE	D AC 48 49 54 919 286-4195
POSTLETHWAIT, RAYMOND W. 143 PINECREST RD. DURHAM 27705 DUKE	GS L/RT 37 47 56 919 489-8865	RANEY, RICHARD BEVERLY, SR. N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514 HARVARD	ORS L/RT 30 34 35 919 966-2030	ROBERTS, HAROLD ROSS UNC, CB #7035 416 BURNETT-WOMACK BLDG. CHAPEL HILL 27599 U OF NC	HEM AC 55 55 62 919 966-4305
POTTER, JOAN GARSKA 109 CONNER DR., STE. 2203 CHAPEL HILL 27514 WEST VA U	FP AC 80 82 84 919 929-5700	RANKIN, JAMES SCOTT BOX 3851, DUMC DURHAM 27710 U OF TENNESSEE	TS AC 69 81 85 919 684-2718	ROBERTS, LOUIS CARROLL 3950 PLYMOUTH ROAD DURHAM 27707 DUKE	U L/RT 33 35 40 919 489-4215
POWELL, ALLEN ORLO 2325 ENGLEWOOD AVE. DURHAM 27705 DUKE	S 88 86 919 286-5436	RAVIN, CARL ERIC BOX 3808, DUMC DURHAM 27710 CORNELL U	R AC 68 71 79 919 681-5268	ROBERTS, MARIE BOX #7 BAHAMA 27503 MED U OF SC	PH L/RT 49 51 51 919 477-2378

32. DURHAM-ORANGE COMPONENT SOCIETY (Continued)

ROCKWELL, WILLIAM J. K. DUKE, DEPT. OF PSYCHIATRY DURHAM 27710 DUKE	P AC 61 61 68 919 684-3073	SAUNDERS, JAMES E. 1413 BROAD ST. DURHAM 27705 U OF OKLAHOMA	R 87 87 88 919 684-8111	SESSIONS, JOHN TURNER, JR. UNC, 324 CLINICAL SCI. 229-H CHAPEL HILL 27514 EMORY U	GE /IM AC 45 52 52 919 966-2511
RODDEY, J. GARDINER R., JR. 109 ISLEY ST. CHAPEL HILL 27514 U OF NC	S 90 87 919 929-0536	SAUTER, SUZANNE V. UNC, TRAILER 33, CB #7200 CHAPEL HILL 27599 U OF NC	RHU /IM AC 74 74 80 919 966-5164	SESSIONS, RICK PAUL 210 WESTBROOK DR. CARRBORO 27510 U OF NC	S 89 85 919 933-5880
RODWELL, ELEANOR 1118 HILLDALE ROAD DURHAM 27705 TEMPLE U	GP L/RT 42 42 44 919 286-1119	SAVITT, MICHAEL ANDREW 1315 MOREENE RD. #22F DURHAM 27707 DUKE	S 89 85 919 286-1989	SHACKELFORD, JOSEPH ROY, III 210 S. CAMERON ST. HILLSBOROUGH 27278 VANDERBILT U	FP AC 59 59 85 919 732-9311
ROSENBERG, MARK ROBERT BOX 3837, DUMC DURHAM 27710 DUKE	P S 88 83 919 493-2846	SAWHNEY, DEEPAK 4 GOOSENECK CIRCLE CHAPEL HILL 27514 U OF NC	S 88 86 919 968-1747	SHAH, SHAFQAT 1911 ERWIN RD. APT. L DURHAM 27705 DUKE	S 91 87 919 684-6035
ROSENSTEIN, BYRON DAVID 205 NORTHWOOD DR. CHAPEL HILL 27514 NORTHWESTERN U	ORS R 82 82 86 919 942-4209	SCATLIFF, JAMES HOWARD N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514 NORTHWESTERN U	R AC 52 66 67 919 966-4238	SHAHADY, GERTRUDE KOCH 112-A W. POPLAR AVE. CARRBORO 27510 U OF NC	S 89 85 919 942-2077
ROTH, NEIL S. BOX 2817, DUMC DURHAM 27705 DUKE	S 91 88 919 383-8278	SCHEIL, CHARLES DAVID 24-F STRATFORD HILLS CHAPEL HILL 27514 U OF NC	S 88 85 919 967-4308	SHARPLESS, ELIZABETH P. 207 CONNER DR. APT. 23 CHAPEL HILL 27514 U OF NC	S 89 86 919 967-6791
ROUSE, JAMES BRISTOL 306 S. GREGSON STREET DURHAM 27701 DUKE	PD /N AC 65 65 71 919 688-6349	SCHIEBEL, HERMAN MAX 1020 ANDERSON ST. DURHAM 27705 JOHNS HOPKINS	GS /TS L 33 38 40 919 489-5109	SHAVENDER, EUGENE FRANK 1830 HILLDALE ROAD DURHAM 27705 U OF NC	GYN AC 68 68 78 919 383-5531
ROYAL, BILLY WILLIAMSON P. O. BOX 2387 CHAPEL HILL 27514 BOWMAN GRAY	P AC 58 58 62 919 733-5540	SCHLASEMAN, GUY W. 3643 N. ROXBORO ST. DURHAM 27704 DUKE	R L/RT 46 54 54 919 471-3411	SHEETS, LYNN K. 2412 FARTHING ST. DURHAM 27704 U OF KANSAS	R 83 86 87 919 471-8562
ROYAL, PHILIP WAYNE RT. #1, BOX 323-E CHAPEL HILL 27514 U OF NC	S 89 87	SCHLOSSMAN, DAVID MICHAEL BOX 3843, DUMC DURHAM 27710 DUKE	IM /ON AC 79 81 85 919 684-2297	SHELBURNE, JOHN DANIEL BOX 3712, DUMC DURHAM 27710 DUKE	PTH AC 72 72 78 919 286-6925
ROZEAR, MARVIN PRICE BOX 3849, DUKE UNIV. MED. CTR. DURHAM 27710 DUKE	N AC 66 66 76 919 684-8111	SCHMALTZ, ROBERT ANDREW 604 W. KNOX ST. DURHAM 27701 DUKE	S 89 85 919 383-5972	SHELDON, GEORGE FRANK UNC, 131 BURNETT-WOMACK CHAPEL HILL 27514 U OF KANSAS	GS /TRS AC 61 62 84 919 966-4052
RUFF, GREGORY LLOYD BOX 3974, DUMC DURHAM 27710 U OF MICHIGAN	PS AC 78 78 87 919 684-6740	SCHMIDT, EVELYN 1301 FAYETTEVILLE STREET DURHAM 27707 DUKE	PD /PH AC 51 51 71 919 683-1316	SHERMER, RICHARD WAYNE UNC, DEPT. OF PATHOLOGY BRINKHOUS-BULLITT BLDG. 228H CHAPEL HILL 27599 U OF NC	PTH AC 63 63 73 919 966-2339
RUTLEDGE, ROBERT UNC, DEPT. OF SURGERY CAMPUS BOX 7050 CHAPEL HILL 27599 U OF FLORIDA	GS AC 78 78 88 919 962-7555	SCHWINN, DEBRA ANNE BOX 3094, DUMC DURHAM 27710 STANFORD U	AN R 83 84 86 919 681-6646	SHERILL, GARY BRADLEY 3630 GRAMERCY RD. GREENSBORO 27410 U OF NC	S 89 85 919 288-2972
SABISTON, DAVID COSTON, JR. DUKE UNIV. MED. CTR. DURHAM 27710 JOHNS HOPKINS	GS /TS AC 47 64 65 919 684-2831	SCOTT, DIANNE LYNNETTE BOX 3094, DUMC DURHAM 27710 U OF NC	AN AC 78 80 83 919 684-3239	SHIELDS, MILTON BRUCE DUKE UNIVERSITY EYE CENTER DURHAM 27710 U OF OKLAHOMA	OPH AC 66 67 76 919 684-2841
SAHBA, MEHRDAD MAJIDZADEH 306 S. GREGSON STREET DURHAM 27701 U OF ISFAHAN	GE /IM AC 57 57 72 919 682-5561	SCOTT, LINCOLN BAIN UNC STUDENT HEALTH SERVICE CHAPEL HILL 27514 U OF PENN	ADL AC 58 61 72	SHIH, DEBORAH P. 1315 MORRENE RD. #17E DURHAM 27705 DUKE	S 91 87 919 383-2016
SALLEE, D. SKIP BOX 3808, DUMC DURHAM 27710 MISSOURI U-KC	R 85 86 87 919 383-6548	SCOTT, STEVEN MARTIN 3711 STONEYBROOK DR. DURHAM 27705 INDIANA U	OBG /EM AC 74 74 79 919 383-0355	SHIMM, CYNIA BROWN 2609 N. DUKE ST. STE. 103 DURHAM 27704 YALE	P /PYA AC 50 54 76 919 471-3487
SALTZMAN, HERBERT AARON BOX 3838, DUMC DURHAM 27710 JEFFERSON	PUD /A AC 52 53 58 919 684-4149	SEALY, WILL CAMP 777 HEMLOCK ST., BOX 6000 MACON, GA 31208 EMORY U	TS /CDS L 36 36 48 912 744-1000	SHINGLETON, WILLIAM WARNER BOX 3814, DUMC DURHAM 27710 BOWMAN GRAY	GS L 43 43 51 919 684-2282
SANDERS, GEO. HERBERT S. 119 F-4 FIDELITY ST. CARRBORO 27510 U OF NC	S 88 86 919 942-0546	SEATON, KAREN GIPSON 59 POLKS LANDING CHAPEL HILL 27516 U OF NC	IM /END S 88 85 919 933-9515	SHUGART, MARGARET ANN 1713 AVONDALE DR. DURHAM 27701 MED COLL OF VA	P /CHP R 84 84 84 919 688-9003
SANDLER, ROBERT SAMUEL UNC, CB #7080 423 BURNETT-WOMACK BLDG. CHAPEL HILL 27599 YALE	GE AC 75 76 83 919 966-2511	SEGRETI, EILEEN MARIE 3127 N. RACINE AVE., 2ND FLOOR CHICAGO, IL 60657 DUKE	S 88 84	SIEFKER, JOSEPH DANIEL 3 VETERANS DR. ASHEVILLE 28805 LA STATE U	OTO R 83 85 83 919 688-1816
SANFILIPPO, ALFRED PAUL 3315 STONEYBROOK DRIVE DURHAM 27705 DUKE	PTH /IG AC 76 76 74 919 684-2482	SEIGLER, HILLIARD FOSTER BOX 3966, DUMC DURHAM 27710 U OF NC	GS AC 60 60 71 919 684-3942	SIEKER, HERBERT OTTO BOX 3822, DUMC DURHAM 27710 WASHINGTON U	IM /PUD AC 48 50 55 919 684-3907
SATHER, RANDALL KENNETH 1901 HILLDALE ROAD DURHAM 27705 MED COLL OF GA	R AC 69 69 83 919 383-9407	SEMANS, JAMES HUSTEAD DUKE UNIV. MED. CTR. DURHAM 27710 JOHNS HOPKINS	U L 36 53 54 919 684-2744	SILBERMAN, HAROLD REITER BOX 3975-M, DUMC DURHAM 27710 WASHINGTON U	EM /IM AC 56 57 64 919 684-5537
		SERAFIN, DONALD DUMC-PLASTIC SURGERY DURHAM 27710 DUKE	PS /GS AC 64 64 74 919 684-3347	SINGER, JAMES DANIEL DD6 OLD WELL CONDOS CARRBORO 27510 U OF NC	S 89 86 919 968-4482

32. DURHAM-ORANGE COMPONENT SOCIETY (Continued)

SINGLETERY, WILLIAM V., JR. 306 S. GREGSON STREET DURHAM 27701 DUKE	GE AC 75 78 80 919 682-5561	SPANGLER, THOMAS CLAYTON 1066 ARTHUR DR. GRAHAM 27253 U OF NC	ORS R 84 00 84 919 226-6586	STONE, LISA MARIE 21 PRESTWICK PLACE DURHAM 27705 DUKE	S 88 85 919 286-2377
SMALL, KENT WILSON 818 PROLOGUE RD. DURHAM 27712 TULANE U	OPH R 81 81 84 919 684-6611	SPARLING, PHILIP FREDERICK UNC SCHOOL OF MEDICINE CHAPEL HILL 27514 HARVARD	ID /IM AC 62 62 70 919 966-1191	STOPFORD, WOODHALL BOX 2914, DUMC DURHAM 27710 HARVARD	OM /IM AC 69 70 80 919 684-6677
SMELZER, TIMOTHY HARVEY 891 W. WILLOW DRIVE CHAPEL HILL 27514 COLUMBIA U	IM /PUD AC 62 69 69 919 942-5123	SPENCER, ROGER FELIX NCMH, 201 SOUTH WING, CB #7160 CHAPEL HILL 27599 HARVARD	P /PYA AC 59 63 63 919 966-4622	STRATTON, IDA JANICE DEAS 414 E. MAIN ST. DURHAM 27701 TULANE U	PD /PH AC 61 61 84 919 682-8176
SMILEY, MARGARET L. BURROUGHS-WELLCOME CO. 3030 CORNWALLIS RD. RESEARCH TRI. PARK 27709 DUKE	IM AC 78 84 88	SPIRO, PHILIP MARGET 2001 DARTMOUTH DR. DURHAM 27705 YALE	GP R 83 84 85 919 796-0689	STRATTON, JOHN PERLEY 2609 N. DUKE ST., STE. 304 DURHAM 27704 HARVARD	IM AC 61 61 69 919 471-8446
SMITH, ALLEN DALE 182 MONTROSE DURHAM 27707 MED COLL OF GA	D /AM L/RT 37 37 61 919 489-2642	SPOCK, ALEXANDER BOX 2994, DUMC DURHAM 27710 U OF MARYLAND	PDA /A AC 55 60 65 919 681-3364	STROHMEYER, JON F. DUKE UNIV. MEDICAL CENTER DURHAM 27710 LA STATE U	R 85 88 88 919 684-8111
SMITH, BRYAN WESLEY 302 PITTSBORO ST. CHAPEL HILL 27514 DUKE	S 88 84 919 929-7447	SPRAGUE, DAVID HUGH UNC-DEPT. OF ANES. CHAPEL HILL 27514 ALBANY MED COLL	AN AC 69 70 85 919 966-3371	STROUP, T. SCOTT 108 STINSON ST. CHAPEL HILL 27514 U OF NC	S 89 85
SMITH, DAVID ALDEN 200 EASTOWNE DR. STE. 216 CHAPEL HILL 27514 U OF CALIFORNIA	FP AC 82 84 85 919 967-4202	SPRUILL, THOMAS RAYFORD RT. #5, BOX 200 HILLSBOROUGH 27278 LA STATE U	P AC 83 83 86 919 821-0300	SUBIN, GLEN DAVID DUMC, BOX 3000 DURHAM 27710 DOWNSTATE ME CTR	ORS /HS R 82 86 87
SMITH, HELEN ELIZABETH 3312-L CIRCLE BROOK DR. SW ROANOKE, VA 24014 U OF NC	R 85 00 83 703 772-3071	ST. CLAIR, STEVEN H. 101 SOUTH PEAK CARRBORO 27510 COLUMBIA U	OM R 87 00 87 919 966-4131	SUGARMAN, JEREMY 28 JUSTIN CT. DURHAM 27705 DUKE	IM R 86 86 83 919 477-9435
SMITH, IRA Q. 400 CRUTCHFIELD ST., APT B DURHAM 27704 BOWMAN GRAY	OBG AC 79 80 82 919 471-1573	ST. CLARIE, KAREN SUE BOX 31172, DUMC DURHAM 27710 U OF TEXAS	R 82 87 88 919 684-6575	SUGIOKA, KENNETH RT. #7, BAYBERRY DR. CHAPEL HILL 27514 WASHINGTON U	AN L/RT 49 54 55 919 933-0487
SMITH, PETER KENT BOX 3442, DUMC DURHAM 27710 DUKE	CDS AC 77 83 88 919 684-2890	STAFFEL, JON G. 605 JONE FERRY RD. FF-8 CARRBORO 27510 U TX-SAN ANTONIO	R 85 86 87 919 968-1030	SUITS, GREGORY WM. B-39 WHITE OAK APTS. CARRBORO 27510 U OF NC	S 90 87 919 967-4356
SMITH, SCOTT VICTOR 4639 HOPE VALLEY RD. APT. J DURHAM 27707 U OF NC	S 90 86	STANKUS, PAUL VICTOR 7 LITCHFORD ROAD CHAPEL HILL 27514 U OF NC	AN AC 76 76 81 919 967-5295	SULLIVAN, DANIEL CARL BOX 3808, DUMC DURHAM 27710 U OF VERMONT	R /P AC 70 70 86 919 684-2711
SMITH, SPENCER MARION 10007 CRESTWOOD RD. KENSINGTON, MD 20895 DUKE	S 90 85 301 493-8395	STAREK, PETER JOSEF KARL UNC, CB 7065, BURNETT-WOMACK DIV. OF CARDIO-SURGERY CHAPEL HILL 27599 OHIO STATE U	TS /GS AC 64 64 71 919 966-3381	SULLIVAN, ROBERT JOSEPH, JR. BOX 3003, DUMC DURHAM 27710 CORNELL U	IM /FP AC 66 71 74 919 684-2248
SNEDEKER, JEFFREY DAVID BOX 31085, DUMC DURHAM 27710 U OF WISCONSIN	PD /ID R 82 85 85 919 684-6610	STEBBINS, NANCY K. G. 1729-B E. CORNWALLIS RD. DURHAM 27713 U OF TX-HOUSTON	P R 87 00 87 919 544-0087	SUMMERS, FRED DAVIDSON, JR. ROUTE #1, BOX 181 CHAPEL HILL 27514 U OF NC	OBG RT 63 63 69 919 929-2158
SOFLEY, CARL WILSON, JR. 319 KILBOURNE RD. COLUMBIA, SC 29205 U OF NC	IM R 86 00 84 803 254-5847	STEIN, JEANNETTE FISCHER 1301 FAYETTEVILLE ST. DURHAM 27707 U OF NC	IM AC 81 82 86 919 683-1316	SUMNER, BRIAN MONTGOMERY 218 CEDARWOOD LANE CARRBORO 27510 U OF NC	S 88 84 919 967-6473
SOLTYS, JOHN JOSEPH UNC, MEDICAL WING D, 208-H CHAPEL HILL 27514 HARVARD	P /CHP AC 59 59 79 919 966-5277	STEINER, ROBERT W. P. RT. #7, BOX 69B CHAPEL HILL 27514 U OF LOUISVILLE	FP /PH R 73 74 87 919 942-0108	SURYANARAYAN, KAVERI BOX 2800, DUMC DURHAM 27710 DUKE	S 91 87 401 789-0710
SOMERS, WILLIAM ALAN 1830 HILLANDALE ROAD DURHAM 27705 DUKE	ORS AC 72 72 81 919 383-5531	STEPHENSON, JOHN HADDON 130 HOMESTEAD RD. CHAPEL HILL 27514 U OF NC	S 89 85 919 968-6454	SUTTON, SYLVIA PO BOX 3574 CHAPEL HILL 27515 U OF NC	S 88 85 919 967-7288
SOMKUTI, STEPHEN GEORGE 2601 STUART DR. DURHAM 27707 U OF NC	S 90 86 919 489-9434	STETS, JOAN MARIE 2609 N. DUKE ST. #612 DURHAM 27704 OHIO STATE U	PS AC 77 78 87 919 471-3990	SWIFT, MICHAEL RONALD NCMH, BSRC 220-H CHAPEL HILL 27514 NEW YORK U	IM AC 62 62 73 919 966-2266
SOOD, ANIL KUMAR 7E, ESTES PARK APTS. CARRBORO 27510 U OF NC	S 91 88 919 929-9240	STEVENS, WILLIAM ROSS 534 MARSHALL WAY DURHAM 27705 DUKE	S 89 85 919 383-5653	SWIFT, RONNIE GORMAN ROUTE #7, BOX 284 CHAPEL HILL 27514 U OF NC	P AC 75 76 81 919 933-5857
SORROW, JOHN MITCHELL, JR. N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514 U OF PENN	IM /CD AC 46 46 54 919 962-8336	STEVENSON, KARL 2609 N. DUKE ST., STE. 103 DURHAM 27704 BOWMAN GRAY	CHP /P AC 66 66 73 919 471-3487	SYKES, KASSELL EUGENE, JR. 215 VANCE ST. CHAPEL HILL 27514 U OF NC	S 88 85 919 942-8492
SOTO, PABLO F. 6D RIVER BIRCH RD. DURHAM 27705 DUKE	S 91 88 919 383-4367	STICKEL, DELFORD LEFEW BOX 3917, DUMC DURHAM 27710 DUKE	GS AC 53 58 62 919 684-6129	SYKES, LISA CAROL 204-A HOWELL ST. CHAPEL HILL 27514 U OF NC	S 89 85 919 968-4727
SOTOLONGO, CARLOS A. 5501 FORTUNE RIDGE DR., STE. A DURHAM 27713 AUTONOMA UNIV	FP AC 81 83 87 919 544-3737	STOKES, THOMAS A., JR. 2609 N. DUKE ST., STE. 102 DURHAM 27704 DUKE	GYN AC 55 55 60 919 477-2183	TAFT, TIMOTHY NED UNC, DIV. OF ORS CHAPEL HILL 27514 U OF MISSOURI	ORS AC 69 72 73 919 966-2039

32. DURHAM-ORANGE COMPONENT SOCIETY (Continued)

TALBERT, LUTHER MARCUS N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514 U OF VIRGINIA	OBG /END AC 53 59 59 919 966-5438	TRUED, SALLY JO NC MEMORIAL HOSP STE. 1015 CHAPEL HILL 27514 GEO WASHINGTON U	EM AC 75 76 88 919 966-5933	VOLLMER, DENNIS G. 148 BURNETT-WOMACK BLDG. UNC SCH. OF MED. CHAPEL HILL 27514 U TX-SAN ANTONIO	NS AC 79 86 87 919 966-1374
TALTON, INGEBORG H. 2725 MONTGOMERY ST. DURHAM 27705 W.V.GOETHE U	AN AC 51 66 68	TUCKER, LANDRUM S., JR. FRANKLIN SQUARE, BLDG 900-A CHAPEL HILL 27514 STANFORD U	PYA /CHP AC 66 66 74 919 942-8716	VUKOSON, MATTHEW BRUCE UNC, STUDENT HEALTH SERVICE CHAPEL HILL 27514 WEST VA U	FP AC 77 78 81 919 966-2281
TANNER, TODD F. 105-A ISLEY ST. CHAPEL HILL 27514 U OF NC	S 91 88 919 967-2682	TURNER, LARRY 1110 W. MAIN STREET DURHAM 27701 DUKE	OPH /OTO L 39 41 47 919 682-9341	WADSWORTH, JOSEPH A.C. 1830 HILLDALE RD. DURHAM 27705 DUKE	OPH L 39 65 65 919 383-5531
TARRY, WALLACE CLEMENTS 208 1/2 E. KNOX ST. DURHAM 27702 DUKE	S 89 85 919 693-3223	TWEED, JOHN LINDSEY 1311 GLENDALE AVE. DURHAM 27701 DUKE	S 88 85 919 688-0527	WALKER, RICHARD ISLEY N. C. MEMORIAL HOSPITAL CHAPEL HILL 27599 HARVARD	IM /HEM AC 54 54 62 919 966-4546
TAYLOR, JENNIFER ELAINE BOX 3061, DUMC DURHAM 27710 U OF MARYLAND	AN AC 78 79 84 919 684-2945	UPCHURCH, GILBERT R., JR. 103 GOLDSTON DR. CARRBORO 27510 U OF NC	S 91 88 919 942-8105	WALLACE, ANDREW G. BOX 3708, DUMC DURHAM 27710 DUKE	CD AC 59 60 87 919 684-5414
TENNISON, MICHAEL BYRON UNC SCHOOL OF MEDICINE 751 BURNETT-WOMACK BLDG. 229-H HARVARD	CHN /PD AC 75 79 81 919 966-2528	URBANIAK, JAMES RANDOLPH BOX 2912, DUKE HOSPITAL DURHAM 27710 DUKE	ORS /HS AC 62 62 70 919 684-2476	WALLIN, ROLF BOLIN 2604 FASHION LANE FAYETTEVILLE 28304 U OF NC	AN R 84 85 83 919 966-5136
TEPLIN, STUART WARREN UNC, CDL/BSRC 220-H,CB #7255 CHAPEL HILL 27599 U OF PENN	PD AC 73 74 83 919 966-5171	UTHE, WILLIAM FREDERICK 1901 HILLDALE ROAD DURHAM 27705 MED COLL OF OHIO	IM AC 74 77 80 919 383-1518	WALSTON, ABE, II 306 S. GREGSON STREET DURHAM 27705 DUKE	CD /IM AC 63 63 76 919 682-5561
TEPPER, JOEL NC MEMORIAL HOSP. RADIATION ONC., APCF CHAPEL HILL 27514 WASHINGTON U	ON AC 72 73 88 919 966-1101	VAN DYKE, ALLEN H., JR. 2609 N. DUKE ST., STE. 204 DURHAM 27704 BOWMAN GRAY	OBG /GYN AC 71 71 77 919 471-8402	WALTER, KEITH A. 1911 ERWIN RD. APT. E DURHAM 27705 DUKE	S 91 88 919 684-6253
TERRY, ROY CLARENCE 300-D MASON FARM RD. CHAPEL HILL 27514 U OF NC	S 89 86 919 933-6747	VAN TASSEL, ERIC D. 104 SONDLEY PARKWAY ASHEVILLE 28805 U OF NC	CD /IM R 82 82 79 919 942-4810	WALTERS-SCHERRER, BARBARA A. 417 COLONY WOODS DR. CHAPEL HILL 27514 MI. ST U-OST MED	P /GP R 85 85 86 919 968-4652
THIELMAN, NATHAN M. 813 LOUISE CIRCLE DURHAM 27705 DUKE	S 90 86 919 383-7118	VANDEMARK, ROBERT M. BOX 3808, DUMC DEPT. OF RADIOLOGY DURHAM 27710 SUNY-SYRACUSE	DR AC 81 82 87 919 681-2711	WALTERS, BRADFORD BLAIR UNC-NEUROSURGERY BURNETT-WOMACK BLDG 229H CHAPEL HILL 27514 HARVARD	NS AC 79 80 86 919 966-1374
THIERJUNG, CHRISTINA 95 CRESCENT AVE. RYE, NY 10580 DUKE	S 89 86	VANDIVIERE, H. MAC U. OF KENTUCKY, PED. MN 102 LEXINGTON, KY 40536 U OF NC	PUD /PD AC 60 60 61 606 233-5857	WALTHER, PHILIP JOHN BOX 3314, DUMC DURHAM 27710 DUKE	U AC 75 77 83 919 684-5235
THOMAS, COLIN GORDON, JR UNC,BURNETT-WOMACK 229H CHAPEL HILL 27514 U OF CHICAGO	GS AC 43 52 52 919 966-4597	VARIA, INDIRA MAHESH BOX 3889, DUMC DURHAM 27710 M P SHAH MED COL	P AC 68 76 81 919 929-6726	WARBURTON, SAMUEL W., JR. 2020 W. MAIN ST. DURHAM 27705 U OF PENN	FP AC 69 70 81 919 471-4421
THOMPSON, ERVIN MAGNUS 3643 N. ROXBORO ST. DURHAM 27704 VANDERBILT U	P AC 72 76 86 919 470-6241	VARIA, MAHESH AMRATLAL RADIATION ONCOLOGY-UNC NCMH BASEMENT CHAPEL HILL 27514 U OF LIVERPOOL	TR AC 67 73 77 919 966-1101	WARD, WILLIAM GOODE 21 GORHAM PLACE DURHAM 27705 DUKE	ORS R 78 80 84 919 383-9667
THOMPSON, LAWRENCE K., III 2609 N. DUKE ST., STE. 401 DURHAM 27704 DUKE	PS AC 61 61 70 919 471-2502	VARTANIAN, VARTAN 23 CLOVER PL. DURHAM 27705 DUKE	AN RT 61 66 77 919 684-6841	WARDEN, CLARK GERARD 212 CEDARWOOD LANE CARRBORO 27510 TULANE U	GS R 84 84 84 919 967-9414
THORNE, NORMAN ALAN 829-B EDWARDS ST. CHAPEL HILL 27516 DUKE	P /R R 58 58 64 919 968-6839	VAUGHAN, DANIEL PATRICK UNC STUDENT HEALTH SERV. CAMPUS BOX 7470 CHAPEL HILL 27599 WAYNE STATE U	IM /ADL AC 71 72 75 919 966-2281	WARREN, JEFFERY STEVEN 274 N. MCLEAN MEMPHIS, TN 38112 DUKE	EM /FP R 82 82 80 901 682-4027
TIEDEMAN, JAMES STUART BOX 3802, DUMC DURHAM 27710 DUKE	OPH AC 77 80 83 919 684-3090	VAUGHAN, ROBERT WILLIAM 101 BARNHILL PLACE CHAPEL HILL 27514 U OF TEXAS-SW	AN AC 66 66 84 919 966-5136	WASHINGTON, MARY KAY 503 E. TRINITY AVE. DURHAM 27701 U OF NC	PTH R 86 00 84 919 684-3300
TOLLEY, AUBREY GRANVILLE 110 LAUREL HILL ROAD CHAPEL HILL 27514 U OF VIRGINIA	P AC 52 52 56 919 942-5754	VICK, WILLIAM WOODROW 214 TALLYHO TRAIL CHAPEL HILL 27514 DUKE	PTH R 87 87 84 919 684-3300	WATKINS, WALTER DAVID BOX 3094, DUMC DURHAM 27710 U OF COLORADO	AN /PA AC 75 78 84 919 681-2498
TOMSICK, ROBERT S. UNC, DEPT. OF DERMATOLOGY CHAPEL HILL 27514 U OF NC	D AC 76 77 85 919 966-4506	VIGLIONE, CHERYL ANNE 213 NORTHWOOD DR. CHAPEL HILL 27514 PENN STATE U	DR /GP AC 79 79 82 919 942-3196	WATTS, CHARLES DEWITT 510 SIMMONS STREET DURHAM 27701 HOWARD U	GS /ABS L 43 45 67 919 688-3391
TRACHMAN, JAYNE FELICIA 2413 DELLWOOD DR. DURHAM 27705 DUKE	S 89 85 919 383-1341	VOGLER, JAMES BREVARD, III BOX 3808, DUMC DURHAM 27710 BOWMAN GRAY	DR AC 77 77 74 919 684-2711	WEAVER, JAMES PHILLIP 1830 HILLDALE ROAD DURHAM 27705 U OF PENN	CDS /GS AC 69 71 84 919 383-5531
TRASK, TODD WILSON BOX 1241, RT. #5,HWY. 70 HILLSBOROUGH 27278 U OF NC	S 89 86 919 942-2319	VOGLER, ROBERT C. 119-C STINSON ST. CHAPEL HILL 27516 U OF NC	S 91 88 919 933-7867	WEBB, BAILEY APT. 14, ALASTAIR COURT APTS. 300 SWIFT AVE. DURHAM 27705 DUKE	PD L 46 49 49 919 286-2202

32. DURHAM-ORANGE COMPONENT SOCIETY (Continued)

WEBB, MICHAEL STEPHEN, JR. 229-A BRIDGEFIELD PLACE DURHAM 27705 DUKE	89 85 919 383-4960	S	WHISNANT, JOHN KEENAN, JR. ROOM 1126, BLDG. 26 EI DUPONT, BARLEY MILL PLAZA WILMINGTON, DE 19898 BOWMAN GRAY	68 68 80 302 992-4282	PD /ON AC	WOODS, JON POINTON 113 PUREFOY ROAD, APT. D CHAPEL HILL 27514 U OF NC	89 83 919 942-0654	S
WEBSTER, GEORGE DAVID DUMC, DIV. OF UROLOGY DURHAM 27710 U OF BIRMINGHAM	68 77 79 919 684-2516	U AC	WHITCOMB, DAVID C. 706 WEST KNOX ST. DURHAM 27701 OHIO STATE U	85 86 88 919 684-8111	R	WORKMAN, JOSEPH BERKELEY 219 COUNTRY CLUB DRIVE DURHAM 27712 U OF MARYLAND	46 46 72 919 681-2711	NM /IM AC
WECHSLER, ANDREW S. DUKE UNIV. MED. CTR. DURHAM 27710 DOWNSTATE ME CTR	64 68 81 919 684-5282	CDS /GS AC	WHITESIDES, EDWARD WM. 1108 WILLOW DR. CHAPEL HILL 27514 U OF NC	88 00 88 919 967-7440	R	WORLEY, GORDON, III 307 BIRCH CIRCLE CHAPEL HILL 27514 HARVARD	73 73 87 919 683-6890	PD AC
WEEKS, FREDERICK M. THE VILLAGES, APT. 0-1 CARRBORO 27510 U OF NC	91 87 919 933-1259	S	WILCOX, BENSON REID UNC, CB 7065, BURNETT-WOMACK 229-H CHAPEL HILL 27599 U OF NC	57 57 65 919 966-3381	CDS AC	WRENN, EDWARD HOWARD 154 RIDGE TRAIL CHAPEL HILL 27514 U OF NC	91 87 919 929-4113	S
WEIDMAN, ERIC ROBERT 311 S. LASALLE ST. APT. 48-0 DURHAM 27705 DUKE	91 88 919 286-2172	S	WILCOX, WILLIAM DAVID 116 CRUTCHFIELD ST. DURHAM 27704 U OF PITTSBURGH	70 71 84 919 477-8050	OPH AC	WRIGHT, JOHN JOSEPH 105 LAUREL HILL CIRCLE CHAPEL HILL 27514 VANDERBILT U	35 35 42 919 942-4557	PH L/RT
WEINERTH, JOHN LOUIS DUKE, DEPT. OF SURGERY DURHAM 27710 HARVARD	67 71 73 919 684-4157	U/GS AC	WILFERT, CATHERINE M. MINOCK BOX 2951, DUMC DURHAM 27710 HARVARD	62 62 85 919 684-6610	PD /ID AC	WRIGHT, PAUL HARLAN 1901 HILLDALE ROAD DURHAM 27705 BOWMAN GRAY	74 74 73 919 383-1511	ORS AC
WEINRICH, A. ELISE 2609 N. DUKE ST. STE. 505 DURHAM 27704 MED U OF SC	78 78 83 919 477-2121	D AC	WILKINSON, ROBERT H., JR. BOX 3949, DUMC DURHAM 27710 WASHINGTON U	58 67 68 919 681-2711	NM /R AC	WYNN, TONJA MICHELLE 136-B PUREFOY RD. CHAPEL HILL 27514 U OF NC	89 85 919 929-4216	S
WEISS, JAMES RICHARD 400 EASTOWN DR., STE. 102 CHAPEL HILL 27514 LA STATE U	73 76 79 919 489-2671	P AC	WILLIAMS, EDWARD S. 306 S. GREGSON STREET DURHAM 27701 U OF NC	54 54 64 919 682-5561	IM /CD AC	WYSOR, WILLIAM G., JR. 306 S. GREGSON STREET DURHAM 27701 U OF VIRGINIA	50 57 57 919 682-5561	IM /GE AC
WEISS, MATTHEW JAY 910 CONSTITUTION #1003 DURHAM 27705 MI. ST U-OST MED	79 80 87 919 383-9755	GER R	WILLIAMS, MARK E. 5039 OLD CLINIC BLDG. 226H UNC, SCH.OF MED. CB #7110 CHAPEL HILL 27599 U OF NC	76 76 88 919 966-3359	IM /GER AC	YADAV, SANJAY SINGH BOX 3053, DUMC DURHAM 27710 WEST VA U	83 84 86 919 286-2352	N /IM R
WEISSLER, MARK C. UNC, 620 BURNETT-WOMACK CB #7070 CHAPEL HILL 27599 BOSTON U	80 80 86 919 966-3341	OTO /HNS AC	WILSON, FRANK CRANE N. C. MEMORIAL HOSPITAL CHAPEL HILL 27514 MED COLL OF GA	54 64 64 919 966-3359	ORS AC	YANCY, WILLIAM SAMUEL 306 S. GREGSON STREET DURHAM 27701 DUKE	65 65 72 919 688-6349	PD /ADL AC
WEITZNER, STANLEY WALLACE 417 LYONS ROAD CHAPEL HILL 27514 NEW YORK U	53 54 78 919 684-2425	AN AC	WILSON, JAMES STEPHENSON 1830 HILLDALE ROAD DURHAM 27705 DUKE	37 47 47 919 383-5531	GS L	YARBROUGH, WENDELL GRAY 407 MASON FARM RD. APT. D CHAPEL HILL 27514 U OF NC	56 56 65 919 924-2447	IM AC
WELLS, JAMES SHELTON, JR. ROUTE #3, BOX 456 HILLSBOROUGH 27278 U OF NC	77 78 75 919 967-6353	P /PYM AC	WILSON, PATRIC ALOYSIUS RT. #3, BOX 213 CHAPEL HILL 27516 U OF NC	90 86 919 967-8931	S	YARLEY, DEWEY HOBSON 2609 N. DUKE STREET DURHAM 27704 U OF NC	87 00 87 919 471-8481	R
WELLS, WARNER LEE 109 PARK PLACE #4 CHAPEL HILL 27514 DUKE	38 41 46 919 968-0069	GS L/RT	WILSON, WILLIAM PRESTON P. O. BOX 2347 BURLINGTON 27216 DUKE	47 50 53 919 229-6049	P L/RT	YOHAY, DANIEL ALAN 3-M POST OAK RD. DURHAM 27705 DUKE	88 84 919 383-6059	S
WERTMAN, DANIEL EDWARD, JR. DURHAM GEN. HOSP-RAD. DURHAM 27704 OHIO STATE U	76 77 84 919 471-3411	R AC	WINFIELD, JOHN BUCKNER UNC 932 FLOB, CB 7280 CHAPEL HILL 27599 CORNELL U	68 69 79 919 966-4191	RHU /IM AC	YOSHINO, PAUL HARUTAKA 1315 MORRENE RD. APT. 27-J DURHAM 27705 DUKE	50 50 57 919 966-4602	CD /IM AC
WESTON, BRENT WILLIAM 301 OLD FOX TRAIL DURHAM 27713 DUKE	85 85 85 919 489-1765	PD R	WOLFE, WALTER GEORGE BOX 3507, DUMC DURHAM 27710 TEMPLE U	63 63 72 919 684-4117	CDS /TS AC	YOUNG, DANIEL TEST UNC, 338 CLINICAL SCI. 229-H CHAPEL HILL 27514 HARVARD	63 63 70 919 471-8495	OPH AC
WHALEN, ROBERT EMMET DUKE UNIV. MED. CTR. DURHAM 27710 CORNELL U	56 59 68 919 684-6315	CD /IM AC	WOOD, WILLIAM BAINSTER UNC, 231 MACNIDER BLDG., CB 7000 CHAPEL HILL 27599 U OF NC	56 56 63 919 962-2118	IM /PUD AC	YOUNG, NOEL WILLIAM, JR. 2609 N. DUKE STREET DURHAM 27704 DUKE	58 58 81 919 684-2037	ADL /PD AC
WHALEY, ROBERT ALLAN 748 SHADYLAWN ROAD CHAPEL HILL 27514 M C OF WISCONSIN	58 66 80 919 966-4397	DR /N AC	WOODARD, PAMELA K. 201 ALEXANDER ST. APT. AA DURHAM 27705 DUKE	90 86 919 684-7402	S	YOUNG, WILLIAM GLENN, JR. DUKE UNIV. MED. CTR. DURHAM 27710 DUKE	48 50 57 919 471-8402	TS /CDS AC
WHANGER, ALAN DUANE 1712 WOODBURN ROAD DURHAM 27705 DUKE	56 56 70 919 684-2545	P AC	WOODBURY, MARGARET H. 4-A BRIARBRIDGE LN. CHAPEL HILL 27514 U OF NC	91 88 919 968-6077	S	YOWELL, ROBERT KLUTTZ 2609 N. DUKE ST., STE. 204 DURHAM 27704 DUKE	61 61 69 919 471-8402	OBG AC
WHATLEY, JOSEPH WILLIAM, JR. 2919 COLONY ROAD DURHAM 27705 DUKE	59 59 63 919 489-9158	PDA /A AC	WOODLEY, DAVID TIMOTHY NCMH, DEPT. OF DERM., RM. 137 CHAPEL HILL 27514 U OF MISSOURI	72 76 85 919 966-4506	D /IM AC	YUE, CHARLES C. 109 TWISTED OAK PL. DURHAM 27705 DUKE	91 87 919 490-1969	S
WHEELER, CLAYTON E., JR. NCMH, DEPT. OF DERMATOLOGY CHAPEL HILL 27514 U OF WISCONSIN	41 62 62 919 966-4507	D /IM L	WOODS, JAMES WATSON, JR. UNC SCHOOL OF MEDICINE CHAPEL HILL 27514 VANDERBILT U	43 48 48 919 942-4627	CD /IM L/RT	ZAROFF, WENDY ANNE 4800 UNIVERSITY DR. EXT. APT. 14-B DURHAM 27707 DUKE	89 85 919 383-7827	S

32. DURHAM-ORANGE COMPONENT SOCIETY (Continued)

ZARZAR, NICHOLAS S.	P R	ZELDIN, DARRYL C.	IM R	ZURFLIEH, PATRICIA J.	S
D-7 VILLAGE GREEN CONDOS	86 86 86	4800 UNIVERSITY DR.	86 86 86	260 SEVERIN ST.	91 88
CHAPEL HILL 27514		DURHAM 27707		CHAPEL HILL 27516	
U OF NC	919 967-8003	INDIANA U	919 490-1023	U OF NC	919 968-3525

33. EDGEcombe COMPONENT SOCIETY

OFFICERS—President: R. Brooks Peters, M.D., 101 Clinic Drive, Tarboro 27886 (919 823-2112)

Secretary: David C. Miller, M.D., 123 Hospital Dr., Tarboro 27886 (919 823-7212)

BROOKS, JOHN IRVING, JR.	IM AC	HUSSEY, HOWARD S., JR.	FP L/RT	NEWTON, DALE ALAN	IM /PD AC
TARBORO CLINIC	58 58 64	908 ST. ANDREW STREET	42 42 43	101 CLINIC DRIVE	73 74 75
101 CLINIC DR.		TARBORO 27886		TARBORO 27886	
TARBORO 27886		JEFFERSON	919 823-2534	U OF NC	919 823-2105
U OF NC	919 823-2105	KELSH, JAMES MICHAEL	GS AC	PETERS, ROBERT BROOKES, IV	FP AC
CRAWFORD, ROBERT ORR, JR.	OPH AC	101 CLINIC DRIVE	58 58 69	101 CLINIC DRIVE	80 81 84
101 CLINIC DR.	54 54 58	TARBORO 27886		TARBORO 27886	
TARBORO 27886		U OF MARYLAND	919 823-2105	U OF NC	919 823-2105
BOWMAN GRAY	919 823-2105	LEBLANG, STEVEN SETH	FP AC	QUIGLESS, MILTON D., SR.	GP /D AC
CUTCHIN, LAWRENCE MCGILBRA	IM /PD AC	4131 N.W. 28TH ST., STE. 2	81 82 85	P. O. BOX 368	34 34 80
RT. #3, BOX 325	62 62 69	GAINESVILLE, FL 32605		TARBORO 27886	
TARBORO 27886		BOWMAN GRAY		MEHARRY MED COLL	919 823-2112
U OF NC	919 823-2105	LEE, DAVID WAYNE	OBG AC	TEMPLE, PETER LIVERMORE	FP AC
DONOVAN, PAUL J.	EM AC	101 CLINIC DR.	82 00 79	101 CLINIC DRIVE	63 68 68
111 HOSPITAL DR.	83 83 88	TARBORO 27886		TARBORO 27886	
TARBORO 27886		U OF NC	919 823-2105	EMORY U	919 823-2105
CHICAGO CO OM	919 641-7150	LOVETTE, KENNETH MAURICE	OBG AC	THOMPSON, KENNETH COCHRAN	P AC
DREW, JOHN EDWIN	FP AC	1612 DOCTORS CIRCLE	79 80 83	101 CLINIC DRIVE	61 61 71
P. O. BOX 337	60 60 61	WILMINGTON 28401		TARBORO 27886	
MACCLESFIELD 27852		U OF NC	919 343-0161	U OF CINCINNATI	919 823-2105
BOWMAN GRAY	919 827-5231	MARROW, JANE GREGORY	GYN AC	VICK, HENRY VERNELL	FP AC
GURKIN, WORTH WICKER, JR.	PD AC	1003 MAIN STREET	43 43 71	101 CLINIC DRIVE	55 55 59
1907 HERITAGE CIRCLE	82 82 80	TARBORO 27886		TARBORO 27886	
TARBORO 27886		DUKE	919 823-8491	BOWMAN GRAY	919 823-2105
EAST CAROLINA U	919 758-6752	MILLER, DAVID CHARLES	ORS AC	WINSLOW, JAMES WEEKS	FP AC
HEMINGWAY, GEORGE C., JR.	IM /PD AC	123 HOSPITAL DR.	80 80 86	101 CLINIC DRIVE	75 75 79
101 CLINIC DRIVE	63 63 70	TARBORO 27886		TARBORO 27886	
TARBORO 27886		HAHNEMANN	919 823-7212	U OF NC	919 823-2105
U OF NC	919 823-2105	MORGAN, JOHN GARLAND	GS /VS AC	YENNEY, MATTHEW FRED J., JR.	R
HIX, MARK TIMOTHY	IM AC	101 CLINIC DR.	62 62 75	111 HOSPITAL DR.	54 61 61
101 CLINIC DR.	81 82 85	TARBORO 27886		HERITAGE HOSPITAL	
TARBORO 27886		DUKE	919 823-2105	TARBORO 27886	
BOWMAN GRAY	919 823-2105	NAVE, LESTER DAVID, JR.	FP AC	JEFFERSON	919 443-9101
		111 FAIRVIEW ROAD	81 83 85		
		ROCKY MOUNT 27801			
		BOWMAN GRAY	919 446-3333		

34. FORSYTH-STOKES-DAVIE COMPONENT SOCIETY

OFFICERS—President: Carolyn R. Ferree, M.D., 300 S. Hawthorne Rd., Winston-Salem 27103 (919 748-4981)

Secretary: William J. Spencer, M.D., 3310 Brookview Hill Blvd., #106, Winston-Salem 27103 (919 765-6020)

Executive Director: Mr. James T. Robinson, 2990 Bethesda Place, Ste. 601-C, Winston-Salem 27103 (919 760-1235)

ADAMS, HARLEY STEWART	R L/RT	ALLEN, DAVID HENRY	CHP /P AC	ALSUP, WILLIAM BYRN, JR.	OTO L/RT
2710 ST. CLAIRE ROAD	42 50 50	1334 ASHLEY SQUARE	64 64 72	261 WESTVIEW DR. SW	40 47 49
WINSTON-SALEM 27106		WINSTON-SALEM 27103		WINSTON-SALEM 27104	
CASE WESTERN RES	919 768-3555	WASHINGTON U	919 765-1866	MED COLL OF GA	919 724-0487
ADAMS, MELANIE	S	ALLEN, ELMS LEACH	HEM /ON AC	ANDERSON, JOSEPH R.	S
300 S. HAWTHORNE RD., BOX 447	89 85	3314 HEALY DR. STE. 107	66 66 74	300 S. HAWTHORNE RD. BOX 184	91 88
WINSTON-SALEM 27103		WINSTON-SALEM 27103		WINSTON-SALEM 27103	
BOWMAN GRAY	919 760-2292	BOWMAN GRAY	919 768-2521	BOWMAN GRAY	919 761-8051
ADAMS, PATRICIA LEE	NEP /IM AC	ALLEN, JOANNE BELL	S	ANDERSON, ROBERT LOUIS	OBG AC
300 S. HAWTHORNE RD.	74 74 80	PO BOX 448	89 86	301 CENTRAL ROAD	68 68 79
WINSTON-SALEM 27103		300 S. HAWTHORNE RD.		CLEMMONS 27012	
BOWMAN GRAY	919 748-4538	WINSTON-SALEM 27103		CREIGHTON U	919 760-0444
ALBERTSON, DAVID ALLEN	GS AC	BOWMAN GRAY	919 777-8288	ANDERSON, STEPHEN GRIFFITH	OBG AC
BOWMAN GRAY	72 72 73	ALLGOOD, DAVID BLAIR	S	2927 LYNDBURST AVENUE	63 63 71
DEPT. OF SURGERY		1821 ELIZABETH AVE.	90 86	WINSTON-SALEM 27103	
WINSTON-SALEM 27103		WINSTON-SALEM 27103		EMORY U	919 765-9350
U OF VIRGINIA	919 748-4442	BOWMAN GRAY	919 723-6041	ANDREW, RAYMOND HALL	P AC
ALEXANDER, BRIAN A.	S	ALPHIN, ROBERT S.	S	779 OAKLAWN AVE.	70 71 84
217-B NEW DR. APT. D	90 86	BOX 319, 300 S. HAWTHORNE RD.	90 88	WINSTON-SALEM 27104	
WINSTON-SALEM 27103		WINSTON-SALEM 27103		U OF ILLINOIS	919 768-4730
BOWMAN GRAY	919 722-7946	BOWMAN GRAY	919 722-3784	ANGELO, JEAN NICHOLAS	NA /PTH AC
ALEXANDER, EBEN, JR.	NS L	ALSON, ROY LEE	EM R	BOWMAN GRAY, DEPT. OF PTH	50 55 80
BOWMAN GRAY SCH. OF MED.	39 48 48	162 HUNTER'S RIDGE RD.	85 86 83	WINSTON-SALEM 27103	
WINSTON-SALEM 27103		WINSTON-SALEM 27103		TUFTS U	919 748-4311
HARVARD	919 748-4082	BOWMAN GRAY		ANTONAKOS, THEODORE	GS L
ALFORD, PETER T.	PUD /IM AC	ALSUP, ROBERT MARTIN	OTO AC	P. O. BOX 8	35 36 46
300 S. HAWTHORNE RD.	79 00 87	175 CHARLOIS BLVD., STE. 101	74 77 80	DANBURY 27016	
WINSTON-SALEM 27103		WINSTON-SALEM 27103		MED COLL OF GA	919 593-8276
U OF MISSISSIPPI		U OF NC	919 768-3361		

34. FORSYTH-STOKES-DAVIE COMPONENT SOCIETY (Continued)

ARONSON, PHILIP R. BOX 631 BERMUDA RUN 27006 DOWNSTATE ME CTR	IM AC 48 55 87 919 765-3471	BITTINGER, ISABEL 118 S. CHERRY ST., PO BOX 10668 WINSTON-SALEM 27108 JOHNS HOPKINS	ORS L 36 39 48 919 725-0656	BRANCH, CHARLES LEON, JR. 300 S. HAWTHORNE RD. BOWMAN GRAY, SECT. — NEURO-SURG. WINSTON-SALEM 27103 U OF TEXAS-SW	NS AC 81 81 86 919 748-4083
ARROWOOD, JOHN P., JR. 2307-D CLOVERDALE AVE. WINSTON-SALEM 27103 BOWMAN GRAY	S 90 86 919 724-7794	BLACKBURN, KATHERINE S. 211-28 DALEWOOD DR. WINSTON-SALEM 27104 BOWMAN GRAY	S 89 86 919 765-5952	BRANCH, JAMES DAVID 224 TOWN RUN LANE WINSTON-SALEM 27101 HOWARD U	OPH AC 73 74 77 919 723-0748
ASSIMOS, DEAN GEORGE BOWMAN GRAY SCH. OF MED. WINSTON-SALEM 27103 LOYOLA U	U AC 77 78 86 919 748-4131	BLAINE, DAVID ALLAN 715 S. HAWTHORNE RD. WINSTON-SALEM 27103 BOWMAN GRAY	S 91 88 919 722-8519	BRANDT-SASIN, ILONA 714 KEIGHTLY CT. WINSTON-SALEM 27104 KRAKOW-POLAND	IM/OM AC 60 77 78 919 784-2476
ATTEBERRY, LINDA ROSE 300 S. HAWTHORNE RD. BOX 185 WINSTON-SALEM 27103 BOWMAN GRAY	S 91 87 919 723-5736	BLAKE, DAMON DALTON 816 PINE VALLEY RD. WINSTON-SALEM 27106 COLUMBIA U	TR L/RT 50 55 58 919 748-4981	BRANHAM, HENRY EZELL, JR. 1409 PLAZA WEST RD., STE. E WINSTON-SALEM 27103 MED U OF SC	P/HYP AC 57 57 82 919 768-9393
AUSTIN, WILLIAM ELLIOT 1830 HAWTHORNE ROAD WINSTON-SALEM 27103 MED COLL OF VA	GE /IM AC 75 76 81 919 765-0463	BLEVINS, VIRGINIA KAY 250 CHARLOIS BLVD. WINSTON-SALEM 27103 MARSHALL U	IM AC 82 84 86 919 768-4730	BRICE, ROBERT SAMUEL, JR. 1901 HAWTHORNE RD., STE. 310 WINSTON-SALEM 27103 DUKE	GE /IM AC 60 60 64 919 760-4340
BAHNSON, EDWARD REID 2725 WINDSOR ROAD WINSTON-SALEM 27104 U OF PENN	IM /OM L/RT 42 42 48 919 768-7784	BLOOMFIELD, ROBERT LEE 741 HIGHLAND AVENUE WINSTON-SALEM 27101 DUKE	IM AC 77 79 82 919 727-8165	BRITTON, BLOYCE HILL, JR. BOWMAN GRAY, DEPT. OF OTO WINSTON-SALEM 27103 U OF OKLAHOMA	OTO /OT AC 60 60 84 919 745-4161
BAHRANI, KHOSROW H. 3080 TRENWEST DRIVE WINSTON-SALEM 27103 U OF TEHRAN	P AC 62 63 74 919 768-2162	BLOUNT, FREDERICK A. 2390 COLISEUM DRIVE WINSTON-SALEM 27106 U OF PENN	PD L/RT 43 44 49 919 724-3072	BROADBENT, BRYAN, J.H. 300 HAWTHORNE ST. BOX 330 WINSTON-SALEM 27103 BOWMAN GRAY	S 90 86 919 721-9971
BALL, JAMES DALE DIV. OF NUCLEAR MEDICINE WINSTON-SALEM 27103 NORTHWESTERN U	NM /R AC 69 70 78 919 748-3520	BOGARD, ANN QUINN 1901 S.HAWTHORNE RD., STE. 240 WINSTON-SALEM 27103 M C OF WISCONSIN	OTO AC 74 75 80 919 768-1308	BRODISH, PAUL HENRY 315 LOCKLAND AVE. WINSTON-SALEM 27103 BOWMAN GRAY	S 90 87 919 766-8447
BALL, MARSHALL RAY BOWMAN GRAY, DEPT. OF RAD. WINSTON-SALEM 27103 BOWMAN GRAY	DR AC 68 68 77 919 748-4435	BOGARD, TERENCE DALE 5020 KNOB VIEW TRAIL WINSTON-SALEM 27104 M C OF WISCONSIN	AN AC 75 76 80 919 760-3954	BROOKS, CLAUDETTE E. 1900 QUEEN ST., APT. C-4 WINSTON-SALEM 27103 BOWMAN GRAY	S 91 88 919 725-3240
BARRETT, ROLLAND JOHN, II 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF MICHIGAN	GYN /ON AC 79 80 85 919 748-2011	BOND, VERNARD FRANKLIN, JR. 318 FORSYTH MEDICAL PK. 1900 S. HAWTHORNE RD. WINSTON-SALEM 27103 JOHNS HOPKINS	IM /CD AC 45 48 51 919 768-1208	BROWN, ANNE BARBARA 2055-A ACADEMY ST. WINSTON-SALEM 27103 BOWMAN GRAY	S 90 86 919 722-2275
BARTON, JOHN HOMER, JR. 160 SARATOGA ST. WINSTON-SALEM 27103 BOWMAN GRAY	R 87 87 85 919 765-7946	BOND, VERNARD FRANKLIN, JR. 318 FORSYTH MEDICAL PK. 1900 S. HAWTHORNE RD. WINSTON-SALEM 27103 JOHNS HOPKINS	ORS AC 59 59 65 919 768-1270	BROWN, RAEFORD E., JR. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF NC	AN AC 80 82 87 919 748-4498
BASS, DAVID ALDEN BOWMAN GRAY, DEPT. OF IM WINSTON-SALEM 27103 JOHNS HOPKINS	ID /IM AC 68 74 83 919 748-4246	BOSTIC, WILLIAM CHIVOUS, III SALEM ORTHOPAEDIC ASSOC. PA PO BOX 25007 WINSTON-SALEM 27114 HARVARD	PD AC 55 61 61 919 765-9170	BROWN, THOMAS LAWRENCE 145 AFTONSHIRE COURT WINSTON-SALEM 27104 BOWMAN GRAY	OBG AC 77 78 83 919 765-2802
BEARD, ELDON S. 3640-A WESTGATE CENTER CIR. WINSTON-SALEM 27103 BOWMAN GRAY	FP AC 82 83 87 919 768-6682	BOWEN, EDWYN TAYLOR, JR 3001 MAPLEWOOD AVENUE WINSTON-SALEM 27103 EMORY U	PD AC 55 61 61 919 765-9170	BROWN, WILLIAM RAY, JR. 3080 TRENWEST DR. WINSTON-SALEM 27104 BOWMAN GRAY	NS AC 70 70 80 919 765-3750
BEASON, EDWARD STEWART 1732 S. HAWTHORNE ROAD WINSTON-SALEM 27103 U OF ALABAMA	PS AC 63 64 73 919 765-3540	BOWER, STEPHEN LEE 3155 MAPLEWOOD AVENUE WINSTON-SALEM 27103 WEST VA U	DR AC 79 79 80 919 760-5874	BROWNING, DOUGLAS GUY 2050 CRAIG ST., APT. 23 WINSTON-SALEM 27103 BOWMAN GRAY	S 89 86 919 723-6603
BELL, WILLIAM OSGOOD BOWMAN GRAY, DEPT. OF NS WINSTON-SALEM 27103 HAHNEMANN	NS AC 77 78 85 919 748-4047	BOWMAN, MARJORIE ANN 300 S. HAWTHORNE RD. DEPT. OF FAMILY MEDICINE WINSTON-SALEM 27103 JEFFERSON	FP /GPM AC 76 77 77 919 748-4649	BRUSINO, F. GREGORY 5129 RIVER CHASE RIDGE WINSTON-SALEM 27104 ST U OF NY-BUFF	AN AC 83 83 85 919 722-5022
BENNETT, JERRY L. 2240 CLOVERDALE AVENUE SUITE 217, PROF. BLDG. WINSTON-SALEM 27103 BOWMAN GRAY	PD AC 67 67 88 919 722-7143	BOWTON, DAVID LOWELL DEPT. OF MED. BOWMAN GRAY SCH. OF MED. WINSTON-SALEM 27103 U OF ILLINOIS	PUD AC 75 76 81 919 748-4131	BUCKALEW, VARDAMAN M. JR. 300 S. HAWTHORNE ROAD WINSTON-SALEM 27103 U OF PENN	NEP /IM AC 58 58 76 919 748-2062
BENTIVOGLIO, GIAN P. 809 GALES AVE. WINSTON-SALEM 27103 BOWMAN GRAY	S 90 87 919 725-3552	BOYCE, WILLIAM HENRY BOWMAN GRAY SCH. OF MED. WINSTON-SALEM 27103 VANDERBILT U	U AC 44 52 52 919 768-4730	BURGESS, GLENN NORMAN 2422-B REYNOLDA RD. WINSTON-SALEM 27106 U OF W ONTARIO	P AC 57 57 75 919 722-5022
BERG, TIMOTHY ARRID 1821 ELIZABETH AVE. WINSTON-SALEM 27103 BOWMAN GRAY	R 84 87 88 919 748-2011	BOYER, JAY ALLEN 250 CHARLOIS BOULEVARD WINSTON-SALEM 27103 TUFTS U	DR AC 66 70 77 919 765-1640	BURKART, JOHN 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 RUSH MED COLL	IM /NEP AC 79 80 87 919 748-3963
BEY, RICHARD DOUD 160 CHARLOIS BOULEVARD WINSTON-SALEM 27103 YALE	N AC 79 79 84 919 768-5834	BOYETTE, GRAY THOMAS 2933 MAPLEWOOD AVENUE WINSTON-SALEM 27103 BOWMAN GRAY	IM /GE AC 60 60 66 919 768-6347	BURKHART, CHARLES ANDREW 345 WESTVIEW DRIVE, S.W. WINSTON-SALEM 27104 OHIO STATE U	GP AC 57 57 75 919 761-1541
BILLINGS, JACK SMITH 540 HOLMES DRIVE RURAL HALL 27045 BOWMAN GRAY	FP AC 58 59 62 919 969-9158	BRADY, WILLIAM ALEX 201 EXECUTIVE PARK BLVD. WINSTON-SALEM 27103 BOWMAN GRAY	N AC 70 70 75 919 765-1640	BUSS, DAVID HUMPHREY 237 GRANDVIEW DRIVE WINSTON-SALEM 27104 BOWMAN GRAY	PTH /HEM AC 66 66 81 919 748-2641
				BUTLER, JAMES HILTON 3155 MAPLEWOOD AVENUE WINSTON-SALEM 27103 U OF MISSISSIPPI	R AC 60 64 68 919 765-2702

34. FORSYTH-STOKES-DAVIE COMPONENT SOCIETY (Continued)

BUTLER, RADFORD NORMAN 1881 WILLIAMS RD. LEWISVILLE 27023 BOWMAN GRAY	IM L/RT 50 50 53 919 725-7587	CHANDLER, EDGAR TED 741 HIGHLAND AVE. WINSTON-SALEM 27101 U OF NC	IM AC 55 55 58 919 727-2097	COPE, BRIAN SCOTT 4755 COUNTRY CLUB RD. APT. 109-E WINSTON-SALEM 27104 BOWMAN GRAY	S 91 87 919 760-2482
BUTTERWORTH, JOHN F., IV 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 MED COLL OF VA	AN AC 79 79 86 919 748-3613	CHASE, TIMOTHY LEE 549 ARBOR HILL RD. APT. 62B KERNERSVILLE 27284 BOWMAN GRAY	S 91 88 919 996-8014	CORDELL, A. ROBERT BOWMAN GRAY SCH. OF MED. WINSTON-SALEM 27103 JOHNS HOPKINS	CDS /TS AC 47 50 57 919 748-4672
BYRD, KERRY WENDELL 152 CHARLESTOWNE CIRCLE WINSTON-SALEM 27103 BOWMAN GRAY	S 89 86 919 765-3033	CHEREN, ISA 1900 QUEEN ST., APT. C-8 WINSTON-SALEM 27103 BOWMAN GRAY	S 88 84 919 724-3782	COWAN, ROBERT JENKINS 2869 FAIRMONT ROAD WINSTON-SALEM 27106 U OF NC	NM /R AC 63 63 70 919 748-4932
CALDERONE, LISA M. 3421 OLD VINEYARD RD. #C41 WINSTON-SALEM 27103 BOWMAN GRAY	S 91 88 919 768-4502	CHICCONI, THOMAS GERARD 1711 LYNWOOD AVE. WINSTON-SALEM 27104 GEORGETOWN U	EM AC 79 80 85 919 765-9328	COWARD, HOLLYJEAN 305 S. HAWTHORNE RD. APT. 8 WINSTON-SALEM 27103 BOWMAN GRAY	S 88 85 919 724-4554
CALDWELL, GEORGE LEONHARD, JR. 2038 QUEEN ST. WINSTON-SALEM 27103 BOWMAN GRAY	S 88 85 919 722-3629	CHIU, ARVA YAHUA 1640 NORTHWEST BLVD. APT. #4 WINSTON-SALEM 27104 BOWMAN GRAY	S 91 87 919 722-1616	COX, WILLIAM FOSCUE 3740 KIRKLEES ROAD WINSTON-SALEM 27104 MED COLL OF VA	IM /GPM L/RT 42 47 47 919 765-2626
CAMPBELL, CHARLES BRUCE, III 2827 LYNDBURST AVE., STE. 204 WINSTON-SALEM 27103 U OF VIRGINIA	OPH AC 76 78 82 919 768-0725	CINTRON, RUBEN 300 S. HAWTHORNE RD. MED. STUDENT, BOX 336 WINSTON-SALEM 27103 BOWMAN GRAY	S 90 86 919 773-1564	CREGAN, GREGG EDWARD BOX 25007 1425 PLAZA DR. WINSTON-SALEM 27114 JEFFERSON	ORS /HS AC 78 78 85 919 768-1270
CANNON, THOMAS BERNARD 2805 LYNDBURST AVENUE WINSTON-SALEM 27103 U OF NC	FP AC 73 73 78 919 768-8890	CLARK, ALAN BOYD BOWMAN GRAY, BOX 93 WINSTON-SALEM 27103 BOWMAN GRAY	S 88 84 919 724-4572	CROSBY, IVAN KEITH 2827 LYNDBURST AVE., #205-A WINSTON-SALEM 27103 U OF QUEENSLAND	CDS /TS AC 63 63 87 919 768-9510
CANTLEY, LARRY KEITH 2933 MAPLEWOOD AVE. WINSTON-SALEM 27103 WEST VA U	END AC 77 77 87 919 765-1640	CLARK, C. SCOTT 3500 POWELTON AVE. C-106 PHILADELPHIA, PA 19104 BOWMAN GRAY	S 88 87	CROUSE, JOHN ROBERT, III BOWMAN GRAY SCH. OF MED. 300 S. HAWTHORNE ROAD WINSTON-SALEM 27103 DOWNSTATE ME CTR	IM AC 69 69 82 919 748-2674
CAPIZZI, ROBERT LAWRENCE 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 HAHNEMANN	ON /HEM AC 64 66 78 919 748-4464	CLARK, MARGARET ANNE 250 CHARLOIS BOULEVARD WINSTON-SALEM 27103 CASE WESTERN RES	IM AC 79 82 84 919 768-4730	CROYLE, TERENCE ALAN 110 CAPISTRANO COURT WINSTON-SALEM 27103 MED COLL OF OHIO	OPH /EM R 79 80 85 919 760-2646
CARLSON, KENNETH PAUL 2932 LYNDBURST AVE. WINSTON-SALEM 27103 EMORY U	U AC 55 65 65 919 765-4021	CLARK, MICHAEL EMIL 1227 EBERT ST. WINSTON-SALEM 27103 BOWMAN GRAY	S 91 87 919 942-1975	CRUM, AMY ELIZABETH 2017 CRAIG ST. WINSTON-SALEM 27103 BOWMAN GRAY	S 89 86
CARLTON, WILLIAM Y. 509 WESTOVER AVE. WINSTON-SALEM 27104 BOWMAN GRAY	P AC 80 82 82 919 722-9939	CLARKE, THOMAS LAWRENCE 501 N. CLEVELAND AVENUE WINSTON-SALEM 27101 MEHARRY MED COLL	OBG AC 59 59 65 919 722-3874	CRUM, BRYAN GLENN 315 TAYLOR ST., APT. O WINSTON-SALEM 27101 BOWMAN GRAY	S 89 86 919 725-7944
CARNES, ROBERT S., III 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF SOU CALIF	AN AC 77 82 87 919 748-2927	CLEVELAND, JEFFREY ALLEN 2000 VIRGINIA ROAD WINSTON-SALEM 27104 BOWMAN GRAY	S 88 85 919 723-8536	CRUTCHFIELD, ANDREW J. 2240 CLOVERDALE AVE., STE. 93 WINSTON-SALEM 27103 U OF VIRGINIA	IM /CD L 42 42 50 919 725-5669
CARR, JENIFER 248 S. SUNSET DR. WINSTON-SALEM 27103 BOWMAN GRAY	S 89 85 919 773-0369	COLAVITA, PAUL G. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 BOWMAN GRAY	IM /CD AC 79 80 87 919 748-4673	CRUZ, JULIA MARGARITA 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF FLORIDA	ON AC 78 81 86 919 748-2075
CARTER, MARGARET F. FORSYTH MEMORIAL HOSPITAL 3333 SILAS CREEK PARKWAY WINSTON-SALEM 27103 BOWMAN GRAY	AN AC 75 75 80 919 760-5691	COLE, DEBRA WULFHORST 840 MAGNOLIA DR. WINSTON-SALEM 27103 BOWMAN GRAY	S 88 85 919 723-4036	CULLEN, PETER PATRICK 250 CHARLOIS BOULEVARD WINSTON-SALEM 27103 SUNY-SYRACUSE	IM AC 72 73 78 919 768-4730
CARTY, BRIAN CLIFFORD 120-4 RAINRIDGE DR. WINSTON SALEM 27104 BOWMAN GRAY	S 90 85 919 765-7147	COLE, ROGER DALE 840 MAGNOLIA ST. WINSTON-SALEM 27103 BOWMAN GRAY	S 88 85 919 723-4036	CUNNINGHAM, JOSEPH W., JR. 381 GLENDARE DR., APT. I WINSTON-SALEM 27104 BOWMAN GRAY	S 90 86 919 725-7803
CASEY, DEBORAH M. 7300 CRESHEIM RD.-C-17 PHILADELPHIA, PA 19119 BOWMAN GRAY	S 88 85	COLLINS, DAVID DUTROW 2825 LYNDBURST AVE., STE. 101 WINSTON-SALEM 27103 DUKE	PUD /IM AC 75 77 84 919 765-0888	CURL, WALTON WRIGHT 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 DUKE	ORS AC 74 75 88 919 748-4207
CASHWELL, LEON FRANKLIN, JR. 300 S. HAWTHORNE ROAD WINSTON-SALEM 27103 U OF NC	OPH AC 72 72 82 919 748-4091	COLLINS, WILLIAM STUART 3969 QUILLING ROAD WINSTON-SALEM 27104 DUKE	P AC 60 60 68 919 765-7350	CURRIE, DONALD PATRICK PO BOX 24369 WINSTON-SALEM 27114 DUKE	U AC 66 66 74 919 768-0735
CASTELL, DONALD OVERTON 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 GEO WASHINGTON U	GE AC 60 61 83 919 748-4612	CONRAD, ELIZABETH 1862 RUNNYMEADE RD. WINSTON-SALEM 27104 JOHNS HOPKINS	PD L/RT 43 46 46 919 723-1213	CUTHRELL, WILLIAM VANCE 300 S. HAWTHORNE RD. DIV. MATERNAL-FETAL MED/OBGYN WINSTON-SALEM 27103 U OF NC	OBG /NPM R 81 85 78 919 748-4595
CELESTINO, FRANK SAMUEL 3400 YORK ROAD WINSTON-SALEM 27104 U OF ROCHESTER	FP AC 78 82 84 919 748-2258	COOK, DAVID OWEN 2652 TANTOLON PL. WINSTON-SALEM 27107 BOWMAN GRAY	U R 84 85 85 919 785-0393	D'LUGIN, JAY JEFFREY 3421 OLD VINEYARD RD. #C-34 WINSTON-SALEM 27103 BOWMAN GRAY	S 91 87 919 768-2093
CHALLA, VENKATA RAMANA 200 FLINTSHIRE ROAD WINSTON-SALEM 27104 S V MEDICAL COLL	PTH /NA AC 69 75 79 919 768-0591	COOPER, MILES ROBERT 300 S. HAWTHORNE ROAD WINSTON-SALEM 27103 BOWMAN GRAY	ON /HEM AC 62 62 75 919 748-4300	D'SOUZA, VINCENT J. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 BANGALORE MED CO	AC 71 74 87 919 748-4435
CHAMBERS, ROBERT TILLMAN 104 BETHESDA MEDICAL CTR. WINSTON-SALEM 27103 DUKE	PD AC 58 58 60 919 765-5242				

34. FORSYTH-STOKES-DAVIE COMPONENT SOCIETY (Continued)

DARNELL, LINDA RUTH 2 MCCORMICK DR. HACKESSIN, DE 19707 BOWMAN GRAY	S 89 87 919 723-9612	DORSEY, DEANNA LYNN 406 LOCKLAND AVE. WINSTON-SALEM 27103 BOWMAN GRAY	S 89 86 919 723-3042	FEIN, DOUGLAS A. 300 S. HAWTHORNE RD. BOX 484, BOWMAN GRAY WINSTON-SALEM 27103 BOWMAN GRAY	S 89 86 919 922-4096
DAVIS, COURTLAND HARWELL, JR. 2525 WARWICK RD. WINSTON-SALEM 27104 U OF VIRGINIA	NS L/RT 44 44 52	DUBOW, DAVID ALAN 1957 STONEWOOD DR. WINSTON-SALEM 27103 BOWMAN GRAY	EM /IM S 88 84 919 768-2751	FELTS, JOHN HARVEY BOWMAN GRAY SCH. OF MED. WINSTON-SALEM 27103 MED U OF SC	NEP /IM AC 49 55 55 919 748-4259
DAVIS, EDWARD LANGSTON 1809 HATTIE CIRCLE WINSTON-SALEM 27105 HOWARD U	IM /CD AC 38 38 72 919 723-4864	DUDLEY, JOSEPH BOYLES 3333 SILAS CREEK PARKWAY WINSTON-SALEM 27103 U OF PENN	PTH AC 57 61 65 919 760-5840	FERGUSON, WILLIAM CLAY 2680 REYNOLDS DRIVE WINSTON-SALEM 27104 U OF NC	GS /TS AC 60 60 69 919 765-8020
DAVIS, JOHN PRESTON 329 BANBURY ROAD WINSTON-SALEM 27104 U OF PENN	IM L/RT 34 37 38 919 768-5390	DUVALL, DIANE LYNN 1936 HINSHAW AVE. WINSTON-SALEM 27104 BOWMAN GRAY	S 91 88 919 723-6168	FERRARI, CAROLYN JEAN 685 FILLGATE DR. WINSTON-SALEM 27104 BOWMAN GRAY	S 90 86 919 766-9068
DAVIS, OWEN KIDDER BRIGHAM AND WOMENS HOSP. 75 FRANCIS ST. BOSTON, MA 02115 BOWMAN GRAY	OBG /END R 82 83 79 617 732-6987	EARLY, IRA G., SR. 2240 CLOVERDALE AVE. STE. 192 WINSTON-SALEM 27103 BOWMAN GRAY	IM /CD AC 50 50 56 919 722-6010	FERREE, CAROLYN RUTH B. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 BOWMAN GRAY	TR AC 70 71 76 919 748-4981
DAVIS, WAYNE EDWARD 504 FORSYTH MEDICAL PARK WINSTON-SALEM 27103 DUKE	U AC 49 51 54 919 765-4882	EARNHARDT, JAMES FREDERICK 3318 HEALY DRIVE WINSTON-SALEM 27103 U OF NC	PD AC 64 64 70 919 765-8490	FERRELL, WM. GREGORY 707 GALES AVE. WINSTON-SALEM 27103 BOWMAN GRAY	R 85 86 87 919 748-2011
DAVIS, WILLIAM HERSEY, JR. 723 N. STRATFORD RD. WINSTON-SALEM 27104 DUKE	ADL /PD L/RT 44 44 47 919 724-3312	EATON, JEFFREY GRAY 103 CAROLINA CIRCLE WINSTON-SALEM 27104 BOWMAN GRAY	CD /IM AC 56 56 70 919 748-4208	FINA, MICHAEL FRANCIS 1901 S. HAWTHORNE RD., #310 WINSTON-SALEM 27103 NEW YORK MED COL	GE /IM AC 75 76 81 919 760-4340
DAY, JAMES WILLIAM 3310 BROOKVIEW HILLS BLVD.#203 WINSTON-SALEM 27103 U OF TENNESSEE	IM AC 75 76 82 919 765-9631	EDMONDS, JOHN HENRY, JR. BOWMAN GRAY SCH. OF MED. WINSTON-SALEM 27103 BOWMAN GRAY	FP AC 76 76 80 704 634-6128	FINKLEA, LEE KILPATRICK 250 CHARLOIS BLVD. WINSTON-SALEM 27103 MED U OF SC	PD AC 79 79 85 919 768-4730
DE-LA-TORRE, ERNESTO E. 3080 TRENWELL DRIVE WINSTON-SALEM 27103 U OF HABANA	NS AC 52 61 63 919 765-3750	EDWARDS, JOEL LYNN P. O. BOX 666 MOCKSVILLE 27028 BOWMAN GRAY	AN AC 82 85 85 919 760-5295	FINN, RICHARD CONNELL 250 CHARLOIS BOULEVARD WINSTON-SALEM 27103 TULANE U	OBG AC 63 63 76 919 768-4730
DEAN, JOAN C. B. 1227 MARTIN ST. WINSTON-SALEM 27103 AMER. U. CARIBBEAN	R 82 87 88 919 748-2382	EISENACH, JAMES CONRAD FORSYTH MEMORIAL HOSP. OBSTETRIC ANESTHESIA WINSTON-SALEM 27103 U OF CALIFORNIA	GS AC 45 53 53 919 765-1610	FINN, WILLIAM FRANCIS, JR. 854 BRENT ST. WINSTON-SALEM 27103 EAST CAROLINA U	EM R 85 85 85 919 760-2462
DEAN, RICHARD HENRY 300 S. HAWTHORNE RD. DEPT. OF SURGERY WINSTON-SALEM 27103 MED COLL OF VA	GS AC 68 68 87 919 748-4443	ELLEDGE, EMMETT SCOTT 114 DEVONSHIRE DR. SAN ANTONIO, TX 78209 BOWMAN GRAY	OTO R 85 86 83 919 765-6172	FISHER, WILLIAM SLOAN, III 175 CHARLOIS BLVD. STE. 101 WINSTON-SALEM 27103 DUKE	OTO AC 74 74 78 919 768-3361
DEFranzo, ANTHONY JOHN 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 GEO WASHINGTON U	PS AC 73 81 82 919 748-4500	ELLIS, GEORGE JOSEPH, JR. 6034 RITTENHOUSE RD. WINSTON-SALEM 27104 GEO WASHINGTON U	OBG AC 56 57 82 919 767-8331	FLETCHER, ROBERT GEORGE 401 N. MAIN STREET WINSTON-SALEM 27102 OHIO STATE U	OM /FP AC 63 63 83 919 741-3024
DELUCA, PAMELA S. 1815 BRANTLEY ST. WINSTON-SALEM 27103 BOWMAN GRAY	S 89 85 919 723-9695	ENGELSTAD, ANNE CARINE A. 2050 QUEEN ST. WINSTON-SALEM 27103 BOWMAN GRAY	S 89 85 919 768-1021	FLORES, RODOLFO FLORES P. O. BOX 96 DANBURY 27016 MANILA U	FP /IM AC 62 74 74 919 593-8281
DENHAM, JOHN WILLIAM 3415 THORESBY CT. WINSTON-SALEM 27104 BOWMAN GRAY	IM /FP AC 66 66 77 919 760-5782	ERNEST, JOSEPH MACDONALD, III BOWMAN GRAY, DEPT. OF OBG WINSTON-SALEM 27103 U OF MISSISSIPPI	S 89 86 919 748-4291	FLOYD, HERBERT MYNATT 3551 BUENA VISTA ROAD WINSTON-SALEM 27106 BOWMAN GRAY	AN AC 71 72 76 919 748-8611
DEWAN, DAVID MICHAEL 3333 SILAS CREEK PKWY. FORSYTH MEM. HOSPITAL WINSTON-SALEM 27103 BOWMAN GRAY	AN AC 71 71 77 919 760-5259	EYERMAN, MELVIN FREDERIC 1244 ARBOR ROAD, 444 WINSTON-SALEM 27104 OHIO STATE U	OBG AC 78 78 84 919 723-7420	FOLDS, WILLIAM FRANKLIN 5043 COUNTRY CLUB ROAD WINSTON-SALEM 27104 BOWMAN GRAY	FP AC 62 62 64 919 768-9275
DIROCCO, JUDITH GERALYN 1725-B FRANCISCAN TERR. WINSTON-SALEM 27127 BOWMAN GRAY	S 90 87 919 788-4844	FAGG, JOHN ANDERSON 2901 MAPLEWOOD AVENUE WINSTON-SALEM 27103 BOWMAN GRAY	PH L/RT 35 35 62 919 765-8620	FONTRIER, TOINETTE HELEN 8220 WHITE WATER DR. CLEMMONS 27012 ALBANY MED COLL	AN AC 78 83 85 919 766-4321
DOANE, JOHN HORTON, JR. 250 CHARLOIS BOULEVARD WINSTON-SALEM 27103 U OF PENN	IM /CD AC 44 45 77 919 768-4730	FARIS, JOHN CHARLES 2803 LYNDRHURST AVE. WINSTON-SALEM 27103 BOWMAN GRAY	PS AC 71 71 77 919 773-3878	FORAUER, ANDREW R. 1919 ACADEMY ST. APT. 19 WINSTON-SALEM 27103 BOWMAN GRAY	S 91 87 919 748-0755
DOBYNS, RICHARD JOSEPH 2517 OLD SALISBURY RD. WINSTON-SALEM 27127 BOWMAN GRAY	S 89 86 919 785-2274	FARRELL, FRANK WILSON, JR. 3155 MAPLEWOOD AVENUE WINSTON-SALEM 27103 BOWMAN GRAY	DR /NM AC 67 67 73 919 748-2368	FORD, ROBERT VIRGIL, JR. 3175 MAPLEWOOD AVENUE WINSTON-SALEM 27103 BOWMAN GRAY	PD AC 71 71 74 919 768-7030
DONGRE, SHRIKUMAR SHRIPAD 1216 BROOK ACRES TRAIL CLEMMONS 27012 U OF BOMBAY	AN AC 70 74 78 919 760-5180	FAYEZ, JAMIL ABDEL-LATIF BOWMAN GRAY SCH. OF MED. WINSTON-SALEM 27103 DOW MED COLLEGE	DR AC 62 62 77 919 748-2368	FOREHAND, MARY L. 3318 HEALY DR. WINSTON-SALEM 27103 U OF NC	PD AC 83 84 87 919 765-8490
DORSETT, FLETCHER I. 2020 HOLLYROOD STREET WINSTON-SALEM 27107 MED COLL OF VA	IM L/RT 41 41 50 919 723-5732			FOREMAN, ARTHUR S. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 BOWMAN GRAY	AN AC 81 81 87 919 724-4210

34. FORSYTH-STOKES-DAVIE COMPONENT SOCIETY (Continued)

†FORSYTH, H. FRANCIS 2865 BARTRAM ROAD DECEASED-5-14-88 WINSTON-SALEM 27106 U OF MICHIGAN	ORS L/RT 40 41 46 919 724-1334	GIVENS, DAVIDSON HOWARD 1399 WESTGATE CENTER DR. WINSTON-SALEM 27103 BOWMAN GRAY	CD /IM AC 76 76 85 919 768-4261	GROSSMAN, SARAH RONA 2061 CRAIG ST., APT. #2 WINSTON-SALEM 27103 BOWMAN GRAY	S 90 86 919 723-3868
FOSTER, BOB MAXWELL P. O. BOX 427 MOCKSVILLE 27028 BOWMAN GRAY	FP AC 57 57 60 704 634-2108	GLASS, FREDERICK WILLIAM BOWMAN GRAY SCH. OF MED. WINSTON-SALEM 27103 BOWMAN GRAY	EM /GS AC 50 50 74 919 748-4626	GULLEY, MARCUS MARCELLUS DEPARTMENT OF PSYCHIATRY WINSTON-SALEM 27103 BOWMAN GRAY	P AC 51 55 56 919 748-4554
FOUSHEE, J. HENRY SMITH, JR. 718 FORSYTH MEDICAL PARK WINSTON-SALEM 27103 JEFFERSON	PTH AC 47 47 55 919 768-2351	GLATZ, FRANK ROBERT, JR. 3303 HEALY DR., STE. A WINSTON-SALEM 27103 BOWMAN GRAY	OTO AC 73 73 79 919 768-4866	GUSDON, JOHN PAUL, JR. 3240 NOTTINGHAM ROAD WINSTON-SALEM 27104 U OF VIRGINIA	OBG AC 59 67 68 919 748-4039
FOWLER, HENRY JACKSON P. O. BOX 38 WALNUT COVE 27052 BOWMAN GRAY	GP AC 46 47 48 919 591-4306	GLEN, DULANEY 250 CHARLOIS BOULEVARD WINSTON-SALEM 27103 COLUMBIA U	IM AC 67 68 80 919 768-4730	GUY, CLIFFORD RICHARD 250 CHARLOIS BOULEVARD WINSTON-SALEM 27103 MED SCH-UMDNJ	CD /IM AC 67 68 83 919 768-4730
FRENCH, WHITNEY JAMES 3310 BROOKVIEW HILL BLVD. SUITE 203 WINSTON-SALEM 27103 DUKE	IM AC 82 84 88 919 765-9631	GLOD, ALBERT PAUL 152 MUIRFIELD DR. WINSTON-SALEM 27104 BOWMAN GRAY	GS /TS L/RT 43 44 54 919 725-3702	GUYTON, SCOTT PAUL 2039 CRAIG ST. WINSTON-SALEM 27103 BOWMAN GRAY	S 91 87 919 777-8689
FROMSON, GERALD ALAN 250 CHARLOIS BOULEVARD WINSTON-SALEM 27103 U OF NC	IM AC 77 80 81 919 768-4730	GOCO, ISAIAS ISMAEL 1901 S.HAWTHORNE RD.,STE.220 WINSTON-SALEM 27103 U OF SANTO TOMAS	GS /CDS AC 56 62 63 919 768-4710	GWYN, PAUL PERKINS, JR. 2901 MAPLEWOOD AVENUE WINSTON-SALEM 27103 COLUMBIA U	PS /GS AC 61 61 70 919 765-8620
FUNDERBURK, AMON LEX 3080 TRENWEST DR. WINSTON-SALEM 27103 BOWMAN GRAY	IM /END AC 66 66 85 919 768-2370	GOODE, DAVID JOHN BOWMAN GRAY, DEPT. OF PSY. WINSTON-SALEM 27103 BOWMAN GRAY	P AC 66 66 78 919 748-4142	HABERKERN, ROY CONRAD 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 DUKE	CHP AC 69 69 74 919 748-4220
GABY, NANCY SUE 622 S. SUNSET DR. WINSTON-SALEM 27103 BOWMAN GRAY	P AC 78 80 86 919 748-4558	GORDON, JOSEPH GROVER 1801 HATTIE CIRCLE WINSTON-SALEM 27105 MEHARRY MED COLL	R RT 48 49 57 919 748-4316	HACKLANDER, SHELLEY W. 2357-D ARDMORE TERR. WINSTON-SALEM 27103 BOWMAN GRAY	S 90 86 919 761-8652
GADDY, JOE ELLIS, JR. 2810 MAPLEWOOD AVENUE WINSTON-SALEM 27104 U OF NC	CD /IM AC 71 71 78 919 768-0437	GOTTLIEB, LOUIS NATHAN 631 COLISEUM DRIVE WINSTON-SALEM 27106 BOWMAN GRAY	OPH AC 62 62 69 919 723-1041	HADDAD, MICHEL GEORGE 300 S. HAWTHORNE RD. BOX 487 WINSTON-SALEM 27103 BOWMAN GRAY	S 89 85 919 723-7442
†GALLANIS, CRAIG T. 1333 MADISON AVE. DECEASED-1988 WINSTON-SALEM 27103 BOWMAN GRAY	S 89 86 919 722-6835	GOWER, DAVID JOHN N. C. BAPTIST HOSPITAL WINSTON-SALEM 27103 U OF FLORIDA	NS R 81 82 84 919 748-4038	HAISTY, WESLEY KENNETH, JR. 300 S. HAWTHORNE ROAD WINSTON-SALEM 27103 NORTHWESTERN U	CD /IM AC 66 67 78 919 748-4673
GALLUP, KENNETH R., JR. 2825 LYNTHURST AVE., STE. 101 WINSTON-SALEM 27103 BOWMAN GRAY	PUD /IM AC 73 73 78 919 765-0888	GOWER, VERLIA COLE 918 MADISON AVENUE WINSTON-SALEM 27103 BOWMAN GRAY	S 88 84 919 723-8602	HALL, JOHN HOWLAND, JR. 237 E. VINELAND RD. AUGUSTA, GA 30904 BOWMAN GRAY	S 88 84 404 738-2112
GARLAND, WESLEY SCOTT R. J. REYNOLDS, MEDICAL DEPT. WINSTON-SALEM 27102 BOSTON U	OM AC 55 60 61 919 741-5695	GRANT, WILLIS JACKSON, III 250 CHARLOIS BLVD. WINSTON-SALEM 27103 U OF NC	P AC 54 54 63 919 768-4730	HAMILTON, GEORGE EDWARD, JR. 908 ARBOR ROAD WINSTON-SALEM 27104 BOSTON U	P AC 65 66 76 919 725-7777
GARNER, TIMOTHY B. 717 LOCKLAND AVE. WINSTON-SALEM 27103 BOWMAN GRAY	NS R 83 00 88 919 748-2011	GRAVES, JOHN W. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF NEBRASKA	NEP /IM AC 77 78 86 919 748-4593	HAMILTON, ROBERT WILLIAM BOWMAN GRAY SCH. OF MED. WINSTON-SALEM 27103 ST U OF NY-BUFF	NEP /IM AC 63 65 75 919 748-4304
GARRETT, JOHN BOSTIAN, SR. 2926 MAIN ST. PO BOX 220 WALKERTOWN 27051 BOWMAN GRAY	FP AC 51 51 52 919 595-2751	GRAVLEE, GLENN PAGE 1205 CLOVER STREET WINSTON-SALEM 27101 NORTHWESTERN U	AN 74 77 80 919 748-4498	HAMPTON, JAMES HARRIS, JR. P. O. BOX 325 LEWISVILLE 27023 BOWMAN GRAY	FP AC 52 52 58 919 945-5846
GELFAND, DAVID WILLIAM 853 BUTTONWOOD DRIVE WINSTON-SALEM 27104 YALE	R AC 62 63 76 919 748-2481	GREEN, HAROLD D. 3619 DEWSBURY ROAD WINSTON-SALEM 27104 CASE WESTERN RES	CD L/RT 31 31 45 919 765-5078	HANNA, LINDA J. 706 DRUID OAKS ATLANTA, GA 30329 BOWMAN GRAY	NR /GS R 85 87 83 404 634-5198
GIBBS, JAMES S. 1830 S. HAWTHORNE RD. WINSTON-SALEM 27103 MED COLL OF VA	GE /IM AC 67 67 74 919 765-0463	GREEN, ROBERT LORENZA 3155 MAPLEWOOD AVENUE WINSTON-SALEM 27103 U OF NC	R AC 59 59 66 919 773-3873	HANSEN, KIMBERLEY J. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF ALABAMA	GS AC 80 81 88 919 748-4443
GIBSON, ROBERT WYLIE 190 CHARLOIS BOULEVARD WINSTON-SALEM 27103 BOWMAN GRAY	P /N AC 68 68 74 919 768-6930	GREGG, CHARLES ELI 108 BALLY HO DR. LEWISVILLE 27023 BOWMAN GRAY	AN AC 74 74 79 919 748-4791	HARBOURNE, KEVIN S. 1641 NORTHWEST BLVD., APT. D WINSTON-SALEM 27104 BOWMAN GRAY	S 90 85 919 724-7390
GILLIAM, JOHN HUGH, III 300 S. HAWTHORNE ROAD BOWMAN GRAY SCH. OF MED WINSTON-SALEM 27103 MED COLL OF VA	GE /IM AC 70 70 80 919 748-4601	GREISS, FRANK CHRISTIAN, JR. BOWMAN GRAY SCH. OF MED. WINSTON-SALEM 27103 U OF PENN	OBG AC 53 54 60 919 748-4039	HARDIE, GREGORY STEVEN 408 FORSYTH MEDICAL PK WINSTON-SALEM 27103 BOWMAN GRAY	AN AC 80 81 77 919 768-7680
GILLILAND, KERRY JAY 153 CEDARLAKE TRAIL WINSTON-SALEM 27104 BOWMAN GRAY	AC 76 76 88 919 768-4261	GREVIOUS, STEPHEN SCOTT 1641-P NORTHWEST BLVD. WINSTON-SALEM 27104 BOWMAN GRAY	S 88 85 919 724-4541	HARLESS, JAMES M. 307 FOXCROFT DR. WINSTON-SALEM 27103 BOWMAN GRAY	S 91 88 919 768-4780
GILPIN, JOHN W. 1206 W. 4TH ST., #2 WINSTON-SALEM 27101 MED U OF SC	DR R 86 87 88 919 748-4316	GRIFFITH, MARY IRENE 515 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF TENNESSEE	GYN L/RT 42 42 46 919 722-2255	HARLEY, WILBUR JONES 241 FLINTSHIRE RD. WINSTON-SALEM 27104 JEFFERSON	OM /GPM AC 50 51 77 919 768-4469
		GRISTINA, ANTHONY GEORGE 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 ALBANY MED COLL	ORS AC 56 56 72 919 748-3952	HARPER, MARGARET A. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF NC	OBG AC 74 74 87 919 748-4595

34. FORSYTH-STOKES-DAVIE COMPONENT SOCIETY (Continued)

HARPOLD, GARY JOE 300 S. HAWTHORNE ROAD WINSTON-SALEM 27103 BOWMAN GRAY	N AC 76 79 86 919 748-4494	HEDRICK, RICHARD ELI, JR. 1806 S. HAWTHORNE RD. #102 WINSTON-SALEM 27103 BOWMAN GRAY	OBG AC 79 80 84 919 768-3632	HOPKINS, MARBRY BENJAMIN, III 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF VIRGINIA	PTH AC 77 81 83 919 748-2624
HARR, CHARLES DULANEY 719 WESTVIEW DRIVE WINSTON-SALEM 27103 BOWMAN GRAY	GS R 83 83 83 919 748-2011	HELMS, JEFFERSON BIVENS, JR. 1405 PLAZA DRIVE WINSTON-SALEM 27103 BOWMAN GRAY	IM /CD AC 62 62 68 919 765-4131	HOUGH, WILLIAM AMOS, III 410 AVALON ROAD WINSTON-SALEM 27104 BOWMAN GRAY	IM AC 73 73 76 919 768-4730
HARR, DEBRA M. B. 719 WESTVIEW DR. WINSTON-SALEM 27103 BOWMAN GRAY	TR R 84 86 87 919 748-4981	HELISABECK, BELMONT A. 631 COLISEUM DRIVE WINSTON-SALEM 27106 MED COLL OF VA	OPH L 31 31 36 919 723-1041	HOWELL, CHARLES MAITLAND, JR. 340 PERSHING AVENUE WINSTON-SALEM 27103 U OF PENN	D L 37 37 46 919 725-8422
HARRINGTON, LEE, JR. 2340 OLIVET CHURCH ROAD WINSTON-SALEM 27106 TEMPLE U	OM /IM L/RT 44 49 52 919 924-4179	HENNESSY, JOHN FRANCIS 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF KANSAS	END /IM AC 67 67 82 919 748-2076	HOWELL, FREDERICK LAWRENCE 2932 LYNTHURST AVENUE WINSTON-SALEM 27103 U OF VIRGINIA	U AC 68 68 77 919 765-4021
HARRIS, MILTON DEAN 2810 MAPLEWOOD AVENUE WINSTON-SALEM 27103 U OF TEXAS-SW	CD /IM AC 68 69 76 919 768-0437	HENRICH, W. DEAN 250 CHARLOIS BLVD. WINSTON-SALEM 27103 U OF KANSAS	D /DMP AC 65 66 84 919 768-6221	HOWELL, JULIUS 1900 S. HAWTHORNE RD. STE. 480 WINSTON-SALEM 27103 U OF PENN	PS /OTO L 43 43 52 919 760-1727
HARRISON, LLOYD HERRITAGE 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 BOWMAN GRAY	U AC 62 62 73 919 748-4131	HERRERA, MARCOS A. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 NAT U OF MEXICO	R AC 74 75 87 919 748-2491	HOYLE, DAVID EMORY 5331 YARDLEY TERRACE DURHAM 27707 U OF NC	S 89 86 919 493-9279
HARROLD, LAURIE J. 1606 W. FIRST ST., APT. 3 WINSTON-SALEM 27104 BOWMAN GRAY	SM /PSF S 91 86 919 723-5882	HERTZ, LINDA ELLEN 2513-A MILLER PARK CIRCLE WINSTON-SALEM 27103 BOWMAN GRAY	S 90 87 919 724-6413	HUBBARD, STEPHEN ADRIAN 2930 CLUB PARK ROAD WINSTON-SALEM 27104 BOWMAN GRAY	EM /IM S 88 85 919 760-1226
HART, OLIVER JAMES, JR. 1806 S. HAWTHORNE ROAD WINSTON-SALEM 27103 U OF NC	U AC 59 59 64 919 768-0735	HEYMANN, ROBERT CURTIS 118 FORSYTH MEDICAL PARK WINSTON-SALEM 27103 BOWMAN GRAY	D AC 60 61 65 919 765-1841	HUDSPETH, ALLEN SHERRILL 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 BOWMAN GRAY	CDS /TS AC 53 53 63 919 748-4359
HART, OLIVER JAMES, SR. 1930 GEORGIA AVENUE WINSTON-SALEM 27104 MED U OF SC	U L/RT 25 30 32 919 722-6598	HIGHTOWER, FELDA 1244 ARBOR RD. #233 WINSTON-SALEM 27104 U OF PENN	GS /TS L/RT 33 33 36 919 727-1661	HUFFMAN, JOHN MITCHEL, JR. 300 S. HAWTHORNE ROAD WINSTON-SALEM 27103 BOWMAN GRAY	S 89 85 919 722-9378
HARTMAN, MARJORIE LYNN 413 YATES CT. #B CHAPEL HILL 27514 BOWMAN GRAY	S 91 86 919 725-8909	HINES, MICHAEL HERBERT 723 FENIMORE ST. WINSTON-SALEM 27103 BOWMAN GRAY	GS R 86 86 84 919 777-0226	HUGHES, DOREEN L. 664 N. SPRING ST., APT. 4 WINSTON-SALEM 27101 BOWMAN GRAY	S 90 86 919 722-5423
HASHEMI, ZIAOLLAH 1439-L HUTTON ST. WINSTON-SALEM 27103 BOWMAN GRAY	S 89 85	HINMAN, ALANSON 792 ROSLYN RD. WINSTON-SALEM 27104 JOHNS HOPKINS	PD /N L/RT 46 47 52 919 723-0458	HUGHES, THOMAS PATRICK 1901 S. HAWTHORNE RD. #310 WINSTON-SALEM 27103 TULANE U	GE AC 79 79 85 919 725-8326
HATCH, STEPHEN J. 167 FOREST VIEW CT. WINSTON-SALEM 27104 BOWMAN GRAY	S 90 87 919 765-4179	HINSON, JONATHAN C. 2841 TULLY SQUARE #F WINSTON-SALEM 27106 BOWMAN GRAY	S 90 86 919 723-7554	HUNT, THOMAS HOLMES 3155 MAPLEWOOD AVENUE WINSTON-SALEM 27103 BOWMAN GRAY	DR /NR AC 71 71 77 919 760-5874
HAYES, DONALD MICHAEL SARA LEE CORP. PO BOX 2760 WINSTON-SALEM 27102 BOWMAN GRAY	OM /IM AC 54 54 56 919 744-3708	HOFFMAN, MARY JACQUELINE 537 S. HAWTHORNE RD. #12 WINSTON-SALEM 27103 BOWMAN GRAY	S 88 85 919 761-8294	HUNTER, BILLY RAY 1328 ASHLEY SQUARE WINSTON-SALEM 27103 U OF NC	P AC 76 82 84 919 765-5092
HAYES, JOHN TERRENCE 1342 WESTGATE CENTER DR. WINSTON-SALEM 27103 U OF MICHIGAN	ORS AC 51 66 66 919 768-3595	HOLLAND, JAMES P. 2810 MAPLEWOOD AVE. WINSTON-SALEM 27103 U OF NC	CD AC 80 82 87 919 768-0437	HUNTER, DAVID MONTGOMERY 1828 ELIZABETH AVE. WINSTON-SALEM 27103 BOWMAN GRAY	R 87 00 85 919 748-4991
HAZZARD, WM. RUSSELL 300 S. HAWTHORNE RD. DEPT. OF MEDICINE WINSTON-SALEM 27103 CORNELL U	IM AC 62 63 87 919 748-4305	HOLLEMAN, IVAN LACY, JR. BOWMAN GRAY, DEPT. OF PATH. WINSTON-SALEM 27103 BOWMAN GRAY	PTH AC 53 53 78 919 748-4311	HURST, DANIEL JOHNSON 250 CHARLOIS BLVD. WINSTON-SALEM 27103 U OF CHICAGO	PUD /IM AC 67 69 84 919 768-4730
HEADLEY, ROBERT NELSON 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF MARYLAND	CD /IM AC 56 57 63 919 748-4331	HOLMES, GEORGE WASHINGTON 4235 STONEHENGE LN. WINSTON-SALEM 27106 MED COLL OF VA	ORS L/RT 31 31 33 919 722-6939	IBRAHIM, MOUNIR LABIB 1400 MILLGATE DR. STE. A WINSTON-SALEM 27103 CAIRO U	P /HYP AC 72 80 80 919 768-2886
HEALY, PATRICK K. 250 CHARLOIS BLVD. WINSTON-SALEM 27103 GEORGETOWN U	IM AC 80 81 84 919 768-4730	HOLTHUSEN, GREGORY GRANT SALEM ORTHOPAEDIC ASSOC. PA PO BOX 25007 WINSTON-SALEM 27114 U OF WISCONSIN	ORS AC 65 65 73 919 768-1270	IFFT, ROBIN DAWN 731 LYNN DEE DR. WINSTON-SALEM 27106 BOWMAN GRAY	S 88 85 919 765-3439
HEBERT, STEPHEN WILLIAM 1365 WESTGATE CENTER DR. SUITE N-1 WINSTON-SALEM 27103 BOWMAN GRAY	P /N AC 72 72 79 919 760-3220	HOMER, STEPHEN HUBERT 3111 MAPLEWOOD AVE., STE. 104 WINSTON-SALEM 27103 U OF PENN	ORS AC 61 67 67 919 768-4110	IRELAND, PATRICK DAVID 315 LOCKLAND AVE. WINSTON-SALEM 27103 BOWMAN GRAY	S 89 86 919 723-2935
HEDBERG, ANN ELIZABETH 339 CRAFTON STE. #3 WINSTON-SALEM 27103 BOWMAN GRAY	S 90 86 919 722-5662	HOMESLEY, HOWARD DAVID DEPT. OF OBG, BOWMAN GRAY WINSTON-SALEM 27103 U OF NC	GYN /ON AC 67 67 75 919 748-4022	IRVING, STEPHEN P. 624 QUAKER LN., STE. A-206 HIGH POINT 27260 U OF ALABAMA	MFS 78 78 00 919 884-8811
HEDRICK, RICHARD ELI 1999 GEORGIA AVE. WINSTON-SALEM 27104 MED U OF SC	GS L/RT 43 43 47 919 724-5454	HOOD, DAVID DEAN 1658 S. MARBLEHEAD RD. CLEMMONS 27012 U OF KANSAS	AN AC 79 80 87 919 760-5259	ISRAEL, JAMES RAY 1365 WESTGATE CENTER DR. SUITE N-1 WINSTON-SALEM 27103 BOWMAN GRAY	P AC 63 63 66 919 760-3220
		HOPKINS, LAWRENCE DAVID 5105 RIVER CHASE RIDGE WINSTON-SALEM 27104 BOWMAN GRAY	OBG AC 77 78 84 919 722-9590	JACKSON, DAVID STONE, JR. 300 S. HAWTHORNE ROAD WINSTON-SALEM 27103 BOWMAN GRAY	FP AC 73 73 80 919 748-2832

34. FORSYTH-STOKES-DAVIE COMPONENT SOCIETY (Continued)

JACKSON, DON VERNON, JR. 300 S. HAWTHORNE ROAD WINSTON-SALEM 27103 U OF VIRGINIA	IM /ON AC 72 72 80 919 748-2088	JORIZZO, JOSEPH L. 300 S. HAWTHORNE RD. DEPT. OF DERMATOLOGY WINSTON-SALEM 27103 BOSTON U	D AC 75 76 86 919 748-2768	†KLEIN, ROBERT EDWARD 650 COLISEUM DRIVE DECEASED -- 3-20-88 WINSTON-SALEM 27106 BOWMAN GRAY	BLB 51 51 81 919 725-4346
JACKSON, ELEANOR C. H. 730 WALNUT FOREST RD. #H WINSTON-SALEM 27103 BOWMAN GRAY	S 88 85 919 722-1325	JULIAN, JESSE S., JR. 614 BELLVIEW ST. WINSTON-SALEM 27103 MED COLL OF VA	GS R 82 83 87 919 748-2011	KLEIN, STEVEN RUSSELL 3310 BROOKVIEW HILLS BLVD. SUITE 102 WINSTON-SALEM 27103 TULANE U	IM AC 74 74 79 919 765-5250
JACOBSON, MARK DAVID 3924 OLD VINEYARD RD., #55 WINSTON-SALEM 27104 BOWMAN GRAY	S 88 85 919 760-3389	KAHL, FREDERIC ROSS 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF CHICAGO	CD /IM AC 67 68 76 919 748-4261	KLOPFENSTEIN, HAROLD S. 300 S. HAWTHORNE RD. DIV. OF CARDIOLOGY WINSTON-SALEM 27103 U OF MIAMI	CD AC 66 67 87 919 748-2718
JAMES, FRANCIS MARSHALL, III 15 GRAYLYN PLACE LANE WINSTON-SALEM 27106 HAHNEMANN	AN AC 61 62 76 919 723-4690	KAMMIRE, GORDON C. RT. #12, BOX 934 LEXINGTON 27292 BOWMAN GRAY	ORS /SM R 83 84 88 704 731-2393	KNOWLES, ROBERT C.Y. 438 S. HAWTHORNE RD. APT. C WINSTON-SALEM 27103 BOWMAN GRAY	S 89 87
JAMES, GEORGE W. 205 S. HAWTHORNE ROAD WINSTON-SALEM 27103 U OF TENNESSEE	D L 40 40 49 919 722-6155	KASPAR, JOHN V. 810 GALES AVE. WINSTON-SALEM 27103 BOWMAN GRAY	S 91 87 919 725-7787	KNOWLES, SUSAN E. 312 GROVE PARK AVE. #4 WINSTON-SALEM 27103 BOWMAN GRAY	S 91 87
JAMISON, JAMES P. 2531-D MILLER PARK CIR. WINSTON-SALEM 27103 BOWMAN GRAY	S 90 87 919 723-3562	KAYE, DOUGLAS EVAN 1900 QUEEN ST. APT. A3 WINSTON-SALEM 27103 BOWMAN GRAY	S 88 85 919 724-6289	KNUDSON, MARK PAUL 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF VIRGINIA	FP AC 82 83 87 919 748-2246
JANEWAY, RICHARD 300 S. HAWTHORNE RD. BOWMAN GRAY SCH. OF MED. WINSTON-SALEM 27103 U OF PENN	N AC 58 63 68 919 748-4424	KEITH, THEODORE ALLEN 2810 MAPLEWOOD AVE. WINSTON-SALEM 27103 BOWMAN GRAY	CD AC 67 67 75 919 768-0437	KOFINAS, ALEXANDER D. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF ATHENS	AC 76 82 87 919 748-4291
JAROW, JONATHAN P. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 NORTHWESTERN U	U AC 80 83 87 919 748-4131	KELLAR, LISA COLLIER 3700 SUTHERLAND #N-1 KNOXVILLE, TN 37919 BOWMAN GRAY	S 88 86 919 722-5371	KOHUT, ROBERT IRWIN 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF CHICAGO	OTO /HNS AC 60 61 79 919 748-4161
JARRAHI, ALI 2830 MAPLEWOOD AVENUE WINSTON-SALEM 27103 U OF TEHRAN	P /PH AC 62 62 73 919 768-2424	KELLEY, TIMOTHY FRANCIS 448 S. HAWTHORNE RD. WINSTON-SALEM 27103 BOWMAN GRAY	S 89 85 919 722-5371	KOMAN, L. ANDREW 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 DUKE	ORS /HS AC 74 74 82 919 748-2878
JENNINGS, JEROME EDWIN 410 FORSYTH MEDICAL PK WINSTON-SALEM 27103 MED COLL OF GA	ORS AC 69 70 75 919 765-1571	KELLY, DAVID L., JR. BOWMAN GRAY-NEUROSURG. WINSTON-SALEM 27103 U OF NC	NS AC 59 59 65 919 748-4049	KONEN, JOSEPH C. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 SUNY-SYRACUSE	FP AC 79 81 88 919 748-4051
JOBSON, VERNON WAKEFIELD 1901 S. HAWTHORNE RD. STE. 360 WINSTON-SALEM 27103 U OF KANSAS	GYN /ON AC 360 73 77 80 919 765-1464	KELLY, JEFFREY 406 CLIFFDALE DR. WINSTON-SALEM 27104 MED COLL OF OHIO	AN /EM R 81 82 85 919 768-8280	KOOKEN, KEITH ROBERT 2915 LYNDBURST AVENUE WINSTON-SALEM 27103 INDIANA U	GS AC 60 63 67 919 765-5221
JOHNSON, HENRY WESLEY 3175 MAPLEWOOD AVENUE WINSTON-SALEM 27103 BOWMAN GRAY	PD AC 56 56 59 919 768-7030	KELLY, ROBERT GEORGE 2805 LYNDBURST AVENUE WINSTON-SALEM 27103 MED U OF SC	FP AC 74 75 79 919 768-8890	KOONTZ, THOMAS JEFFREY 4250 ALLISTAIR ROAD WINSTON-SALEM 27104 U OF NC	GS AC 66 66 74 919 765-5221
JOHNSTON, FRANK R. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 DUKE	TS /CDS L/RT 42 50 50 919 748-4338	KELLY, WILLIAM SHERWOOD 116 S. MAIN ST. KERNERSVILLE 27284 U OF LOUISVILLE	FP AC 81 81 84 919 993-2224	KORNEGAY, ALONZO DIXON PO BOX 25007 WINSTON-SALEM 27114 MED U OF SC	ORS AC 74 74 80 919 760-0436
JOHNSTON, WM. ELLIOTT 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 DUKE	AN AC 75 79 87 919 748-3613	KENNEDY, CHARLIE LEE 501 N. CLEVELAND AVE. WINSTON-SALEM 27101 MEHARRY MED COLL	PD AC 63 64 67 919 725-0514	KOSFELD, SCOTT LEE 420 LOCKLAND AVE. WINSTON-SALEM 27103 BOWMAN GRAY	S 89 85 919 722-9025
JOLLY, THOMAS LYNN 1500 W. ACADEMY ST. WINSTON-SALEM 27103 BOWMAN GRAY	FP R 85 85 86 919 727-0550	KERR, ROBERT MORTON BOWMAN GRAY, DEPT. OF MED. WINSTON-SALEM 27103 CORNELL U	GE /IM AC 61 66 70 919 748-4602	KOUFMAN, JAMES ALAN BOWMAN GRAY, DIV. OTO WINSTON-SALEM 27103 BOSTON U	LAR /OTO AC 73 75 79 919 748-4161
JONES, CHAMP MCMILLIAN, JR. 2805 LYNDBURST AVE. WINSTON-SALEM 27103 MED U OF SC	FP AC 74 78 86 919 768-8890	KEY, STEVEN PAUL 300 S. HAWTHORNE RD., BOX 374 WINSTON-SALEM 27103 BOWMAN GRAY	S 90 86 919 777-0769	KOURI, DAVID LAWRENCE 1935 W. FIRST ST. WINSTON-SALEM 27104 BOWMAN GRAY	S 89 86 919 723-7169
JONES, JAMES MARSHALL, JR. 1225 E. FIFTH STREET WINSTON-SALEM 27101 MEHARRY MED COLL	IM AC 54 55 76 919 725-7362	KEYES, KENNETH SHOCKLEY 1420 PLAZA DRIVE WINSTON-SALEM 27103 U OF OREGON	OTO /HNS AC 66 66 75 919 765-4922	KRAMER, STEPHEN IRWIN 250 CHARLOIS BLVD. WINSTON-SALEM 27103 JEFFERSON	P AC 78 79 83 919 768-4730
JONES, JOSEPH REID, JR. P. O. BOX 387 KING 27021 BOWMAN GRAY	GP AC 51 51 52 919 983-3113	KILBY-SIMPSON, MARTHA ANN 420 BRIARLEA RD. WINSTON-SALEM 27104 BOWMAN GRAY	S 88 84 919 768-2403	KROOVAND, ROY LAWRENCE 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF CINCINNATI	U /PD AC 68 68 84 919 748-4131
JONES, SARA THOMPSON 321 BANBURY ROAD WINSTON-SALEM 27104 BOWMAN GRAY	AN AC 62 62 84 919 768-8987	KIMBERLY, GEORGE DOUGLAS PO BOX 1047 MOCKSVILLE 27028 BOWMAN GRAY	FP AC 58 58 60 704 634-1124	KULP, KENNETH ROBERT 1900 S. HAWTHORNE RD. STE. 358 WINSTON-SALEM 27103 U OF NC	D AC 74 74 79 919 768-4382
JONES, THADDEUS LEROY 3333 SILAS CREEK PARKWAY WINSTON-SALEM 27103 U OF VIRGINIA	PTH /HEM AC 67 67 74 919 773-3840	KING, MICHAEL EUSTERMAN 3111 MAPLEWOOD AVE. WINSTON-SALEM 27103 U OF NC	ORS AC 77 77 83 919 768-4110	KUTCHER, MICHAEL A. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 JEFFERSON	CD /IM AC 74 76 88 919 748-2960
JORIZZO, JOHANNA 250 CHARLOIS BLVD. WINSTON-SALEM 27103 U OF ROCHESTER	DR AC 81 86 88 919 768-4730	KLEIN, ALAN 631 LICHFIELD ROAD WINSTON-SALEM 27104 U-WITWATERSRAND	DR AC 54 77 77 919 748-4316		

34. FORSYTH-STOKES-DAVIE COMPONENT SOCIETY (Continued)

LAMAY, EDWARD NORMAN 448 HAWTHORNE RD. WINSTON-SALEM 27103 BOWMAN GRAY	88 85	S	LINS, MARK DAVID 1641-F NORTHWEST BLVD. WINSTON-SALEM 27104 BOWMAN GRAY	90 86	S	MARION, JEREMIAH RICHARD, III 631 COLISEUM DR. WINSTON-SALEM 27106 DUKE	73 75 83	OPH AC
LASTER, DAN WAYNE 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF TEXAS	66 66 84	R AC	LINTON, EUGENE BELL 112 BENT ST., BOX 742 BERMUDA RUN 27006 MED COLL OF VA	51 52 62	OBG AC	MARLOWE, DONNA M. 1208-A W. 4TH ST. WINSTON-SALEM 27101 BOWMAN GRAY	90 86	S
LATZ, JOHN E., JR. 1322 MADISON AVE. WINSTON-SALEM 27103 BOWMAN GRAY	91 87	S	LINZ, WALTER JOSEPH 1944 HINSHAW AVE. APT. 3A WINSTON-SALEM 27104 BOWMAN GRAY	90 88	S	MARSHALL, HARVEY E., III 228 OAKWOOD CT. WINSTON-SALEM 27103 BOWMAN GRAY	91 87	S
LATZ, TRACY J. T. 1322 MADISON AVE. WINSTON-SALEM 27103 BOWMAN GRAY	90 86	S	LIPSON, ERIC JAMES 7713 N. KENDALL DR. #A108 MIAMI, FL 33156 BOWMAN GRAY	88 84	S	MARSHALL, RICHARD BLAIR 236 STANAFORD ROAD WINSTON-SALEM 27104 BOSTON U	55 57 80	PTH AC
LAWLESS, MICHAEL RHODES DEPT. OF PEDIATRICS BOWMAN GRAY SCH. OF MED. WINSTON-SALEM 27103 U OF TEXAS	68 68 78	PD AC	LITTLE, HARRY 158 HOSPITAL ST. PO BOX 425 MOCKSVILLE 27028 BOWMAN GRAY	80 80 77	FP AC	MARTIN, JAMES CICERO, JR. 1420 PLAZA DR. WINSTON-SALEM 27103 LA STATE U	82 82 85	OTO AC
LEE, BENJAMIN HOWARD 2050 CRAIG ST. APT. #8 WINSTON-SALEM 27103 BOWMAN GRAY	89 87	S	LITTLE, WILLIAM C. 300 S. HAWTHORNE RD. DIV. OF CARDIOLOGY WINSTON-SALEM 27103 OHIO STATE U	75 78 88	CD AC	MARTIN, JAMES FRANKLIN 2680-3 GROSVENOR PLACE WINSTON-SALEM 27106 CASE WESTERN RES	42 50 51	R /DR L
LEE, K. STUART 2109 W. STRAFORD DR. CHANDLER, AZ 85224 EAST CAROLINA U	81 83 78	NS R	LITTLEJOHN, THOMAS WILLARD, III 2805 LYNDBURST AVENUE WINSTON-SALEM 27103 U OF NC	73 73 77	FP AC	MARX, RICHARD SAMUEL 3310 BROOKVIEW HILLS BLVD #204 WINSTON-SALEM 27103 BOWMAN GRAY	74 74 80	ID /IM AC
LEINBACH, LAURENCE B. BOWMAN GRAY SCH. OF MED. WINSTON-SALEM 27103 HARVARD	52 52 58	DR AC	LIU, AMY WEN 106 S. SUNSET DR. WINSTON-SALEM 27101 BOWMAN GRAY	91 88	S	MATTHEWS, BRIAN LEWIS DEPT. OF OTOLARYNGOLOGY N. C. BAPTIST HOSPITAL WINSTON-SALEM 27103 BOWMAN GRAY	80 82 86	OTO AC
LENDLE, DONALD LAWRENCE 147 COLUMBINE DR. WINSTON-SALEM 27106 U OF CALIFORNIA	74 75 82	FP AC	LIU, DEBRA CHIH-FEN 250 EXECUTIVE PARK BLVD. WINSTON-SALEM 27103 U OF WASHINGTON	81 81 87	D AC	MATTHEWS, COY RANDOLPH 120 EDEN TERRACE #1 WINSTON-SALEM 27103 BOWMAN GRAY	88 85	S
LEONARD, RALPH BEAUMONT 300 S. HAWTHORNE ROAD WINSTON-SALEM 27103 MED U OF SC	77 78 81	EM AC	LOMBARD, LISA L. 725-B GALES AVE. WINSTON-SALEM 27103 BOWMAN GRAY	91 87	S	MATTOX, HUITT EVERETT, III 1764 ROBINHOOD RD. WINSTON-SALEM 27104 EAST CAROLINA U	84 85 83	IM R
LESHIN, BARRY 300 S. HAWTHORNE RD. DEPT. OF DERMATOLOGY WINSTON-SALEM 27103 U OF TX-HOUSTON	81 81 86	D AC	LONG, JOHN CLAYTON 1401-C OLD MILL CIRCLE WINSTON-SALEM 27103 U OF NC	73 73 77	D AC	MATTOX, JAMES DWIGHT, JR. 1546 OVERBROOK AVENUE WINSTON-SALEM 27104 BOWMAN GRAY	69 69 76	P AC
LETTIERI, SALVATORE CARMINE 2011 VIKING DR., NW APT. 17 ROCHESTER, MN 55901 BOWMAN GRAY	88 84	S	LOPEZ, WM. CHRIS 1901 HAWTHORNE RD., STE. 310 WINSTON-SALEM 27103 U OF ALABAMA	82 83 88	GE AC	MAXWELL, MICHAEL C. 418 LOCKLAND AVENUE WINSTON-SALEM 27103 BOWMAN GRAY	89 85	S
LEVIN, STEPHEN WARREN 116-A S. CHERRY STREET KERNERSVILLE 27284 U OF TENNESSEE	76 76 87	PD AC	LORD, RICHARD WILLIAM, JR. 2506 MILLER PARK CIRCLE WINSTON-SALEM 27103 BOWMAN GRAY	88 86	S	MAY, WILLIAM JOSEPH 300 S. HAWTHORNE ROAD WINSTON-SALEM 27103 BOWMAN GRAY	44 44 49	GYN /OBG AC
LEWIS, JEFFERY DUN BOX 514, BOWMAN GRAY WINSTON-SALEM 27103 BOWMAN GRAY	89 88	S	LOWE, STEPHEN BECHTLER SALEM ORTHOPAEDIC ASSOC. PA PO BOX 25007 WINSTON-SALEM 27114 U OF NC	76 76 77	ORS /HS AC	MCCAIN, KENNETH FRANKLIN 223 HARPER STREET WINSTON-SALEM 27104 U OF NC	60 60 65	A AC
LIDE, THOMAS NORWOOD 10 SOVEREIGN DRIVE HILTON HEAD ISLAND, SC 29928 DUKE	38 47 47	PTH L/RT	LYLES, MARY FENNELL 300 S. HAWTHORNE ROAD WINSTON-SALEM 27103 U OF MISSISSIPPI	75 75 80	IM /GER AC	MCCALL, CHARLES EMORY 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 BOWMAN GRAY	61 61 78	IM /ID AC
LILLARD, PATRICK L. 333 SILAS CREEK PARKWAY WINSTON-SALEM 27103 U OF CINCINNATI	66 66 88	PM AC	MACK, RONALD BRIAN 2516 WOODBERRY DRIVE WINSTON-SALEM 27106 LOYOLA U	54 55 82	PD AC	MCCALL, WILLIAM, JR. 1405 PLAZA DRIVE WINSTON-SALEM 27103 DUKE	49 52 55	A /IM AC
LIMPERT, GEORGE HENRY 57 PUTNAM ST. TUNKHANNOCK, PA 18657 BOWMAN GRAY	85 85 85	FP R	MACK, YVONNE 300 S. HAWTHORNE, BOX 140 WINSTON-SALEM 27103 BOWMAN GRAY	88 85	S	MCCAULEY, ROGER LEE 190 CHARLOIS BOULEVARD WINSTON-SALEM 27103 WEST VA U	70 70 76	P AC
LINDEL, WM. M. 5668 BUCKHORN RD. LEWISVILLE 27023 U OF VIRGINIA	84 85 87	R	MAGEE, MICHAEL R. 11726 GRANT DR. OVERLAND PARK, KANSAS 66210 U OF IOWA	84 87 88	OBG R	MCCONVILLE, JOSEPH FRANCIS 2257 BRECKNOCK DR. WINSTON-SALEM 27103 CREIGHTON U	78 83 86	AN AC
LINK, ARTHUR STANLEY, JR. 3310 BROOKVIEW HILLS, #204 WINSTON-SALEM 27103 COLUMBIA U	72 74 79	ID /IM AC	MALLOY, H. REMBERT 2020 NEW WALKERTOWN RD. WINSTON-SALEM 27101 HOWARD U	39 44 63	GS L/RT	MCCOOL, JAMES ALVIS 3333 SILAS CREEK PARKWAY WINSTON-SALEM 27103 BOWMAN GRAY	64 64 79	PTH AC
LINK, KERRY MICHAEL 300 S. HAWTHORNE RD., BOX 265 WINSTON-SALEM 27103 U OF ROCHESTER	82 83 85	R AC	MANDELL, GORDON LEE 1321 ABINGDON WAY WINSTON-SALEM 27106 U OF MARYLAND	81 84 86	AN AC	MCCULLOUGH, DAVID LEGARDE BOWMAN GRAY, DEPT. OF URO. WINSTON-SALEM 27103 BOWMAN GRAY	64 64 84	U AC

34. FORSYTH-STOKES-DAVIE COMPONENT SOCIETY (Continued)

MCCUNE, BRUCE ROBERT 2808 MAPLEWOOD AVENUE WINSTON-SALEM 27103 U OF FLORIDA	GE /IM AC 73 75 78 919 768-6211	MILLER, HENRY SHELTON, JR. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 BOWMAN GRAY	CD /IM AC 54 54 63 919 748-4467	MOSTELLAR, HENRY CURTIS, III 2229 PARKWAY DR. WINSTON-SALEM 27103 U OF SOU ALA	GS R 83 85 84 919 723-7177
MCCUNNIFF, ANN JONES 1025 WESSYNGTON RD. WINSTON-SALEM 27104 MED COLL OF GA	ON /TR AC 81 83 86 919 748-4981	MILLER, LISA DAWN 1715 ELIZABETH AVE. WINSTON-SALEM 27103 BOWMAN GRAY	S 91 88 919 761-0895	MOUNTJOY, JOHN ROBERT 1420 PLAZA DRIVE WINSTON-SALEM 27103 GEO WASHINGTON U	OTO AC 66 67 75 919 765-4922
MCCUNNIFF, DENNIS EDWARD 1025 WESSYNGTON ROAD WINSTON-SALEM 27104 MED COLL OF GA	OBG AC 81 83 86 919 768-6221	MILLER, NORMAN ERIC 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF MANCHESTER	AC 68 69 88 919 748-2073	MURPHY, DANIEL WM. 1901 S. HAWTHORNE RD., STE. 310 WINSTON-SALEM 27103 U OF CINCINNATI	GE AC 81 82 88 919 760-4340
MCGUIRT, WILLIAM F. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 BOWMAN GRAY	OTO /ON AC 68 68 77 919 748-4161	MILLS, MICHAEL KENNETH 3402 DONEGAL DR. CLEMMONS 27012 BOWMAN GRAY	OBG AC 82 82 80 919 722-6891	MURPHY, MICHAEL D. 312 GRACE ST. #3 WINSTON-SALEM 27103 BOWMAN GRAY	S 90 86 919 724-5686
MCKINLEY, PHILIP HOWARD 3111 MAPLEWOOD AVENUE WINSTON-SALEM 27103 TULANE U	OPH AC 72 76 82 919 768-3240	MILLS, STEPHEN ALAN 3320 PADDINGTON LANE WINSTON-SALEM 27106 MCGILL U	CDS /TS AC 71 71 81 919 748-4488	MURPHY, WENDY ELAINE 1539 1/2 HAWTHORNE RD. WINSTON-SALEM 27103 BOWMAN GRAY	S 89 85 919 765-1935
MCKINNEY, WILLIAM MARKLEY BOWMAN GRAY-NEUROLOGY WINSTON-SALEM 27103 U OF VIRGINIA	N /NM AC 59 59 70 919 748-4494	MILNER, THOMAS H., III 3155 MAPLEWOOD AVENUE WINSTON-SALEM 27104 MED COLL OF GA	DR AC 68 69 75 919 773-3877	MURRAY, NIAL PATRICK 780 YORKSHIRE ROAD WINSTON-SALEM 27106 NAT U OF IRELAND	AN AC 54 54 83 919 760-5259
MCLAUGHLIN, JAMES CHARLES 250 CHARLOIS BOULEVARD WINSTON-SALEM 27103 JEFFERSON	OBG AC 51 52 77 919 768-4730	MIMS, GROVER RAY, III 2580 COUNTRY CLUB ROAD WINSTON-SALEM 27104 BOWMAN GRAY	AN AC 66 66 77 919 748-4791	MUSS, HYMAN BERNARD BOWMAN GRAY, DEPT. OF MED. WINSTON-SALEM 27103 DOWNSTATE ME CTR	ON /HEM AC 68 70 75 919 748-4397
MCLEAN, WILLIAM THADDEUS, JR. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 BOWMAN GRAY	N /PD AC 51 51 67 919 748-2316	MINICK, JAMES ELDER 5029 COUNTRY CLUB ROAD WINSTON-SALEM 27104 TEMPLE U	GP AC 51 52 82 919 768-9515	MUTTON, THOMAS PAUL 2933 MAPLEWOOD AVENUE WINSTON-SALEM 27103 BOWMAN GRAY	GS /VS AC 73 73 87 919 768-9198
MCLENDON, SUSAN D. 2000-J FALCON WOOD CT. WINSTON-SALEM 27107 BOWMAN GRAY	S 91 87 919 760-4458	MINICK, RUSSELL CLARK 1504 WILLIAMS RD. LEWISVILLE 27023 TEMPLE U	FP AC 46 46 72 919 768-9515	MYERS, RICHARD THOMAS 613 GLEN ECHO TRAIL WINSTON-SALEM 27106 U OF PENN	GS /TS L/RT 43 43 50 919 748-4541
MCMURCHY, CHARLES R. 2808 MAPLEWOOD AVE. WINSTON-SALEM 27103 U OF MISSISSIPPI	GE /IM AC 74 74 80 919 768-6211	MIRAGLIA, CHARLES CARMEN 1057 S. HAWTHORNE RD. WINSTON-SALEM 27103 BOWMAN GRAY	S 89 85 919 723-2299	MYRACLE, JOHN HOBART 250 CHARLOIS BOULEVARD WINSTON-SALEM 27103 U OF OKLAHOMA	PD /PDC AC 74 75 79 919 768-4730
MCNEIL, QUINCY ALBERT, JR. 2909 MAPLEWOOD AVENUE WINSTON-SALEM 27103 BOWMAN GRAY	OBG AC 69 69 77 919 765-2802	MIRAGLIA, COLLEEN P. 1057 S. HAWTHORNE RD. WINSTON-SALEM 27103 HAHNEMANN	FP R 83 84 86 919 723-2299	MYRICK, WILLIAM GLENN 3115 TURKEY HILL RD. WINSTON-SALEM 27106 BOWMAN GRAY	IM AC 62 62 66 919 765-3806
MCWHORTER, JOE MAURICE 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF MISSISSIPPI	NS AC 68 68 77 919 748-4020	MISHKIND, STEVEN HART 2500-K MILLER PARK CIRCLE WINSTON-SALEM 27103 BOWMAN GRAY	S 89 85 919 722-0477	NANZETTA, LEONARD 2756 WINDSOR ROAD WINSTON-SALEM 27104 U OF MICHIGAN	AN L/RT 42 46 46 919 768-7572
MEADS, MANSON 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 TEMPLE U	IM L/RT 43 47 47 919 748-4301	MODEST, VICKI ELLEN 3760 WILL SCARLET RD. WINSTON-SALEM 27104 BOWMAN GRAY	S 91 87 919 765-6399	NAPOLITANO, CHARLES A. 1772 HAUSMAN DR. WINSTON-SALEM 27103 BOWMAN GRAY	S 90 86 919 722-7787
MEANS, ROBERT LEE PO BOX 5082, ARDMORE STA. WINSTON-SALEM 27103 BOWMAN GRAY	GS AC 47 48 55 919 725-1602	MONROE, JOHN HOWARD 236 PLYMOUTH AVE. WINSTON-SALEM 27104 HARVARD	GYN AC 47 47 57 919 765-2802	NAPPER, CLAY H., JR. 2039 CRAIG ST. WINSTON-SALEM 27103 BOWMAN GRAY	S 91 87 919 777-8689
MEIS, PAUL JEAN BOWMAN GRAY, DEPT. OF OBG WINSTON-SALEM 27103 U OF IOWA	OBG /NPM AC 59 60 78 919 748-4039	MONTERO-PEARSON, PER M. PO BOX 407 MOCKSVILLE 27028 AUTONOMA U-MADRID	GS AC 77 79 88 704 634-6121	NAPPER, CLAY HUGHES 301 MILLER ST., STE. 209 WINSTON-SALEM 27103 BOWMAN GRAY	IM AC 56 56 62 919 723-0789
MEREDITH, JAY WAYNE 363 SPRINGDALE AVENUE WINSTON-SALEM 27104 BOWMAN GRAY	TRS /TS AC 78 79 81 919 748-2011	MONTGOMERY, WILLIAM GARDNER 2932 LYNDBURST AVE. WINSTON-SALEM 27103 BOWMAN GRAY	U AC 52 52 56 919 765-4021	NAYLOR, LEE ANN A. 2803 LYNDBURST AVE. WINSTON-SALEM 27103 MED U OF SC	DR AC 83 85 86 919 768-1021
MEREDITH, JESSE HEDGEPEETH BOWMAN GRAY-SURGERY WINSTON-SALEM 27103 CASE WESTERN RES	GS /TS AC 51 60 64 919 748-4278	MOODY, DIXON MCGUIRE BOWMAN GRAY-RADIOLOGY WINSTON-SALEM 27103 U OF TEXAS-SW	DR AC 63 63 74 919 748-4435	NELSEN, KAY M. 2050 CRAIG ST. #24 WINSTON-SALEM 27103 BOWMAN GRAY	S 91 87 919 777-0975
MEYER, DAVID DAVIS 1800 S. HAWTHORNE ROAD WINSTON-SALEM 27103 BOWMAN GRAY	AC 69 69 85 919 768-1860	MOORE, ROBERT ALEXANDER, III 1243 WEDGEWOOD DR. WINSTON-SALEM 27103 BOWMAN GRAY	NEP /IM R 84 85 82 919 765-5862	NELSON, DAVID STEPHEN 248 FLINTSHIRE ROAD WINSTON-SALEM 27104 BOWMAN GRAY	EM /GS AC 61 61 73 919 765-3950
MEYERS, JAMES HOWARD 2540 EMPIRE DR. WINSTON-SALEM 27103 WASHINGTON U	PTH AC 72 74 82 919 722-9410	MOREHEAD, ROBERT PAGE 1051 ARBOR ROAD WINSTON-SALEM 27104 JEFFERSON	PTH L/RT 36 36 38 919 722-2879	NELSON, LEWIS HENRY, III BOWMAN GRAY, DEPT. OF OBG WINSTON-SALEM 27103 BOWMAN GRAY	OBG /GYN AC 70 70 79 919 748-4291
MICHEL, RONALD CHARLES 250 CHARLOIS BLVD. WINSTON-SALEM 27103 WEST VA U	IM /END AC 72 72 86 919 768-4730	MORGAN, JOEL CLARENCE 2827 LYNDBURST AVE., STE. 205 WINSTON-SALEM 27103 BOWMAN GRAY	CDS /TS AC 78 79 83 919 768-9510	NEWSOME, ALBERT RAY 1405 PLAZA DRIVE WINSTON-SALEM 27103 U OF NC	CD AC 61 61 67 919 765-4131
MILLER, EMERY CLYDE, JR. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 JOHNS HOPKINS	END /IM AC 49 53 55 919 748-3630	MORGAN, MELVIN KENNETH 5029 COUNTRY CLUB RD. WINSTON-SALEM 27104 BOWMAN GRAY	FP AC 80 82 86 919 773-0074	NEWSOME, SAMUEL CARL P. O. BOX 1129 KING 27021 BOWMAN GRAY	FP AC 75 75 73 919 983-4346

34. FORSYTH-STOKES-DAVIE COMPONENT SOCIETY (Continued)

NEWTON, JIMMIE ISAAC 3030 TRENWEST DRIVE WINSTON-SALEM 27103 U OF NC	OBG AC 64 64 78 919 768-4310	PARRIS, ALVA EDWARD 2240 CLOVERDALE AVE., #219 WINSTON-SALEM 27103 BOWMAN GRAY	FP /OM AC 53 53 54 919 725-5881	PETRILLI, ROBERT 5465 STYERS FERRY RD. CLEMMONS 27012 U OF SOU FLORIDA	EM AC 82 83 84 919 766-0479
NICASTRO, JOSEPH FRANCIS 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 M C OF WISCONSIN	ORS AC 69 73 77 919 748-3947	PARSLEY, BETSY ALLEN 3420 THORESBY COURT WINSTON-SALEM 27104 BOWMAN GRAY	PD AC 69 69 73 919 768-6830	PETROZZA, PATRICIA HARPER 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 JEFFERSON	AN AC 78 80 84 919 748-4498
NIFONG, FRANK MILLER P. O. BOX 988 CLEMMONS 27012 JEFFERSON	FP L 43 43 48 919 766-6811	PASCHOLD, EUGENE H. 3314 HEALY DR. STE. 107 WINSTON-SALEM 27103 BOWMAN GRAY	ON /IM AC 78 79 85 919 768-2521	PHAN, THAI TIEN 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF HUE	P AC 72 72 83 919 748-3920
NOLAN, ROBERT EARL 1901 S. HAWTHORNE, STE. 210 WINSTON-SALEM 27103 CASE WESTERN RES	GS /VS AC 55 60 60 919 765-5101	PATTERSON, RICHARD BRUCE 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 BOWMAN GRAY	PHO /PD AC 55 55 61 919 748-4085	PHILLIPS, WESLEY FLETCHER P. O. BOX 727 KERNERSVILLE 27284 BOWMAN GRAY	FP AC 62 62 67 919 993-8181
NOMEIR, ABDEL-MOHSEN 3219 PENSBY ROAD WINSTON-SALEM 27106 ALEXANDRIA U	CD /IM AC 52 72 78 919 748-4581	PAUCA, ALFREDO LAZO 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 SAN MARCOS U	AN AC 58 58 77 919 748-4473	PHILP, ELIZABETH BEATSON BOWMAN GRAY SCH. OF MED. WINSTON-SALEM 27103 U OF EDINBURGH	FP AC 63 73 78 919 748-2235
NORFLEET, CHARLES M., JR. 1244 ARBOR ROAD, #199 WINSTON-SALEM 27104 U OF PENN	U L/RT 37 37 41 919 722-1464	PAYNE, JEFFREY C. 938 MADISON AVE. WINSTON-SALEM 27103 BOWMAN GRAY	S 90 86 919 724-6286	PHIPPS, CARL SPENCER 3333 SILAS CREEK PARKWAY WINSTON-SALEM 27103 U OF NC	END /IM AC 62 62 66 919 765-1640
O'BRIEN, MICHAEL K. 2418 LYNDBURST AVE. WINSTON-SALEM 27103 BOWMAN GRAY	S 91 87 919 723-1492	PEACOCK, JAMES EDWARD, JR. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF NC	ID /IM AC 75 76 83 919 748-4507	PICKLESIMER, FRED L., JR. 1930 ELIZABETH AVE. APT. 3 WINSTON-SALEM 27103 BOWMAN GRAY	S 91 87 919 723-7547
O'CONNOR, MICHAEL LEE BOWMAN GRAY, DEPT. OF PATH. WINSTON-SALEM 27103 U OF KANSAS	PTH AC 64 65 76 919 748-4311	PEARCE, LARRY ALLEN 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 BOWMAN GRAY	N AC 61 61 72 919 748-4101	PIERCE, JEFFREY N. BOX 274, 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 BOWMAN GRAY	S 91 88 919 724-3509
O'HALLARON, MAUREEN A. 1902 QUEEN ST. #E-6 WINSTON-SALEM 27104 BOWMAN GRAY	S 90 87 919 724-3686	PEARSON, WILLIAM SEYMOUR BOWMAN GRAY SCH. OF MED. 300 S. HAWTHORNE RD WINSTON-SALEM 27103 U OF NC	P AC 60 60 66 919 748-4553	PIERSON, STEVEN S. 2028 ELIZABETH AVE. WINSTON-SALEM 27103 BOWMAN GRAY	P AC 72 72 87 919 722-2323
O'NEAL, RUTH BOWMAN GRAY, DEPT. OF PED. WINSTON-SALEM 27103 MED COLL OF VA	PD L 43 45 48 919 727-8105	PEGRAM, PAUL SAMUEL, JR 2332 ELIZABETH AVENUE WINSTON-SALEM 27103 BOWMAN GRAY	ID /IM AC 70 70 80 919 748-4246	PIKULA, LOUIS, JR. 3080 TRENWEST DRIVE WINSTON-SALEM 27103 BOWMAN GRAY	NS AC 61 61 70 919 765-3750
OBER, KARL PATRICK 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF FLORIDA	END /IM AC 74 76 82 919 748-2076	PENCE, CARLA RAFFETY 1900 QUEEN ST. A-4 WINSTON-SALEM 27103 BOWMAN GRAY	IM R 85 00 83 919 725-7499	PITSER, WILLIAM ROSS 1420 PLAZA DRIVE WINSTON SALEM N C 27103 U OF NC	OTO AC 62 62 70 919 765-4922
OGBURN, LUNDIE CALVIN 3263 ROBINHOOD TALLAHASSEE, FL 32312 JEFFERSON	GYN L/RT 28 28 36 919 748-2076	PENKAR, SURESH JAGANNATH 3333 SILAS CREEK PARKWAY WINSTON-SALEM 27103 U OF BOMBAY	AN AC 70 71 76 919 760-5180	PITTAWAY, DONALD EDWARD 578 MAIDSTONE LANE CLEMMONS 27012 LSU-SHREVEPORT	OBG AC 77 77 84 919 748-2368
OLSEN, JEFFREY DOVE 2451 BOONE AVE. WINSTON-SALEM 27103 BOWMAN GRAY	S 89 85 919 725-9812	PENNELL, TIMOTHY C. BOWMAN GRAY - SURGERY WINSTON-SALEM 27103 BOWMAN GRAY	GS /TS AC 60 60 72 919 748-4671	PITTMAN, CLYDE EDWIN 2230 MAPLEWOOD AVE. WINSTON-SALEM 27103 MED COLL OF GA	R 85 00 87 919 748-2011
OLYMPIO, GEORGIA K. 526 OSBORNE RD. WINSTON-SALEM 27103 U OF FLORIDA	PTH AC 82 84 85 919 768-5217	PEPPER, FRANCIS DEWITT, JR. 3155 MAPLEWOOD AVENUE WINSTON-SALEM 27103 U OF NC	DR /NR AC 56 56 64 919 765-2702	PLONK, GEORGE WEBB, JR. BOWMAN GRAY - SURGERY WINSTON-SALEM 27103 BOWMAN GRAY	GS /VS AC 73 73 81 919 748-4449
OLYMPIO, MICHAEL A. 526 OSBORNE RD. WINSTON-SALEM 27103 U OF FLORIDA	AN AC 82 84 85 919 768-5217	PERRY, DAVID RUSSELL, JR. 3175 MAPLEWOOD AVENUE WINSTON-SALEM 27103 BOWMAN GRAY	PD AC 46 47 53 919 768-7030	PODGORNY, GEORGE 2115 GEORGIA AVENUE WINSTON-SALEM 27104 BOWMAN GRAY	EM /GS AC 62 69 73 919 727-1161
ORBOCK, JACOB ALEXANDER 250 CHARLOIS BOULEVARD WINSTON-SALEM 27103 JEFFERSON	CD /IM AC 62 65 79 919 768-4730	PERRY, IRVIN SAMUEL 2825 LYNDBURST AVENUE WINSTON-SALEM 27103 MED COLL OF VA	PUD /IM AC 55 55 76 919 765-0383	POEHLING, GARY GEORGE BOWMAN GRAY, DEPT. OF ORS WINSTON-SALEM 27103 M C OF WISCONSIN	ORS /HS AC 68 76 77 919 748-3948
ORCUTT, JAMES MICHAEL 1327 REVERE RD. WINSTON-SALEM 27103 BOWMAN GRAY	S 90 86 919 725-8866	PERRY, SAMUEL JOSEPH 1723 VIRGINIA RD. 1/2 WINSTON-SALEM 27104 BOWMAN GRAY	S 88 85 919 724-7680	POLLAK, MICHAEL JOSEPH 302 FORSYTH MEDICAL PARK WINSTON-SALEM 27103 MED COLL OF VA	OBG AC 68 68 74 919 765-9350
OTT, DAVID JAMES 4761 GREY FOX COURT WINSTON-SALEM 27104 U OF MICHIGAN	DR AC 71 72 78 919 765-7633	PESANO, RICK LOUIS 1407-A SENECA ST. WINSTON-SALEM 27103 BOWMAN GRAY	S 91 88 919 748-0946	POLLARD, HAROLD C., III 2927 LYNDBURST AVE. WINSTON-SALEM 27103 U OF NC	OBG AC 73 73 79 919 765-9350
PARKER, PETER EMENS 2933 MAPLEWOOD AVENUE WINSTON-SALEM 27103 OHIO STATE U	GS /VS AC 60 60 71 919 765-0155	PETERS, DONALD W. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF NC	P AC 82 84 88 919 748-3693	POLLOCK, FRANK EDWARD SALEM ORTHOPAEDIC ASSOC. PA PO BOX 25007 WINSTON-SALEM 27114 OHIO STATE U	ORS AC 54 54 60 919 768-1270
PARKER, ROBERT L., JR. 822 OLD WINSTON RD. KERNERSVILLE 27284 BOWMAN GRAY	OBG AC 82 83 86 919 993-4532	PETERS, RANDY ALAN 1830 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF VIRGINIA	GE /IM AC 82 83 87 919 765-0463	POOL, ROBERT SMITHWICK FORSYTH MEMORIAL HOSPITAL WINSTON-SALEM 27103 BOWMAN GRAY	PTH /CLP AC 55 55 67 919 773-3840
PARLIER, REGGIE DAVID 828 HOLLY HEDGE DR. LEWISVILLE 27023 DUKE	R 87 00 84 919 479-5559	PETERSEN, NICOLE M. 520-Z PARK RIDGE CT. WINSTON-SALEM 27104 BOWMAN GRAY	S 91 87 919 765-5023	PORCHEY, CARL JOSEPH, JR. 3630 WINDING CREEK WAY WINSTON-SALEM 27106 WASHINGTON U	IM AC 72 74 76 919 768-4730

34. FORSYTH-STOKES-DAVIE COMPONENT SOCIETY (Continued)

POWELL, BAYARD LOWERY 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF NC	ON /HEM AC 80 80 78 919 748-2946	RENSNER, RICHARD WM., JR. 1304 FENIMORE ST. WINSTON-SALEM 27103 BOWMAN GRAY	S 90 88 919 761-8933	ROSS, ROBERT MITCHELL 1401-A OLD MILL CIR. WINSTON-SALEM 27103 HAHNEMANN	AI AC 74 77 81 919 768-0914
PRICHARD, ROBERT WILLIAMS 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 GEO WASHINGTON U	PTH AC 47 51 51 919 748-2649	RHOADES, VADE G. 2240-98 CLOVERDALE AVE. W-S PROF. BLDG. PO BOX 5128 WINSTON-SALEM 27113 BOWMAN GRAY	D AC 60 60 68 919 723-1834	ROUFAIL, WALTER MICHEL 1901 S. HAWTHORNE RD., #310 WINSTON-SALEM 27103 CAIRO U	GE /IM AC 57 66 66 919 760-4340
PROCTOR, RICHARD CULPEPPER 381 WESTVIEW DR., S.W. WINSTON-SALEM 27104 BOWMAN GRAY	P L/RT 45 47 48 919 723-6020	RICE, WILLIAM YATES, III 706 FRIAR TUCK ROAD WINSTON-SALEM 27104 BOWMAN GRAY	S 89 85 919 768-7293	ROVERE, GEORGE DAVITTO 300 S. HAWTHORNE ROAD WINSTON-SALEM 27103 SUNY-SYRACUSE	ORS /SM AC 58 59 73 919 748-3946
PROUGH, DONALD SANDERSON 1890 RUNNYMEADE RD. WINSTON-SALEM 27104 PENN STATE U	AN AC 73 77 88 919 748-4684	RICHARDS, FREDERICK, II 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 MED U OF SC	ON /HEM AC 64 64 74 919 748-4337	ROY, RAYMOND CLYDE 454 WESTOVER AVENUE WINSTON-SALEM 27104 TULANE U	AN AC 74 75 83 919 748-4498
PRUETT, DENNIS DERWOOD 1611 W. FIRST STREET WINSTON-SALEM 27104 BOWMAN GRAY	EM AC 56 57 78 919 721-1075	RICHTER, JOEL EDWARDS 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF TEXAS-SW	GE /IM AC 75 75 83 919 748-2810	ROYSER, ROGER LEE N. C. BAPTIST HOSPITAL WINSTON-SALEM 27103 BOWMAN GRAY	AN AC 75 76 88 919 748-2927
PUGH, HOLLY P. 416 RIDGEHAVEN DR. WINSTON-SALEM 27104 JEFFERSON	OPH R 86 86 87 919 748-3504	RICHTER, RICHARD LESTER 1640 NORTHWEST BLVD. WINSTON-SALEM 27104 BOWMAN GRAY	S 89 86 919 722-5918	RUBIN, MICHAEL HOTELLING 1830 S. HAWTHORNE ROAD WINSTON-SALEM 27103 MED COLL OF VA	GE /IM AC 70 70 78 919 765-0463
PULLIAM, THOMAS JACKSON 311 STAFFORDSHIRE RD. WINSTON-SALEM 27104 BOWMAN GRAY	IM R 84 85 81 919 760-4557	RIEKER, ROBERT PAUL 2827 LYNDBURST AVE., #203 WINSTON-SALEM 27103 TUFTS U	AN /PDC AC 66 67 85 919 768-3212	RUCH, DAVID SIMMS 3807 PORTER ST. NW #303 WASHINGTON, DC 20016 BOWMAN GRAY	S 88 88 919 748-4469
RABEN, MILTON N. C. BAPTIST HOSPITAL WINSTON-SALEM 27103 TUFTS U	TR AC 59 59 71 919 748-4981	RIELA, ANTHONY RICHARD 211 RIVERBEND DR. BERMUDA RUN 27006 MED SCH-UMDNJ	CHN /N AC 79 81 85 919 998-7646	RUFFY, ALFRED JACKSON, JR. BOWMAN GRAY, DEPT. OF MED. WINSTON-SALEM 27103 LA STATE U	CD /IM AC 61 61 73 919 748-4469
RABIL, WILLIAM EDMOND 2240 CLOVERDALE AVE., #218 WINSTON-SALEM 27103 U OF VIRGINIA	GS /GYN AC 46 46 52 919 722-3691	RIESER, GEOFFREY DAVIS 2833 BIRCHWOOD DR. WINSTON-SALEM 27103 MED U OF SC	DR R 85 85 85 919 760-3090	RUSSELL, WILSON GLOVER FORSYTH MEM HOSP-PTH WINSTON-SALEM 27103 VANDERBILT U	PTH AC 74 75 81 919 773-3840
RACKLEY, JAMES WAYNE 250 CHARLOIS BLVD. WINSTON-SALEM 27103 U OF TENNESSEE	PD /HEM AC 55 55 77 919 768-4730	ROARK, GARY LEE 1106 MELROSE ST. WINSTON-SALEM 27103 BOWMAN GRAY	S 89 85 919 761-1590	RYDEN, JANICE BETH 300 S. HAWTHORNE RD. STUDENT BOX 543-BOWMAN GRAY WINSTON-SALEM 27103 BOWMAN GRAY	S 89 87 919 748-1783
RANDALL, MARCUS EDDIE 300 S. HAWTHORNE RD. DIV. RADIATION ONCOLOGY WINSTON-SALEM 27103 U OF NC	ON /TR AC 82 83 82 919 748-4981	ROBACZEWSKI, DAVID L. 206 OAKWOOD CT. WINSTON-SALEM 27103 BOWMAN GRAY	S 90 87 919 760-1643	SANDERFORD, JAMES LYON, JR. 3155 MAPLEWOOD AVENUE WINSTON-SALEM 27103 U OF NC	DR /NM AC 78 78 78 919 773-3874
RANDOLPH, ANGUS C. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF VIRGINIA	P /N L 40 48 48 919 748-4635	ROBERTS, JESSE EARLE 1425 PLAZA DRIVE WINSTON-SALEM 27103 LA STATE U	RHU /IM AC 61 61 73 919 768-5221	SATO, TAKAO LEWIS 6730 AMBERLEY LN. CLEMMONS 27012 EAST CAROLINA U	IM R 86 86 83 919 766-9505
RAU, BRUCE WILLIAM 190 CHARLOIS BLVD. WINSTON-SALEM 27103 U OF MISSOURI	P AC 72 74 79 919 768-6930	ROBERTS, JOSEPH E. 1333 MADISON AVE. WINSTON-SALEM 27103 BOWMAN GRAY	S 90 87 919 722-6835	SATTERWHITE, WILLIAM M. 1420 PLAZA DRIVE WINSTON-SALEM 27103 DUKE	OTO /HNS AC 58 58 65 919 765-4922
RAUCK, RICHARD LEE 1740 VIRGINIA RD. WINSTON-SALEM 27104 BOWMAN GRAY	AN AC 82 83 87 919 748-2591	ROBIE, PETER WILLIAM 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 BAYLOR	IM AC 76 76 81 919 748-2085	SAVITT, JOSEPH S. 101 ECHO GLEN DR. APT. B1 WINSTON-SALEM 27106 BOWMAN GRAY	S 91 87 919 761-0236
RECORD, S. LEO, JR. P. O. BOX 627 KERNERSVILLE 27284 BOWMAN GRAY	FP AC 64 65 66 919 993-8181	ROBINSON, JAMES ELBERT FORSYTH MEDICAL PARK, #504 WINSTON-SALEM 27103 NORTHWESTERN U	ORS AC 53 58 58 919 768-9500	SAWYER, CHARLES GLENN 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 BOWMAN GRAY	CD /IM AC 44 44 50 919 748-4462
REED, JAMES CROFT 300 S. HAWTHORNE RD. DEPT. OF RADIOLOGY WINSTON-SALEM 27103 U OF MIAMI	R AC 68 75 80 919 748-4091	ROGERS, ANNE T. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF GLASGOW	AN AC 75 75 88 919 748-4498	SAYERS, DANIEL GARVIN 2804 MONTCLAIR ROAD WINSTON-SALEM 27106 OHIO STATE U	EM AC 77 77 78 919 748-4625
REED, JOHN WILLIAM BOWMAN GRAY, DEPT. OF OPH WINSTON-SALEM 27103 BOWMAN GRAY	OPH AC 62 62 71 919 768-0735	ROGERS, JACK MARRELL BOWMAN GRAY, DEPT. OF PSY. WINSTON-SALEM 27103 BOWMAN GRAY	P /N AC 58 58 64 919 748-3617	SAYERS, WILLIAM FLOYD 3318 HEALY DRIVE WINSTON-SALEM 27103 U OF NC	PD AC 65 65 73 919 765-8490
REID, CHARLES FREDRIC 1806 S. HAWTHORNE RD. PO BOX 5655 WINSTON-SALEM 27103 U OF NC	U AC 74 75 79 919 768-0994	ROGERS, JAMES MICHAEL 3318 HEALY DRIVE WINSTON-SALEM 27103 BOWMAN GRAY	PD AC 71 71 78 919 765-8490	SCHARYJ, MODESTO BOWMAN GRAY, DEPT. OF PATH. WINSTON-SALEM 27103 U OF WIEN	PTH AC 46 63 78 919 748-2632
REID, CHARLES HAMILTON, JR. 215 PLYMOUTH AVE. WINSTON-SALEM 27104 DUKE	IM L/RT 42 45 45 919 768-0994	ROMM, FREDRIC JAY BOWMAN GRAY-FAMILY MED. WINSTON-SALEM 27103 HARVARD	FP /GPM AC 70 71 84 919 748-2229	SCHERER, JAMES LEROY 3155 MAPLEWOOD AVENUE WINSTON-SALEM 27103 DUKE	R /DR AC 68 67 81 919 760-5874
REIFLER, BURTON V. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 EMORY U	P /GER AC 69 70 87 919 748-4552	ROSE, RICHARD PHILLIP FORSYTH MED. PARK, #504 WINSTON-SALEM 27103 BOWMAN GRAY	ORS AC 64 64 75 919 768-9500	SCHILLER, HERBERT MILES 2570 EMPIRE DR. WINSTON-SALEM 27103 BOWMAN GRAY	PTH /CLP AC 68 68 78 919 760-4620
		ROSEN, ROBERT DEAN 147 COLUMBINE DRIVE WINSTON-SALEM 27106 U OF PITTSBURGH	FP AC 79 80 83 919 722-9535	SCHOLNE, BENZION 300 BEECHCLIFF COURT WINSTON-SALEM 27104 U OF CAPE TOWN	AN AC 72 78 82 919 765-9091

34. FORSYTH-STOKES-DAVIE COMPONENT SOCIETY (Continued)

SCHMID, HERMAN E., JR. 147 COLUMBINE DR. WINSTON-SALEM 27106 U OF ILLINOIS	FP /GER AC 55 56 71 919 722-9535	SLATE, FRANCIS WESLEY P. O. BOX 407 MOCKSVILLE 27028 U OF CAPE TOWN	GS AC 47 57 59 704 634-6121	SPUDIS, EDWARD VERHINES 1900 S. HAWTHORNE RD. #674 WINSTON-SALEM 27103 U OF MARYLAND	N AC 53 59 59 919 765-2195
SCHNEIDER, MICHAEL J. 300 S. HAWTHORNE RD. BOX 280 WINSTON-SALEM 27103 BOWMAN GRAY	S 91 87 919 723-2935	SLUSHER, M. MADISON 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF KENTUCKY	OPH AC 64 65 74 919 748-4091	SPURR, CHARLES LEWIS 1845 BEUNA VISTA RD. WINSTON-SALEM 27104 U OF ROCHESTER	ON /HEM L/RT 40 57 57 919 748-2946
SCHULTZ, JOHN LOESCH 3155 MAPLEWOOD AVENUE WINSTON-SALEM 27103 BOWMAN GRAY	DR /NM AC 61 61 73 919 760-5948	SMALES, WILLIAM PALMER STUDENT BOX 411, BOWMAN GRAY 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 BOWMAN GRAY	S 90 86 919 351-4144	STALLINGS, DAVEY BINGHAM P. O. BOX 69 RURAL HALL 27045 BOWMAN GRAY	GP AC 57 57 61 919 969-9158
SCHWARTZ, EARL 3465 DIXIANA LANE PFAFFTOWN 27040 BOWMAN GRAY	EM AC 74 75 77 919 748-4625	SMALTO, GARY PAUL 401 S. SUNSET DR. WINSTON-SALEM 27103 BOWMAN GRAY	S 88 85 919 724-9744	STAMEY, CHARLES CLAUD 3000 BETHESDA PL. #501 WINSTON-SALEM 27103 HARVARD	PD AC 53 53 57 919 768-6830
SCUDERI, PHILLIP EDWARD 1728 BUENA VISTA RD. WINSTON-SALEM 27104 BOWMAN GRAY	AN AC 78 79 81 919 773-3180	SMITH-COOK, SHARON R. 312-10 LINVILLE RIDGE CT. WINSTON-SALEM 27101 BOWMAN GRAY	S 91 88 919 722-4258	STANDISH, MYLES 838 BRENT WINSTON-SALEM 27103 BOWMAN GRAY	S 89 86 919 725-6971
SEARS, RICHARD JOHN 730-P WALNUT FOREST RD. WINSTON-SALEM 27103 BOWMAN GRAY	S 91 87 919 765-1396	SMITH, CLAUDE ALFRED 3155 MAPLEWOOD AVENUE WINSTON-SALEM 27103 JEFFERSON	R AC 53 53 66 919 765-2702	STEPHENS, WAYLAND C. 5043 COUNTRY CLUB RD. WINSTON-SALEM 27104 DUKE	FP AC 80 83 87 919 768-9575
SEARS, VICTOR W., JR. 3556 HEATHROW DR. WINSTON-SALEM 27127 BOWMAN GRAY	S 90 86 919 722-8650	SMITH, JOHN BALDWIN, III 160 CHARLOIS BLVD. WINSTON-SALEM 27103 MED COLL OF VA	N /CHN AC 69 69 76 919 768-5834	STERCHI, JOHN MICHAEL 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF CINCINNATI	ON /GS AC 66 66 79 919 748-4276
SEEN, NELSON DER 1631 PARK AVE. NEW HYDE PARK, NY 11040 BOWMAN GRAY	S 88 86	SMITH, KAREN MARIE 1605-P ZUIDER ZEE DR. WINSTON-SALEM 27127 BOWMAN GRAY	S 91 87 919 784-8762	STERNER, DAVID CHARLES 3487 TANGLEBROOK TR. CLEMMONS 27012 BOWMAN GRAY	GS /OBG S 88 84 919 766-6117
SHACKELFORD, DONALD P., JR. BOX 284, BOWMAN GRAY 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 BOWMAN GRAY	S 91 87 919 725-8605	SMITH, NAT ERSKINE 2900 COUNTRY CLUB ROAD WINSTON-SALEM 27104 MED COLL OF GA	IM AC 49 49 77 919 748-4524	STEWART, RONALD CLEVELAND 2901 MAPLEWOOD AVENUE WINSTON-SALEM 27103 BOWMAN GRAY	PS /HS AC 74 75 82 919 765-8620
SHAFFNER, LOUIS DES 740 N. PINE VALLEY ROAD WINSTON-SALEM 27106 HARVARD	PDS /GS L/RT 41 47 51 919 725-1503	SMITH, RUSSELL LEE 1030 W. 25TH STREET WINSTON-SALEM 27104 U OF ILLINOIS	IM /GP L/RT 32 41 65 919 723-2188	STONE, PERRY GALE DALTON ROAD, P. O. BOX 426 KING 27021 BOWMAN GRAY	PD AC 76 76 84 919 983-2531
SHEALY, RONALD BERNARD 175 CHARLOIS BLVD., STE. 101 WINSTON-SALEM 27103 MED U OF SC	OTO AC 75 76 81 919 768-3361	SNOWHITE, JENNIFER CELESTE 1712 ELIZABETH AVE. WINSTON-SALEM 27103 BOWMAN GRAY	S 90 85 919 722-8712	STORY, LLOYD JERRELL HAWTHORNE MED. PL. #260 1901 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF TENNESSEE	IM /CD AC 61 65 68 919 768-4460
SHEARIN, JACOB CONNELL 1900 S. HAWTHORNE RD. 208 FORSYTH MEDICAL PARK WINSTON-SALEM 27103 U OF PENN	PS /GS AC 68 70 79 919 748-4171	SO, GERALD MENDOZA 312 GROVE PARK AVE., APT. #3 WINSTON-SALEM 27103 BOWMAN GRAY	S 90 87 919 725-4912	STOUT, ROBERT GREGROY 415 IRVING ST. WINSTON-SALEM 27103 BOWMAN GRAY	S 89 85 919 723-9141
SHELLHORN, DOUGLAS B. 1715 ELIZABETH AVE. WINSTON-SALEM 27103 BOWMAN GRAY	S 91 87 919 761-0895	SOHMER, MARCUS FRANK, JR. 9808 REYNOLDA RD. TOBACCOVILLE 27050 BOWMAN GRAY	GE /IM AC 52 52 56 919 924-0857	STRIKE, WILLIAM K. 300 S. HAWTHORNE RD. BOX 416 WINSTON-SALEM 27103 BOWMAN GRAY	S 90 86 919 723-1491
SHEPARD, CLAUDIA PRICHARD 1406 JARVIS ST. WINSTON-SALEM 27101 BOWMAN GRAY	S 89 85 919 722-8253	SOPER, HERBERT ALVA 1901 S. HAWTHORNE RD. #320 WINSTON-SALEM 27103 U OF ARKANSAS	GYN /OBS AC 60 67 68 919 768-1180	STRINGER, LLEWELLYN WINN 1728 S. HAWTHORNE ROAD WINSTON-SALEM 27103 MED COLL OF VA	PUD AC 66 66 74 919 765-7517
SHOWN, THOMAS EARL 2932 LYN DHURST AVENUE WINSTON-SALEM 27103 U OF LOUISVILLE	U AC 61 61 71 919 765-4021	SORIANO, CLINTON REYES 1901 S. HAWTHORNE RD. #340 WINSTON-SALEM 27103 U OF EAST	CDS AC 69 69 78 919 765-6277	STUBBS, ALLSTON JULIUS 7932 LYN DHURST AVENUE WINSTON-SALEM 27103 DUKE	U AC 67 67 79 919 765-4021
SIGAL, BARRY WM. 2825 LYN DHURST AVE. STE. 101 WINSTON-SALEM 27103 MED COLL OF GA	PUD /IM AC 82 83 87	SOUTH, STEPHEN ALAN 3160-93 BERRY LANE ROANOKE, VA 24018 BOWMAN GRAY	IM R 87 00 84 703 981-7000	STUBER, SUSAN MARIE 2050 CRAIG ST., APT. #12 WINSTON-SALEM 27103 BOWMAN GRAY	S 89 88 919 725-9443
SIMON, JIMMY L. BOWMAN GRAY, DEPT. OF PED. WINSTON-SALEM 27103 U OF CALIFORNIA	PD AC 55 56 80 919 748-4431	SOUTHARD, JOHN K., JR. 3111 MAPLEWOOD AVE., STE. 107 WINSTON-SALEM 27103 BOSTON U	D AC 67 73 87 919 768-1280	STURKIE, H. RAY 1365 WESTGATE CENTER DR. SUITE 1-C WINSTON-SALEM 27103 U OF ALABAMA	GYN AC 55 64 64 919 768-8302
SIMPSON, EUGENE MYERS, JR. 250 CHARLOIS BOULEVARD WINSTON-SALEM 27103 BOWMAN GRAY	PD AC 73 73 77 919 768-4730	SPEIGHT, KEVIN LEWIS 1825 GASTON ST. WINSTON-SALEM 27103 MED U OF SC	AN R 85 86 87 919 748-4497	SUGG, WILLIAM CUNNINGHAM 7870 FAIR OAKS DR. PO BOX 38 CLEMMONS 27012 JEFFERSON	IM AC 53 53 57 919 766-6401
SINGER, LAWRENCE ROBERT 250 CHARLOIS BOULEVARD WINSTON-SALEM 27103 GEO WASHINGTON U	OBG AC 54 55 79 919 768-4730	SPENCER, RICHARD LEWIS 3309-A HEALY DRIVE WINSTON-SALEM 27103 MED COLL OF VA	P AC 60 60 69 919 765-6525	SUMNER, THOMAS EDWARD BOWMAN GRAY, DEPT. OF RAD. WINSTON-SALEM 27103 U OF ROCHESTER	PDR /PD AC 68 68 77 919 748-4316
SINTHUSEK, CHIRAPA 1200 TARTAN CT. WINSTON-SALEM 27106 CHIENGMAI U	IM /END AC 70 73 78 919 725-4741	SPENCER, WILLIAM JOSEPH 3310 BROOKVIEW HILLS BLVD. #106 WINSTON-SALEM 27103 BOWMAN GRAY	IM /CD AC 61 62 77 919 765-6020	SUTTON, HOMER GEORGE 3722 REYNOLDA ROAD WINSTON-SALEM 27106 BOWMAN GRAY	FP AC 53 53 56 919 924-2900
		SPIVEY, DAVID EUGENE, JR. 1511 MAIN ST. SW ROANOKE, VA. 24015 BOWMAN GRAY	R 87 00 85 703 985-0216		

34. FORSYTH-STOKES-DAVIE COMPONENT SOCIETY (Continued)

SWATHWOOD, TODD C. 235 CORONA ST. APT. 203 WINSTON-SALEM 27103 BOWMAN GRAY	S 91 87 919 722-8981	TRUSCOTT, BASIL LIONEL 1244 ARBOR RD., #449 WINSTON-SALEM 27104 YALE	N /IM AC 50 50 70 919 725-4441	WARD, WALTER AVEREL, JR. 1411-B PLAZA WEST RD. WINSTON-SALEM 27103 BOWMAN GRAY	OTO /A AC 61 61 76 919 760-0240
TABOR, CHARLES GORDON 1360 PINEBLUFF ROAD WINSTON-SALEM 27103 BOWMAN GRAY	IM /EM AC 54 54 54 919 765-9074	TUCKER, SCOTT L. 225 HARPER ST. WINSTON-SALEM 27104 U OF MISSOURI	R 82 83 88 919 765-9047	WATSON, NAT ERSKINE, JR. 766 OAKLAWN AVENUE WINSTON-SALEM 27104 MED U OF SC	NM /IM AC 66 66 79 919 748-3520
TAEKMAN, JEFFREY M. 730-P WALNUT FOREST RD. WINSTON-SALEM 27103 BOWMAN GRAY	S 91 87 919 765-1396	TUCKER, WILLIAM YORK, JR. 300 S. HAWTHORNE ROAD WINSTON-SALEM 27103 BOWMAN GRAY	CDS AC 68 68 86 919 748-4487	WATTS, LESTER EARL 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 BOWMAN GRAY	CD /IM AC 57 57 57 919 748-4581
TAFT, CHARLES VAN 1425 PLAZA DR., BOX 25007 WINSTON-SALEM 27114 DUKE	ORS AC 68 68 77 919 768-1270	TURNER, CHARLES SIEWERS 2819 FOREST DRIVE WINSTON-SALEM 27104 BOWMAN GRAY	PDS AC 70 70 75 919 724-0345	WEAVER, EDWARD HARRISON 190 CHARLOIS BLVD. WINSTON-SALEM 27103 U OF ALABAMA	P AC 74 75 81 919 768-6930
TALTON, DAVID SMITH 1641 N. W. BLVD., APT. R WINSTON-SALEM 27104 BOWMAN GRAY	S 90 86	TURNER, HENRY CATLETT 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF NC	AN AC 62 62 68 919 748-4791	WEAVER, FREDERICK BROWN 1409 PLAZA DRIVE WINSTON-SALEM 27103 BOWMAN GRAY	IM AC 63 63 72 919 765-4301
TARA, CHARLES SAMUEL 1702 S. HAWTHORNE ROAD WINSTON-SALEM 27103 U OF VERMONT	OPH AC 69 69 77 919 768-4140	TURNER, ROBERT A., JR. BOWMAN GRAY SCH. OF MED. WINSTON-SALEM 27103 U OF ALABAMA	RHU /IM AC 66 67 73 919 748-4209	WEAVER, R. GREY, JR. 771 REAFORD ROAD WINSTON-SALEM 27104 BOWMAN GRAY	PD AC 77 77 84 919 748-4091
TATE, DAVID HARRISON 3175 MAPLEWOOD AVENUE WINSTON-SALEM 27103 BOWMAN GRAY	PD AC 65 65 69 919 768-7030	UELAND, FREDERICK R. BOX 421, 1ST YEAR STUDENT 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 BOWMAN GRAY	S 90 87 919 723-0070	WEBB, LAWRENCE XAVIER 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 TEMPLE U	PTH AC 65 65 70 919 768-7680
TAYLOR, BLUCHER EHRLINGHAUS 2909 LYNHURST AVENUE WINSTON-SALEM 27103 BOWMAN GRAY	OBG AC 63 63 69 919 765-5470	VALK, HENRY LEWIS 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 DUKE	IM L 41 43 48 919 748-4677	WEBER, GLENDA H. P. O. BOX 809 CLEMMONS 27012 BOWMAN GRAY	AN AC 65 65 75 919 748-4791
TAYLOR, MARY ANN HAMPTON 4450 GREEN MEADOWS WINSTON-SALEM 27106 BOWMAN GRAY	FP AC 60 60 64 919 761-5218	VAN NOORD, GLENN RICHARD 4020 DRESDEN DR. WINSTON-SALEM 27104 WAYNE STATE U	FP AC 74 74 86 919 748-2230	WEEKS, DUKE BYRON 2615 TALLWOOD COURT WINSTON-SALEM 27106 BOWMAN GRAY	GE /IM AC 73 73 78 919 768-6211
THELAN, KENNETH MACLACHLAN 250 CHARLOIS BLVD. WINSTON-SALEM 27103 U OF MICHIGAN	IM AC 75 78 79 919 768-4730	VAN ZANDT, KEITH BERGEN 2805 LYNHURST AVE. WINSTON-SALEM 27103 BOWMAN GRAY	AC 80 87 78 919 768-8890	WEEKS, LANDON EARL 2808 MAPLEWOOD AVENUE WINSTON-SALEM 27103 MED COLL OF VA	GYN /ON AC 71 72 81 919 748-4022
THOMAS, BARBARA ANNE LOWRY 2720 WINDY CROSSING WINSTON-SALEM 27127 MED U OF SC	P R 85 85 85 919 785-2073	VERSCHUYL, EVERT JAN 1232 FORSYTH ST. WINSTON-SALEM 27101 BOWMAN GRAY	S 88 87 919 722-6637	WELANDER, CHARLES ERIC 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF CHICAGO	GS /TS AC 57 57 65 919 760-3112
THOMASON, ROBERT BRADLEY, III N.C. BAPTIST HOSPITAL 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 BOWMAN GRAY	GS R 84 86 85 919 748-2011	VIVEONANTHAN, SANDEEP P. 4608 HIDDENBROOK DR. RALEIGH 27609 BOWMAN GRAY	S 91 88 919 876-8566	WELCH, EARL PARKS, JR. 2825 LYNHURST AVE. STE. 105 WINSTON-SALEM 27103 U OF NC	IM L/RT 40 40 47 919 723-3856
THOMPSON, JAMES NICHOLAS BOWMAN GRAY-SURGERY WINSTON-SALEM 27103 OHIO STATE U	OTO /PSF AC 71 71 80 919 748-4161	VREELAND, WALLING D., JR. 3910 COUNTRY CLUB ROAD WINSTON-SALEM 27104 BOWMAN GRAY	GP AC 55 55 57 919 765-0170	WELFARE, CHARLES RANDALL 1113 STANDISH COURT WINSTON-SALEM 27106 U OF PENN	S 88 84 919 761-0895
TOLBERT, FRANKLIN LEE PO BOX 666 MOCKSVILLE 27028 MED COLL OF VA	FP AC 83 84 88 919 634-6128	WALKER, FRANCIS O. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 INDIANA U	N AC 78 78 88 919 748-2069	WELLS, ANDREW HENDERSON 1715 ELIZABETH AVE. WINSTON-SALEM 27103 BOWMAN GRAY	OBG AC 75 75 85 919 725-8874
TOLMIE, JOHN DUNCAN 1543 ABBEY COURT WINSTON-SALEM 27103 MCGILL U	AN AC 59 70 76 919 727-4271	WALKER, JAMES LYSLE 2353 QUEEN ST. #D WINSTON-SALEM 27103 BOWMAN GRAY	S 89 86 919 722-9268	WESTON, JONATHAN D. 495 N. CLEVELAND AVE. WINSTON-SALEM 27101 U OF ROCHESTER	IM /ID AC 81 81 86 919 723-3856
TOMLINSON, MARGARET F. 324 CRAFTON ST. WINSTON-SALEM 27103 BOWMAN GRAY	S 90 87 919 723-5882	WALKER, LAWRENCE C., JR. 2927 LYNHURST AVE. WINSTON-SALEM 27103 DUKE	OBG AC 60 60 69 919 765-9350	WHEELER, REBECCA RUSSELL 3310 BROOKVIEW HILLS BLVD. SUITE 204 WINSTON-SALEM 27103 BAYLOR	GP L/RT 34 34 39 919 993-3838
TOOLE, JAMES FRANCIS 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 CORNELL U	N /IM AC 49 62 63 919 748-4101	WALKER, WILLIAM THOMAS 202 S. CHERRY ST. KERNERSVILLE 27284 MED COLL OF VA	FP L/RT 49 50 50 919 993-2011	WHITE, ALAN FRASER 2418 LYNHURST AVE. WINSTON-SALEM 27103 BOWMAN GRAY	S 89 87 919 723-1492
TROOST, B. TODD 300 S. HAWTHORNE RD. DEPT. OF NEUROLOGY WINSTON-SALEM 27103 HARVARD	N /OPH AC 63 70 85 919 748-4643	WALL, ROSCOE LEGRAND, JR. 440 SHERWOOD FOREST ROAD WINSTON-SALEM 27104 JEFFERSON	GYN /END L/RT 40 40 50 919 765-3383	WHITE, DOUGLAS RECTOR BOWMAN GRAY, DEPT. OF MED. WINSTON-SALEM 27103 U OF CHICAGO	HEM /ON AC 67 74 75 919 748-4380
TROWELL, AMY REBECCA 250 CHARLOIS BOULEVARD WINSTON-SALEM 27103 MED COLL OF GA	PD /PHO AC 72 72 78 919 768-4730	WALLENHAUPT, STEPHEN L. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 BOWMAN GRAY	CDS AC 78 82 87 919 748-2281	WHITE, JAMES ALFRED, JR. 2240 CLOVERDALE AVE.-#198 WINSTON-SALEM 27103 U OF TENNESSEE	PTH AC 48 55 56 919 722-1154
TRUJILLO, JAIME EMILIO 3111 MAPLEWOOD AVE., STE. 101 WINSTON-SALEM 27103 U OF ANTIOQUIA	IM /END AC 72 75 77 919 768-0496	WALLEY, BRUCE DOUGLAS 2827 LYNHURST AVE. STE. 205 WINSTON-SALEM 27103 BOWMAN GRAY	CD /CDS AC 74 74 83 919 768-9535	WHITE, JOHN PAUL 2240 SUNDERLAND RD. #56-N WINSTON-SALEM 27103 U OF MISSISSIPPI	AN AC 55 55 70 919 748-2011

34. FORSYTH-STOKES-DAVIE COMPONENT SOCIETY (Continued)

WHITENER, DONALD LEONARD 2927 LYNDBURST AVENUE WINSTON-SALEM 27103 JOHNS HOPKINS	OBG AC 46 50 51 919 765-9350	WILSON, VIRGIL ARCHIBALD 4193 DIMHOLT COURT WINSTON-SALEM 27104 U OF NC	AN AC 54 54 55 919 765-8452	YOPP, JAMES DENNIE, JR. 602 FORSYTH MEDICAL PARK WINSTON-SALEM 27103 BOWMAN GRAY	CD /IM AC 66 66 74 919 765-4871
WIGGINS, THOMAS BARNES 3155 MAPLEWOOD AVE. WINSTON-SALEM 27103 BOWMAN GRAY	DR AC 83 85 81 919 760-5866	WOLFE, JOHN RICHARD 2933 MAPLEWOOD AVENUE WINSTON-SALEM 27103 MED COLL OF VA	IM /RHU AC 67 67 76 919 765-1640	YOUNCE, LAURA L. H. 4361 JOHNSBOROUGH CT., APT 78 WINSTON-SALEM 27104 BOWMAN GRAY	S 90 86 919 768-5971
WILHOIT, RANDALL D., III 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 EMORY U	AN AC 83 85 88 919 748-4498	WOLFMAN, NEIL TURNER BOWMAN GRAY, DEPT. OF RAD. WINSTON-SALEM 27103 ALBANY MED COLL	R AC 71 72 79 919 748-2471	YOUNT, ERNEST HARSHAW, JR. 2800 GREENWICH ROAD WINSTON-SALEM 27104 VANDERBILT U	IM L/RT 43 48 48 919 768-5702
WILLIAMS, BARRY NEIL 1328 ASHLEY SQUARE WINSTON-SALEM 27103 BOWMAN GRAY	P AC 83 85 88 919 765-5092	WOODRUFF, RALPH DUTTON BOWMAN GRAY, DEPT. OF PATH. WINSTON-SALEM 27103 JEFFERSON	PTH AC 65 68 83 919 748-4311	ZAGORIA, RONALD JAY 300 S. HAWTHORNE RD. DEPT. OF RADIOLOGY WINSTON-SALEM 27103 U OF MARYLAND	R AC 83 84 85 919 748-4316
WILLIAMS, JAMES JOS. 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF IOWA	FP AC 74 74 86 919 748-2833	WOOLLEN, THOMAS H., JR. 2406 PARKWAY DR. WINSTON-SALEM 27103 BOWMAN GRAY	S 91 87 919 722-6459	ZAMMIT, ROBERT PAUL 406 FORSYTH MEDICAL PARK WINSTON-SALEM 27103 CREIGHTON U	OBG AC 56 67 67 919 765-2232
WILLIAMS, KENAN BANKS 3175 MAPLEWOOD AVENUE WINSTON-SALEM 27103 JEFFERSON	PD AC 44 44 51 919 768-7030	WRIGHT, JOHN HERMAN, JR. 2901 MAPLEWOOD AVENUE WINSTON-SALEM 27103 U OF NC	PS /GS AC 68 68 75 919 765-8620	ZANOLLI, MICHAEL DOMINIC 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF TENNESSEE	D AC 81 81 86 919 748-2768
WILLIAMS, ROBERT LEE 2004 CLAXTON DRIVE WINSTON-SALEM 27107 DUKE	PD AC 75 76 80 919 785-0037	WU, WALLACE CHI LI 300 S. HAWTHORNE RD. WINSTON-SALEM 27103 U OF HONG KONG	GE /IM AC 66 66 75 919 748-4603	ZARATE, RENATO P. O. BOX 86 DANBURY 27016 FAR EAST U	IM AC 69 70 75 919 593-2001
WILLIAMS, SAMUEL CLAY 2637 AUDUBON DR. WINSTON-SALEM 27106 U OF PENN	IM AC 45 46 51 919 722-3838	YAKEL, DONALD L. 1828 NORTHWINDS DR. WINSTON-SALEM 27127 BOWMAN GRAY	S 90 87 919 788-3468	ZEKAN, PATRICIA JOAN 300 S. HAWTHORNE ROAD WINSTON-SALEM 27103 WEST VA U	ON /IM AC 78 78 84 919 748-2075
WILLIAMS, SUSAN JEAN 300 S. HAWTHORNE RD. DEPT. OF FAMILY MED. WINSTON-SALEM 27103 U OF NC	FP AC 80 81 87 919 748-4479	YEATTS, ROBERT P. 300 S. HAWTHORNE RD. DEPT. OF OPH. WINSTON-SALEM 27103 BOWMAN GRAY	OPH /PSF AC 78 78 88 919 748-4091	ZIMMERMAN, CAROL FRANCES 784 N. STRATFORD ROAD WINSTON-SALEM 27104 U OF MISSISSIPPI	OPH /N R 81 82 83 919 748-3500

35. FRANKLIN COMPONENT SOCIETY

OFFICERS—President: Phillip E. Stover, M.D., 519 N. Bickett Blvd., Louisburg 27549 (919 496-5774)
Secretary: James E. Bellard, M.D., 125 Emergency Road, Henderson 27536

MEDDERS, JAMES DOYLE 113 JOLLY STREET LOUISBURG 27549 U OF NC	GP /CD AC 56 56 62 919 496-4250	PERRY, CAREY JONES 113 JOLLY STREET LOUISBURG 27549 U OF NC	FP AC 56 56 62 919 496-4250	STOVER, PHILLIP E. 519 BICKETT BLVD. 519 N. BUCKETT BLVD. LOUISBURG 27549 EASTERN VA	FP AC 80 81 86 919 496-5774
PERDUE, JASPER BURT, JR. 111 JOLLY STREET LOUISBURG 27549 BOWMAN GRAY	GS AC 64 64 71 919 496-4177	STALLINGS, STEPHEN D., JR. ROUTE #2, BOX 109 ZEBULON 27597 BOWMAN GRAY	GP AC 46 47 50 919 269-8802	WHELESS, THOMAS O. 948 N. MAIN STREET LOUISBURG 27549 BOWMAN GRAY	FP /GER AC 43 43 47 919 496-3375

36. GASTON COMPONENT SOCIETY

OFFICERS—President: M. S. Moskowitz, M.D., 2555 Pembroke Rd., Gastonia 28054 (704 864-8377)
Secretary: John B. Garrett, Jr., M.D., 631 Cox Rd., Gastonia 28054 (704 864-7764)
Executive Secretary: Debbie Ward, P.O. Box 1747, Gastonia 28053 (704 866-2990)

ABERNETHY, WILLIAM BORDEN, JR. 610 DEERWOOD GASTONIA 28052 U OF NC	PD AC 60 60 66 704 864-4298	AIZCORBE, RAUL CESAR 79 MCADENVILLE ROAD BELMONT 28012 U OF HABANA	FP AC 52 64 65 704 825-3101	ARNEY, GERALD WAYNE GASTON RAD.MED. BLDG. P. O. BOX 1495 GASTONIA 28052 U OF TENNESSEE	DR AC 74 75 82 704 864-4378
ADAMS, SIMEON HUEY 902-G COX ROAD GASTONIA 28054 MED COLL OF VA	GS AC 53 55 59 704 864-7821	AKERS, RICHARD EDWIN 631 COX ROAD GASTONIA 28054 MED U OF SC	OPH AC 70 72 74 704 864-7789	AYCOCK, PERRY WILLIAM, JR. 1896 REMOUNT ROAD GASTONIA 28054 MED U OF SC	IM /GE AC 68 68 74 704 867-0735
AGNER, MARSHAL EDWARD 609 E. ACADEMY ST. PO BOX 159 CHERRYVILLE 28021 DUKE	FP AC 52 54 54 704 435-6058	ALBRIGHT, BENJAMIN PHILLIPS, JR 1896 REMOUNT ROAD GASTONIA 28054 EMORY U	IM AC 65 65 71 704 867-0735	BAAGIL, HASAN MOHAMAD 1315 E. GARRISON BOULEVARD GASTONIA 28052 AIRLANGA U	FP AC 61 77 88
AIKEN, JANET CYBRYNSKI 1377-A E. GARRISON BLVD. GASTONIA 28054 U OF NC	IM AC 76 78 80 704 861-0210	ALLAN, JAMES THOMAS, JR. 3705 PRINCETON DRIVE GASTONIA 28054 U OF PENN	R AC 70 70 76 704 866-2948	BARRINGER, ROBERT PHILLIPS 1896 REMOUNT ROAD GASTONIA 28054 U OF NC	IM AC 66 66 74 704 867-0730
AIKEN, WARWICK, III 1349-B E. GARRISON BLVD. GASTONIA 28054 U OF NC	IM AC 76 78 73 704 861-0210	ANTHONY, LUTHER LESLIE, JR. 1896 REMOUNT ROAD GASTONIA 28054 JEFFERSON	IM /CD AC 53 53 54 704 867-0736	BLAKE, ROBERT ADAMS 902-D COX ROAD GASTONIA 28054 MED U OF SC	ORS AC 65 65 74 704 864-6723

36. GASTON COMPONENT SOCIETY (Continued)

BOLIN, LEWIS BRYANT 226 WILMOT DR. GASTONIA 28054 BOWMAN GRAY	GP AC 54 54 58 704 865-2386	ECKBERT, WILLIAM FOX P. O. BOX 309 CRAMERTON 28032 DUKE	FP L 39 41 42 704 824-1321	KEATHLEY, FRANKLIN BURR 224 NEW HOPE ROAD GASTONIA 28052 U OF TENNESSEE	D /A AC 46 50 50 704 867-0773
BOLIN, LEWIS BRYANT, JR. 226 WILMOT DRIVE GASTONIA 28054 BOWMAN GRAY	FP AC 82 84 86 704 865-2386	FEUER, ABE LAWRENCE 1006 FAIRFIELD DR. GASTONIA 28054 HAHNEMANN	OTO L/RT 39 47 49 704 864-2222	KING, GLENDALL LEE 902 COX ROAD, SUITE A GASTONIA 28054 WASHINGTON U	ORS AC 55 65 65 704 865-6487
BOND, JOHN PENNINGTON 1806 FAIRFIELD DRIVE GASTONIA 28054 MED COLL OF GA	GS L/RT 40 47 48 704 865-0154	FISHER, CARL ELLIS 902-C COX ROAD GASTONIA 28054 U OF NC	PD AC 69 69 76 704 867-5356	KING, RICHARD GLEN 226 WILMOT DR. GASTONIA 28054 DUKE	FP AC 80 81 88 704 865-2386
BONNIN, IRVIN RAYMOND 1225 E. GARRISON BOULEVARD GASTONIA 28054 LA STATE U	OBG AC 64 64 74 704 867-7226	FORRESTER, JAMES SUMMERS P. O. BOX 459 STANLEY 28164 BOWMAN GRAY	FP /GPM AC 62 62 63 704 263-4716	LAHSE, CHARLES IRVING 902-C COX ROAD GASTONIA 28052 BOWMAN GRAY	PD RT 46 46 52 704 867-5356
BOYCE, OREN DOUGLAS 406 S. CHESTER STREET GASTONIA 28052 DUKE	IM /HYP L 33 35 46 704 865-3181	FREEMAN, PERCY LEE LAKE WYLIE, RT. #5, BOX 410-G CLOVER, SC 29710 MED COLL OF GA	U L/RT 43 47 47 803 831-8598	LEEPER, WILLIAM EDWARD, JR. 2525 PINWOOD RD. GASTONIA 28054 DUKE	IM RT 43 44 52 PTH AC 69 70 78
BRADLEY, GEORGE LEE, JR. 800 E. FIRST STREET CHERRYVILLE 28021 PHIL OSTEO MC	GP /AM AC 68 69 83 704 435-4111	GARRETT, JOHN BOSTIAN, JR. 631 COX ROAD GASTONIA 28054 MED U OF SC	U AC 73 74 82 704 864-7764	LEONE, CHERYL LEVINE 1740 MONTCLAIR AVENUE GASTONIA 28054 TULANE U	PTH AC 68 68 78 704 866-2851
BRANDON, DANIEL 3028 MT. VERNON DRIVE GASTONIA 28054 BOWMAN GRAY	EM AC 65 65 70 919 827-0253	GIBBS, STUART WYNN 2647 ARMSTRONG CIR. GASTONIA 28054 BOWMAN GRAY	R L/RT 44 44 48 704 865-5883	LEONE, PHILIP GEORGE 1740 MONTCLAIR AVENUE GASTONIA 28054 TULANE U	PTH AC 68 68 78 704 866-2851
BREEDEN, THOMAS E. 1391-C GARRISON BLVD. GASTONIA 28054 MED U OF SC	GYN AC 60 60 72 704 867-3551	GLENN, DOROTHY NORMAN 1319 PARK LANE GASTONIA 28052 MED COLL OF PENN	OBG L 38 38 40 703 235-9656	LESTER, ROBERT HILTON 902 COX ROAD, SUITE F GASTONIA 28054 U OF NC	OBG AC 75 76 80 704 867-6386
CAIN, FRANK CORAL, JR. 224 NEW HOPE ROAD GASTONIA 28052 DUKE	GP AC 53 54 55 704 865-8241	HAMMOND, WILLIAM HOWARD, JR. 224 S. NEW HOPE RD. GASTONIA 28054 MEHARRY MED COLL	GP AC 63 64 72 704 867-3621	LUVIS, L.D.A. CLAUDIUS 1018 HEATHERLOCH DR. GASTONIA 28054 U OF CEYLON	IM AC 71 71 83 704 867-1306
CALDWELL, JESSE B., JR. 1307 PARK LANE GASTONIA 28052 MCGILL U	GYN L/RT 41 41 50 704 865-0968	HAYES, WILLIAM CLAYTON, JR. 635-A COX ROAD GASTONIA 28054 U OF NC	PD AC 74 76 85 704 864-5437	MASON, GARY MERLIN MEDICAL PARK 902 COX RD., STE. F GASTONIA 28054 CASE WESTERN RES	OBG AC 82 86 86 704 867-6386
CHAMBERS, ROBERT EDWARD 1839 E. GARRISON BOULEVARD GASTONIA 28054 DUKE	PD AC 52 56 56 704 864-2685	HEMBREE, EUGENE EDWARD, JR. 1225 E. GARRISON BLVD. GASTONIA 28054 MED U OF SC	OBG AC 66 66 73 704 865-7417	MCDOWELL, ROY HENDRIX 100 DOGWOOD LANE BELMONT 28012 U OF MARYLAND	FP L/RT 29 29 31 704 825-8546
CONNER, JOEL DEWITT 571 COX RD. GASTONIA 28054 U OF NC	GYN AC 57 58 63 704 865-0033	HENDERSON, BRADLEY E. 902 COX RD. STE. A GASTONIA 28054 MED COLL OF GA	ORS AC 81 82 86 704 865-6487	MILES, JOHN RALPH, JR. 211 S. CHESTNUT ST. GASTONIA 28054 U OF VIRGINIA	GS /VS AC 73 74 80 704 867-8975
COTTER, DANIEL T. 2122 SHANNON DR. GASTONIA 28054 U OF KENTUCKY	AN AC 83 83 88 704 866-2825	HORSLEY, WILLIAM NOLEN 28 E. WOODROW AVENUE BELMONT 28012 DUKE	FP L 41 46 47 704 825-5376	MILLER, ANDREW CLEVELAND, III 311 W. THIRD AVENUE GASTONIA 28052 U OF NC	FP AC 55 55 60 704 865-4231
COUTURE, MARK MOSCOE 902 COX RD. STE. G GASTONIA 28054 MCGILL U	GS AC 74 74 79 704 864-6011	HOUSER, FOREST MELVILLE 410 S. ELM STREET CHERRYVILLE 28021 U OF PENN	GP L/RT 28 28 30 704 435-6803	MILLER, GEORGE ROLFE 902 COX ROAD, SUITE A GASTONIA 28052 U OF ROCHESTER	ORS L/RT 43 50 50 704 865-6487
COX, RUSSELL JACKSON 902 COX RD. STE. C GASTONIA 28052 U TX-SAN ANTONIO	PD AC 79 79 82 704 864-6522	HOWE, DONALD DOUGLAS 1225 E. GARRISON BLVD. GASTONIA 28054 U OF NC	OBG AC 70 71 77 704 865-7416	MORRIS, LESLIE MORGAN 3636 BRENTWOOD DR. GASTONIA 28054 BOWMAN GRAY	R L/RT 43 43 48 704 865-4430
DAVIS, RUFUS JACKSON P. O. BOX 337 CRAMERTON 28032 MED U OF SC	GP AC 46 46 51 704 825-8266	HUTCHINS, CHARLES HUBERT 750 COX ROAD GASTONIA 28054 MED COLL OF GA	PSF /OTO AC 66 66 75 704 867-7212	MOSKOWITZ, MARK SANDERS 2555 PEMBROKE ROAD GASTONIA 28054 BOSTON U	GS /VS AC 74 80 80 704 864-8377
DEAS, DAVID JOHN 239 WILMOT DR. GASTONIA 28054 DUKE	P AC 61 61 65 704 867-2338	JACOBS, GEORGE DANIEL 1225 E. GARRISON BLVD. GASTONIA 28054 U OF NC	OBG AC 76 76 82 704 865-7416	MURPHY, THOMAS LYNCH, JR. 1021 X-RAY DR. GASTONIA 28054 HARVARD	IM /PUD AC 73 76 82 704 867-2341
DICKSON, BRICE TEMPELTON, JR. 837 ATHENIAN DR. GASTONIA 28052 JEFFERSON	IM L/RT 44 44 50 704 867-7656	JARMAN, WILLIAM HENRY, JR. 902 COX RD. STE. E GASTONIA 28052 U OF NC	ORS AC 67 67 74 704 867-2333	NICHOLS, GEORGE LOUIS 1431 LAUREL LANE GASTONIA 28054 CREIGHTON U	P /CHP AC 63 64 74 704 867-4411
DIGBY, RONALD WYMAN 1896 REMOUNT ROAD GASTONIA 28054 MED COLL OF GA	CD /IM AC 71 72 77 704 867-0735	JARVIS, JAMES LUTHER 1516 PINEOLA LANE GASTONIA 28054 BOWMAN GRAY	NM /R AC 46 46 52 704 865-8679	NIEMEYER, CHARLES JOHN 902 COX ROAD, SUITE A GASTONIA 28054 DUKE	ORS AC 66 66 74 704 865-6487
DRAKE, SAMUEL THOMAS 603 COX ROAD GASTONIA 28054 MED U OF SC	GE /IM AC 73 75 79 704 867-3585	JORDAN, RICHARD M. 2151 JEFFERSON AVE. GASTONIA 28054 BOWMAN GRAY	R AC 83 84 87 704 864-4378	NORCROSS, FREDERICK C. 1839 E. GARRISON BOULEVARD GASTONIA 28052 GEO WASHINGTON U	PD AC 64 64 71 704 864-2685
EAVES, RUPERT SPENCER, JR. 631 COX RD. GASTONIA 28054 U OF NC	OPH AC 60 60 66 704 864-7789	KAHN, ROBERT HOWARD 1072 X-RAY DR. PO BOX 3598 GASTONIA 28053 NEW YORK U	D AC 72 73 76 704 864-8386	OGDEN, ROBERT HARVEY 902 COX RD., STE. F GASTONIA 28054 MED COLL OF GA	OBG AC 63 69 70 704 867-6386

36. GASTON COMPONENT SOCIETY (Continued)

PAULI, JON WARREN 1896 REMOUNT RD. GASTONIA 28054 U OF LOUISVILLE	IM AC 84 84 87 704 867-0735	SHASTRY, CHANDRASHEKARA 607 E. GARRISON BLVD. GASTONIA 28054 KARNATAK U	IM /END AC 70 71 83 704 866-4607	WALLACE, ROBERT BRUCE 3101 ANDOVER CIRCLE GASTONIA 28054 DALHOUSIE U	EM AC 76 77 80 704 867-2580
PEACH, CHARLES ARTHUR 902 COX RD., STE. F GASTONIA 28054 MED COLL OF GA	OBG AC 78 79 83 704 867-6386	SHERILL, WILLIAM C., JR. 1896 REMOUNT RD. GASTONIA 28054 U OF FLORIDA	IM /PUD AC 79 79 86 704 867-0735	WARLICK, JOHN THOMAS, III 631 COX ROAD GASTONIA 28052 MED U OF SC	U AC 66 66 72 704 864-7764
PENDLEY, ROBERT ALAN 211 S. CHESTNUT STREET GASTONIA 28054 EMORY U	GE /IM AC 76 77 82 704 867-4406	SILVOY, EDWARD JOHN 1010 X-RAY DR. GASTONIA 28054 NEW YORK MED COL	OTO /PS AC 71 72 79 704 865-7677	WEATHERS, BAILEY GRAHAM, JR. 222 S. MAIN STREET STANLEY 28164 MED COLL OF VA	FP AC 60 61 61 704 263-8945
PERKINS, ROBERT SANBORN 3406 COUNTRY CLUB DR. GASTONIA 28054 TUFTS U	TS /GS AC 60 62 84 704 864-8377	SIVA, SIVALINGAM 900 COX ROAD GASTONIA 28054 U OF SINGAPORE	NS AC 65 76 78 704 865-7655	WEEKS, JOHN WESLEY 902 COX ROAD GASTONIA 28054 DUKE	OBG AC 65 65 85 704 867-6386
PILLAI, JEYAKUMAR P. 238-3 WILMOT DR. #239 GASTONIA 28054 KARNATAK UNIV.	P AC 78 78 85 704 867-2338	SMITH, JOSEPH PINKNEY 1508 S. YORK STREET GASTONIA 28052 BOWMAN GRAY	GP AC 45 45 49 704 864-3496	WHITE, GROVER WATTS 631 COX ROAD GASTONIA 28054 U OF ALABAMA	U AC 56 64 64 704 864-7764
PRINCE, GEORGE EDWARD 3709 ST. REGIS DR. GASTONIA 28054 DUKE	PD AC 44 47 48 704 866-3222	SODERSTROM, LAWRENCE P. 10230 BALMORAL CIRCLE CHARLOTTE 28210 BOWMAN GRAY	DR /NM AC 80 81 80 704 864-4378	WHITESIDES, EDWARD STEELE 902 COX ROAD, SUITE D GASTONIA 28054 DUKE	ORS AC 51 52 57 704 864-6723
PUSTROM, EINAR 239 WILMONT ROAD GASTONIA 28054 BOWMAN GRAY	P /CHP AC 58 58 79 704 867-2338	STREETER, CHARLES TRUMAN 222 WOODRIDGE DR. BELMONT 28012 U OF NEBRASKA	FP L/RT 45 55 56 704 825-4426	WILL, THOMAS AUGUSTINE P. O. BOX 515 DALLAS 28034 BOWMAN GRAY	GP AC 48 49 53 704 922-3106
RANKIN, RICHARD EUGENE RANKIN CLINIC MOUNT HOLLY 28120 U OF VIRGINIA	FP /GP AC 50 50 52 704 827-3031	TAYLOR, JAMES EDWARD 631 COX ROAD GASTONIA 28052 MED COLL OF GA	U AC 77 77 83 704 867-4896	WILLIAMS, ERNEST COUNCIL 3618 CLUB COLONY DR., W. GASTONIA 28054 TULANE U	GS /TS RT 51 56 56 704 864-1417
RICE, EDMOND LEE UNITED CHRISTIAN HOSPITAL LAHORE, WEST PAKISTAN EMORY U	GS H 31 32 43	THOMAS, HENRY FULLER 902-G COX ROAD GASTONIA 28054 U OF NC	GS /CDS AC 66 66 75 704 864-7821	WILLIAMS, WARREN HERBERT PO BOX 3864 GASTONIA 28054 GUATEMALA U	P AC 80 86 86 704 788-8400
RINEHART, DAVID APGAR 9 FOREST HILL ROAD BELMONT 28012 U OF VIRGINIA	FP AC 82 82 86 704 825-5333	THOMAS, WALTER E., JR. 902-C COX RD. GASTONIA 28054 BOWMAN GRAY	PD AC 84 86 83 704 864-6522	WILLIS, H.S.K., JR. 125 W. CENTRAL AVE. MOUNT HOLLY 28120 DUKE	FP /AM AC 52 52 76 704 827-5876
ROBERTS, RICHARD SCOTT 1050 X-RAY DRIVE, SUITE A GASTONIA 28054 COLUMBIA U	AI /PD AC 78 80 83 704 861-0515	THOMASON, HENRY C., JR. 1021 X-RAY DR. GASTONIA 28054 U OF NC	CD /IM AC 67 67 74 704 867-2341	WILSON, ROEBY BRYANT 1330 W. SECOND AVENUE GASTONIA 28052 U OF LOUISVILLE	GP L/RT 31 31 33 704 865-3940
SANDERS, JAMES ALLEN 902 COX RD. GASTONIA 28052 BOWMAN GRAY	ORS AC 63 63 68 704 867-2333	TYNER, HUGH EDWARD 2562 PINWOOD RD. GASTONIA 28054 BOWMAN GRAY	GS /TS AC 46 46 54 704 864-7821	WINGFIELD, THOMAS WHETSELL 629 TORRENCE DRIVE GASTONIA 28052 U OF MARYLAND	AN AC 65 73 77 704 864-2499
SCHMITTER, KARL JOSEPH 902 COX RD., STE. C GASTONIA 28054 OHIO STATE U	GS /HNS AC 78 81 85 704 864-7821	VARGAS, CARLOS ABRAHAM P. O. BOX 1495 GASTONIA 28052 U OF ST. ANDRES	DR AC 63 75 76 704 864-4378	WITTENBERG, PETER HERBERT GASTON MEM. HOSP. PO BOX 1747 GASTONIA 28053 U OF COLORADO	PTH AC 64 65 78 704 866-2851
SCOTT, JACKSON VANCE 101 W. CATAWBA AVENUE MOUNT HOLLY 28120 JEFFERSON	FP /IM AC 59 62 66 704 827-3014	VOCI, VINCENT EUGENE 902 COX RD., STE. B GASTONIA 28054 U OF LOUISVILLE	PS /HS AC 74 75 85 704 867-5852	YARBOROUGH, JESSE G., JR. RT. 1, BOX 125 CATAWBA COVE RD. BELMONT 28012 U OF NC	AN AC 78 78 85
SEEAR, TORBEN 938 PARAMOUNT CIRCLE GASTONIA 28052 U OF COPENHAGEN	GYN L/RT 41 54 54 704 864-7935	WAGGONER, LONNIE AUSTINE, JR. 2522 SHEFFIELD DR. GASTONIA 28054 DUKE	IM RT 48 53 54 704 865-5486		

39. GRANVILLE COMPONENT SOCIETY

OFFICERS—**President:** John W. Watson, M.D., 104 New College St., Oxford 27565 (919 693-8126)**Secretary:** Steve D. Ertischek, M.D., 1032 College St., Oxford 27565 (919 693-6541)

ALKHALDI, AOUS SALIM 104 TRANQUIL CIRCLE OXFORD 27565 DAMASCUS U	R AC 71 77 78 919 693-5115	DANIEL, LOUIE SAMUEL 124 PINE CONE DRIVE OXFORD 27565 U OF MARYLAND	FP L/RT 40 40 46 919 693-6735	JUER, ROBERT CRAIG RT. #2, BOX 172-D CREEDMOOR 27522 U OF TENNESSEE	FP AC 79 83 86 919 528-1535
ANDERSON, JOHN B., JR. 1018 COLLEGE STREET OXFORD 27565 U OF CINCINNATI	FP AC 80 81 84 919 693-3972	ELLIOTT, JAMES FRANCIS, SR. ROUTE #2, BOX 405 CREEDMOOR 27522 DUKE	P L/RT 54 54 57 919 528-2433	MAHAN, DENNIS MICHAEL 1012 COLLEGE ST. OXFORD 27565 U OF MONTERREY	FP AC 77 79 82 919 693-7108
BARKER, CAROLYN E. CULBRETH PO BOX 1541 OXFORD 27565 U OF NC	P AC 58 58 64 919 693-3003	ERTISCHEK, STEPHEN DAVID 1032 COLLEGE STREET OXFORD 27565 U OF BOLOGNA	IM AC 74 77 78 919 693-6541	MANGUM, RICHARD ARNOLD PO BOX 706 CREEDMOOR 27522 U OF NC	FP AC 64 64 66 919 528-0707
COLSON, JOSEPH SAMPSON 106 WARREN AVE. OXFORD 27565 HOWARD U	FP RT 51 51 65 919 693-2697	HAMPTON, JAMES WELDON 1016 COLLEGE ST. EXT. OXFORD 27565 U OF TX-HOUSTON	OBG AC 81 81 87 919 693-1082	MASSAQUOI, ALFRED D. L. 1030 COLLEGE ST. P. O. BOX 1513 OXFORD 27565 HOWARD U	OBG AC 79 80 85 919 693-4212

39. GRANVILLE COMPONENT SOCIETY (Continued)

NOEL, RICHARD DAVID 1026 COLLEGE STREET OXFORD 27565 MED COLL OF GA	GS AC 49 56 56 919 693-7066	STEAD, EUGENE ANSON, JR. ROUTE #1, BOX 194 BULLOCK 27507 EMORY U	IM /CD L 32 47 47 919 684-6587	WATSON, JOHN WILLIAM 104 NEW COLLEGE STREET OXFORD 27565 MED COLL OF VA	FP AC 53 55 55 919 693-8126
REEDER, PAUL ARLINGTON 1026 COLLEGE STREET OXFORD 27565 U OF MARYLAND	GS AC 61 61 80 919 693-7066	TARRY, WILLIAM BURWELL, JR. 104 NEW COLLEGE STREET OXFORD 27565 MED COLL OF VA	FP AC 53 54 54 919 693-8126	WHITENER, BETTY LOU P. O. BOX 220 OAK RIDGE, LA 71264 U OF OKLAHOMA	FP AC 59 60 77 318 647-3720
SIMONSON, DELLA SUE MURDOCH CENTER BUTNER 27509 U OF ARKANSAS	PD /PH AC 55 55 59 919 575-7740	TAYLOR, RICHARD LEWIS 1018 COLLEGE STREET OXFORD 27565 U OF NC	FP AC 62 62 66 919 693-3972		

40. HIGH POINT MEDICAL SOCIETY

OFFICERS—President: Stephen R. Uhlin, M.D., 624 Quaker Ln., Ste. 302-B, High Point 27262 (919 885-8333)

Secretary: Thomas E. Lauer, M.D., 624 Quaker Ln., Ste. A-111, High Point 27262 (919 889-4122)

Executive Director: Mr. James H. Busick, 612 Pasteur Dr., Ste. 404, Greensboro 27403 (919 854-1563)

ADERHOLDT, MARCUS LAFAYETTE 624 QUAKER LANE, SUITE 100-A HIGH POINT 27262 U OF MARYLAND	PD L 43 43 49 919 882-4187	BUSBY, JULIAN GOODE, JR. 307 N. LINDSAY ST. HIGH POINT 27260 U OF NC	OBG AC 70 75 77 919 885-0149	DONALD, WILLIAM BLANTON, JR. 624 QUAKER LANE, SUITE 202-C HIGH POINT 27262 BOWMAN GRAY	OPH AC 52 52 56 919 884-2242
AKERS, RICHARD ELBERT 624 QUAKER LN., D-100 HIGH POINT 27262 U OF TENNESSEE	U AC 59 59 70 919 886-5151	CANIPE, TOMMIE LEE P. O. BOX 5229 HIGH POINT 27262 BOWMAN GRAY	GS /TS AC 59 59 67 919 887-3164	DOUGLASS, DONALD PERRY 401 WESTWOOD AVENUE HIGH POINT 27262 BOWMAN GRAY	GS /TS AC 53 53 61 919 887-3164
ARNOLD, GORDON BRUCE 624 QUAKER LANE, STE. 213-B HIGH POINT 27262 NORTHWESTERN U	IM AC 62 62 72 919 883-4132	CARR, RAYMOND EDWARD 624 QUAKER LN., STE. C-101 HIGH POINT 27262 ALBANY MED COLL	GS /TS AC 62 73 75 919 883-1348	ERDIN, ROBERT ALEXANDER, JR. 624 QUAKER LN., STE. 103-C HIGH POINT 27262 MED COLL OF GA	CD /IM AC 73 75 78 919 885-6168
ARTHUR, ROBERT KEY P. O. BOX 5128 HIGH POINT 27262 U OF MARYLAND	OBG AC 51 57 57 919 887-3011	CHALFA, NICOLAI P. O. BOX 1864 HIGH POINT 27261 U OF FLORIDA	AN AC 76 77 84 919 882-2567	ERRICO, JAMES MELTON 100 WESTWOOD AVENUE HIGH POINT 27262 JOHNS HOPKINS	OPH AC 64 64 72 919 889-2323
AUMAN, EDWIN LEWIS 624 QUAKER LANE, SUITE 210-A HIGH POINT 27262 BOWMAN GRAY	IM AC 55 55 61 919 841-8822	CHILES, NOAH HAMPTON 501 WESTWOOD AVENUE HIGH POINT 27262 U OF LOUISVILLE	IM AC 44 48 56 919 882-3911	FARABOW, WILLIAM SIDNEY 400 N. ELM ST. HIGH POINT 27260 EMORY U	OBG AC 63 63 71 919 889-4353
AVERETT, LELAND STANLEY, JR. 700 N. ELM STREET HIGH POINT 27262 U OF NC	FP AC 54 54 55 919 882-1324	CHUNG, ZUN SUB 2926 S. MAIN STREET HIGH POINT 27263 KOREA U	FP /EM AC 65 75 76 919 434-3118	FARRINGTON, JOHN KIRBY 307 N. LINDSAY ST. HIGH POINT 27262 U OF NC	OBG AC 57 57 65 919 885-0149
BARDELAS, JOSE ANTONIO, JR. 100 WESTWOOD AVE. HIGH POINT 27262 JOHNS HOPKINS	A /PD AC 73 75 77 919 883-1393	CLOUTIER, MICHAEL 1005 SHAMROCK RD. HIGH POINT 27260 U OF LOUISVILLE	R AC 73 74 85 919 887-1926	FINCHER, ROBERT CHARLES, JR. 107 SPENCER STREET HIGH POINT 27260 MED U OF SC	P /PH L/RT 44 48 55 919 883-8914
BENNETT, HERRON KENT P. O. BOX 5128 HIGH POINT 27262 BOWMAN GRAY	OBG AC 52 52 54 919 887-3011	COUGHLIN, PAUL WM. F. 624 QUAKER LANE, D-100 HIGH POINT 27262 U OF NC	U AC 78 80 85 919 886-5151	FLYTHE, WILLIAM HENRY 1131 GATEHOUSE ROAD HIGH POINT 27260 VANDERBILT U	IM L 33 33 37 919 882-8933
BENSON, JOHN FISHER 318 WESTWOOD AVENUE HIGH POINT 27262 U OF MARYLAND	RHU /IM AC 47 55 55 919 882-2515	COX, RONNIE LEWIS 624 QUAKER LANE HIGH POINT 27262 DUKE	IM /CD AC 61 61 70 919 841-6711	FORD, C. STEPHEN 105 BRANTLEY CIRCLE HIGH POINT 27262 MED U OF SC	N AC 79 83 87 919 841-4233
BICKLEY, SAMUEL TAYLOR P. O. BOX 5168 HIGH POINT 27262 BOWMAN GRAY	FP AC 61 61 63 919 885-2118	CRAWFORD, ROBERT CECIL, JR. P. O. BOX 5543 HIGH POINT 27262 DUKE	OBG AC 65 65 74 919 889-5422	FORTNEY, AUSTIN POWELL P. O. BOX 579 JAMESTOWN 27282 EMORY U	IM AC 46 51 52 919 454-3151
BIESECKER, GARY LEROY 624 QUAKER LN., STE. C-101 HIGH POINT 27262 U OF NEBRASKA	GS AC 68 68 77 919 883-1348	CROOM, ARTHUR BASCOM 1311 ROBIN HOOD RD. HIGH POINT 27260 MED COLL OF VA	R L/RT 40 46 46 919 882-6057	FRANK, JEFFREY H. 606 N. ELM ST. HIGH POINT 27262 U OF KENTUCKY	N AC 81 83 87 919 889-8877
BLACK, KYLE E., JR. 624 QUAKER LN., STE. D-200 HIGH POINT 27262 BOWMAN GRAY	ORS AC 78 78 86 919 841-6262	CROSS, ALMON RUFUS 414 HILLCREST DRIVE HIGH POINT 27262 DUKE	OBG L/RT 38 41 47 919 884-1236	FULTON, JAMES WALKER 400 N. ELM ST. HIGH POINT 27260 DUKE	OBG AC 57 57 63 919 889-4353
BLAYLOCK, RUSSELL LANE P. O. BOX 5388 HIGH POINT 27262 LA STATE U	NS AC 71 71 78 919 889-4810	CROSS, ROBERT VANDERVOORT P. O. BOX 5128 HIGH POINT 27262 U OF PITTSBURGH	GYN L/RT 47 53 53 919 887-3011	GALLEMORE, WARREN GHOLSON P. O. BOX 5904 HIGH POINT 27262 MED COLL OF GA	IM AC 75 76 79 919 889-1191
BRIGMAN, PAUL HAMER 2807 EARLHAM PLACE HIGH POINT 27263 U OF NC	EM AC 54 54 55 919 434-4007	CROWELL, CHARLES CARLOS, III 624 QUAKER LN., STE. 103-C HIGH POINT 27262 BOWMAN GRAY	CD /IM AC 72 72 77 919 885-6168	GATLIN, KEITH A., JR. 624 QUAKER LN., STE. 103-C HIGH POINT 27262 MED U OF SC	CD AC 79 80 86 919 885-6168
BROOKS, RALPH ELBERT, JR. 624 QUAKER LANE, SUITE D-100 HIGH POINT 27262 U OF NC	U AC 55 55 62 919 886-5151	CULLOM, JOSEPH WILLIAM 624 QUAKER LN., STE. 200-C PO BOX 5229 HIGH POINT 27262 MED U OF SC	GS AC 73 73 84 919 887-3164	GEDDIE, KENNETH BAXTER 201 GREENSBORO RD., BOX 198 HIGH POINT 27260 JEFFERSON	PD L/RT 21 21 23 919 882-4171
BURAPAVONG, THAVIJ DAVID 416 GATEWOOD AVENUE HIGH POINT 27260 CHIENGMAI U	PS /GS AC 69 74 77 919 882-2531			GENIEC, PAUL P. O. BOX 5666 HIGH POINT 27262 U OF UTAH	OTO /PS AC 64 64 70 919 885-0071

40. HIGH POINT MEDICAL SOCIETY (Continued)

GILL, KENNETH ARNOLD, JR. 624 QUAKER LN,STE,302,BLDG B HIGH POINT 27262 MED COLL OF VA	D /DMP AC 58 58 69 919 887-3195	LAUER, THOMAS EUGENE 624 QUAKER LN., STE. A-111 HIGH POINT 27262 U OF NC	P /ALD AC 77 79 81 919 889-4122	ROSTAND, ROBERT ALTON 624 QUAKER LANE, STE. B211 HIGH POINT 27262 TUFTS U	IM /PUD AC 72 74 78 919 889-1496
GRAEUB, CHARLES M., JR. 2021 LA DORA DR. HIGH POINT 27260 MED COLL OF VA	EM AC 81 82 87 919 884-6009	LEWIS, CLIFFORD WHITFIELD 322 WOODROW AVENUE HIGH POINT 27262 MED COLL OF VA	OBG /OBS L 30 30 31 919 882-2830	ROWE, CHARLES EUGENE, JR. 624 QUAKER LANE, SUITE D-100 HIGH POINT 27262 U OF VIRGINIA	U AC 65 65 72 919 886-5151
GRAY, CYRUS LEIGHTON P. O. BOX 5007 HIGH POINT 27262 DUKE	R L 37 37 40 919 887-1955	LYNCH, JOHN FRANKLIN, JR. 905 ARBORDALE DR. HIGH POINT 27260 JEFFERSON	PD L/RT 44 44 48 919 886-4049	SANDERS, STEPHEN BRIAN 903 NORTHSORE COURT HIGH POINT 27260 BOWMAN GRAY	P AC 81 81 87 919 884-7946
GREENE, ELEANOR E.W. 701 SHAMROCK RD. HIGH POINT 27260 U OF NC	OBG AC 81 86 87 919 885-0149	MARKHAM, ROBERT WADE 624 QUAKER LANE, SUITE 302-B HIGH POINT 27262 DUKE	D AC 63 63 71 919 887-3195	SHULL, KENNETH CASTLES P. O. BOX 5229 HIGH POINT 27262 MED U OF SC	GS /CDS AC 73 74 79 919 887-3164
HARRELL, WADE WHITLEY 319 WESTWOOD AVENUE HIGH POINT 27262 U OF NC	OPH AC 59 59 64 919 883-7867	MARLOWE, JAMES MANNING 624 QUAKER LANE, SUITE D-200 HIGH POINT 27262 U OF NC	ORS AC 60 60 68 919 841-6262	SLATE, MARVIN LONGWORTH 807 PARKWOOD CIRCLE HIGH POINT 27260 U OF MARYLAND	FP L/RT 31 31 34 919 883-9756
HARRISS, WILLIAM FRED P. O. BOX 5007 HIGH POINT 27262 BOWMAN GRAY	R AC 66 66 74 919 884-6037	MARTIN, WELLS, III HIGH POINT MEM.HOSP.,-RAD. HIGH POINT 27260 U OF CINCINNATI	DR AC 76 79 83 919 884-6037	SMITH, LAFAYETTE LYLE 624 QUAKER LANE, SUITE 213-B HIGH POINT 27262 MED U OF SC	IM AC 72 73 77 919 883-4131
HAWORTH, CHESTER CARL, JR. 624 QUAKER LANE, SUITE 211-B HIGH POINT 27262 DUKE	N /IM AC 63 63 71 919 889-1496	MCFALLS, VERNON WENDELL 624 QUAKER LANE, SUITE 100-A HIGH POINT 27262 U OF NC	PD AC 58 58 61 919 882-4187	STONE, GRADY MITCHELL 624 QUAKER LANE HIGH POINT 27262 U OF NC	IM AC 75 77 80 919 883-4131
HIGGINS, LLOYD MALCOLM 221 HILLCREST DRIVE HIGH POINT 27262 LA STATE U	PTH AC 55 55 72 919 883-7047	MICHAL, WILLIAM NORWOOD, JR. 624 QUAKER LANE, SUITE 200-A HIGH POINT 27262 U OF NC	PD AC 60 60 67	TERRELL, SARA E. H. 624 QUAKER LN. STE. 207-C HIGH POINT 27262 DUKE	IM AC 53 53 57 919 841-4233
HILL, EDWARD GRAY, JR. 606 N. ELM ST. HIGH POINT 27262 BOWMAN GRAY	N /EM AC 80 81 80 919 889-8877	MILLER, IRA BEN 110 CHURCH STREET HIGH POINT 27260 BOWMAN GRAY	IM AC 46 46 51 919 884-5888	TERRELL, THOMAS EUGENE 624 QUAKER LN., STE. 207-C HIGH POINT 27262 DUKE	IM AC 53 53 57 919 841-4233
HOFFMAN, CARL MAURICE 307 N. LINDSAY STREET HIGH POINT 27262 U OF MIAMI	OBG AC 67 68 76 919 885-0149	NEAVE, VICTORIA C.D. 606 N. ELM ST. HIGH POINT 27262 MED COLL OF VA	NS AC 80 81 87 919 889-8877	TESTER, RICHARD DEAN P. O. BOX 5007 HIGH POINT 27262 MED COLL OF VA	R /NM AC 58 61 64 919 883-6716
HOWELL, HARRY SLADE, JR. 624 QUAKER LANE, SUITE 116-B HIGH POINT 27262 BOWMAN GRAY	GS /CDS AC 68 68 76 919 886-4552	NEWELL, ROBERT B. 508 NEPTUNE DR. CAPE CARTERET SWANSBORO 28584 ST U OF NY-BUFF	GS /EM L/RT 36 36 57 919 393-6417	TRIPP, MICHAEL DAVID 1101 SHALIMAR COURT HIGH POINT 27262 EAST CAROLINA U	R AC 81 82 88 919 884-6037
HUNT, WILLIAM JACK 1605 HEATHGATE PL. HIGH POINT 27260 U OF MARYLAND	IM L 43 43 49 919 882-9814	NOAH, HUGH BRYAN 624 QUAKER LANE, SUITE D-200 HIGH POINT 27262 BOWMAN GRAY	ORS /HS AC 66 66 76 919 841-6262	TYSON, WOODROW WILSON 1114 FERNDAL DRIVE HIGH POINT 27260 MED COLL OF VA	IM /CD L 35 35 38 919 882-6130
HUSSEY, MICHAEL BRUSH P. O. BOX 5388 HIGH POINT 27262 U OF VIRGINIA	NS AC 61 61 71 919 889-3242	ORR, RICHARD L., JR. 624 QUAKER LN., STE. 210-A HIGH POINT 27262 MED U OF SC	IM AC 80 83 88	UHLIN, STEPHEN RICHARD 624 QUAKER LANE, 302-B HIGH POINT 27262 OHIO STATE U	D /IM AC 70 70 78 919 885-8333
INGRAM, CHARLES HAL 229 CASCADE DR. HIGH POINT 27260 U OF MARYLAND	GS L/RT 43 43 49 919 886-4552	PARKS, WILLIAM CRAIG 624 QUAKER LANE, SUITE 207-A HIGH POINT 27262 MED U OF SC	IM L 38 38 40 919 841-4233	VELAT, CLARENCE ANTHONY 406 CASCADE CT. HIGH POINT 27260 ST LOUIS U	PTH /CLP L 46 62 63 919 884-6065
JARRETT, THOMAS EDWARD 624 QUAKER LANE, #205A HIGH POINT 27262 MED U OF SC	IM AC 78 78 83 919 885-2111	PICKLESIMER, FRED LEON 624 QUAKER LN. STE. 301-D HIGH POINT 27262 BOWMAN GRAY	OTO AC 66 66 75 919 883-1366	WARBURTON, KEELING ALFRED P. O. BOX 5128 HIGH POINT 27262 U OF MICHIGAN	OBG AC 63 63 70 919 887-3011
JENNINGS, ROYAL GREEN 624 QUAKER LANE, SUITE 302-B HIGH POINT 27262 BOWMAN GRAY	D AC 45 46 54 919 887-3195	PLOWDEN, JAMES FRANCIS P. O. BOX 5904 HIGH POINT 27262 MED U OF SC	ON /HEM AC 73 73 79 919 841-2114	WARBURTON, MARK JOSEPH 624 QUAKER LANE, SUITE D-200 HIGH POINT 27262 BOWMAN GRAY	ORS AC 76 76 82 919 841-6262
JOHNSON, JAMES ALFRED 606 N. ELM ST. HIGH POINT 27262 DUKE	NS AC 58 58 67 919 889-8877	POLLOCK, NELSON EARL P. O. BOX 5904 HIGH POINT 27262 MED COLL OF GA	IM AC 75 77 79 919 841-2114	WELLER, EDWARD BROOKS 624-D 200 QUAKER LANE HIGH POINT 27262 U OF LOUISVILLE	ORS AC 79 84 85 919 841-6262
JONES, ALLEN G. 624 QUAKER LN., STE. 2076 HIGH POINT, ND 27262 U OF MISSISSIPPI	IM AC 84 85 88 919 841-4233	ROBERSON, VIRGIL ODELL, III 502 LINDSAY ST. PO BOX 2324 HIGH POINT 27261 U OF NC	AN AC 71 71 77 919 882-2567	WHITE, RONDA SNOW PO BOX 5128 HIGH POINT 27262 BOWMAN GRAY	OBG AC 83 84 88
JOYCE, GEORGE WILLIAM 624 QUAKER LANE, SUITE 213-B HIGH POINT 27262 BOWMAN GRAY	IM /NEP AC 60 60 68 919 883-4131	ROBINSON, JAMES THOMAS, JR. 1124 E. LEXINGTON AVENUE HIGH POINT 27262 MED COLL OF VA	FP AC 55 57 58 919 882-1606	WIDNER, LARRY ALLEN 1310 KENSINGTON DR. HIGH POINT 27260 U OF VIRGINIA	R AC 73 73 85 919 887-1926
KEEVER, RICHARD ALAN 624 QUAKER LN., STE. 301-D HIGH POINT 27262 U OF NC	OTO AC 69 69 77 919 883-1366	ROSS, DAVID B. 624 QUAKER LN. STE. D-200 HIGH POINT 27262 VANDERBILT U	ORS AC 80 81 86 919 841-6262	WOODRUFF, WILLIAM WALTER, III PO BOX 5007 HIGH POINT 27262 DUKE	DR AC 82 83 84 919 884-6037
KIRBY, SAMUEL CRAIG 624 QUAKER LN.,STE. 302,BLDG.B HIGH POINT 27262 EAST CAROLINA U	D AC 82 83 87 919 887-3195			ZARITZKY, DAVID RON P. O. BOX 6146 HIGH POINT 27262 U OF FLORIDA	R AC 74 75 84 919 887-2551

41. GREENSBORO SOCIETY OF MEDICINE

OFFICERS—**President:** William S. Smith, M.D., 104 W. Northwood St., Greensboro 27401 (919 378-1843)**Secretary:** William H. Gamble, M.D., 920 Cherry St., Greensboro 27401 (919 273-7900)**Executive Director:** Mr. James H. Busick, 612 Pasteur Dr., Ste. 404, Greensboro 27403 (919 854-1563)

ABRAHAMS, STUART JOEL 200 E. NORTHWOOD ST., STE. 216 GREENSBORO 27401 U OF MARYLAND	GYN AC 57 64 65 919 275-5391	BEAVERS, CHARLES LEE 100 MEADOWBROOK TERRACE GREENSBORO 27408 U OF PENN	AN L/RT 38 38 46 919 273-1066	BOWMAN, WILLIAM EDMUND, JR. PO BOX 10037 1317 N. ELM ST. GREENSBORO 27401 U OF NC	GS /VS AC 74 79 82 919 274-8444
ABRAMS, MURRAY STANLEY 311 W. WENDOVER AVE. GREENSBORO 27408 TEMPLE U	GS AC 65 66 72 919 275-8415	BEAVERS, JAMES WALLACE 2206 W. MARKET ST. GREENSBORO 27403 U OF PENN	GP L/RT 30 30 35 919 272-3487	BRACKBILL, THOMAS ANDREW 1011 PROFESSIONAL VILLAGE GREENSBORO 27401 COLUMBIA U	CD /CD AC 68 69 75 919 272-6133
ACKERMAN, JAYNE A. GOVE HEALTH CENTER UNCG, GRAY DR. GREENSBORO 27412 U OF VERMONT	IM /ADL AC 76 77 79 919 334-5340	BENBOW, EDWARD PERRY, JR. PO BOX 339 ORIENTAL 28571 DUKE	PD L 40 43 49 919 299-7057	BRADLEY, HAROLD JOHN, JR. 721 GREEN VALLEY RD. GREENSBORO 27408 U OF NC	U AC 57 57 64 919 378-9176
ADELMAN, JAMES U. 1910 N. CHURCH STREET GREENSBORO 27405 NORTHWESTERN U	N AC 67 68 74 919 273-2511	BERGIN, DONALD J. 3312 BATTLEGROUNDS AVE. GREENSBORO 27410 DUKE	OPH AC 75 77 87 919 282-5000	BRADLEY, HAROLD JOHN, SR. 721 GREEN VALLEY RD. GREENSBORO 27408 U OF IOWA	U L 32 32 36 919 274-7624
ALLGOOD, JOHN WILLIAM, JR. 1503 PEBBLE DR. GREENSBORO 27410 EMORY U	IM L/RT 38 38 46 919 292-2196	BERRY, FRANCIS XAVIER 1208 COLONIAL AVE. GREENSBORO 27408 GEORGETOWN U	OBG L/RT 42 53 53 919 272-2155	BRANTLEY, JULIAN THWEATT 6-C FOUNTAINVIEW CIR. GREENSBORO 27405 HARVARD	OBG AC 44 44 49 919 272-9840
ALTHEIMER, MICHAEL D. 1022 PROFESSIONAL VILL. GREENSBORO 27401 U OF IOWA	END /IM AC 81 82 86 919 378-1074	BERTLING, MARION HENRY 2312 PRINCESS ANN STREET GREENSBORO 27408 CASE WESTERN RES	GYN L/RT 35 35 48 919 288-6344	BRATTON, TERESA SUE 1021 E. WENDOVER, STE. 302 GREENSBORO 27405 VANDERBILT U	PDA /A AC 74 76 82 919 275-1318
AMES, RICHARD HAIGHT 2316 PRINCESS ANN ST. GREENSBORO 27408 DUKE	NS L/RT 41 48 49 919 288-0421	BERTRAND, MARGARET LINS 112 WEDGE DALE AVE. GREENSBORO 27403 BAYLOR	DR AC 74 74 78 919 379-0941	BRETT, CHARLES BURDEN 1307 W. WENDOVER AVENUE GREENSBORO 27408 U OF NC	PD AC 71 71 80 919 272-5189
ANDRINGA, RICHARD CORNELL 1816 PEMBROKE RD., STE. #2 GREENSBORO 27408 U OF WISCONSIN	AN AC 74 75 79 919 272-3720	BERTRAND, SCOTT ALAN PO BOX 10373 GREENSBORO 27404 BAYLOR	AN AC 73 74 77 919 373-0372	BREWER, JAMES CHESTER, JR. P. O. BOX 8248 GREENSBORO 27419 DUKE	FP AC 59 59 61 919 852-7618
APLINGTON, JAMES PAGE PO BOX 14580 315 W. WENDOVER AVE. GREENSBORO 27415 JOHNS HOPKINS	ORS AC 66 66 76 919 275-0724	BEST, DAVID CHARLES 600 PASTEUR DR. GREENSBORO 27403 BOWMAN GRAY	PS /HS AC 77 80 83 919 852-0300	BREWINGTON, THOMAS E., JR. P. O. BOX 20346 GREENSBORO 27420 MEHARRY MED COLL	OPH AC 69 70 77 919 272-5628
ARKIN, ROY MARC 721 GREEN VALLEY RD. GREENSBORO 27408 NEW YORK MED COL	GS AC 69 74 77 919 275-2889	BEST, JAMES ERNEST 600 PASTEUR DRIVE GREENSBORO 27403 BOWMAN GRAY	PD /ADL L/RT 45 45 48 919 299-8046	BRODIE, BRUCE ROGERS 721 GREEN VALLEY RD. GREENSBORO 27408 WASHINGTON U	CD /IM AC 70 73 79 919 378-0774
ARRINGTON, JOHN HODGE, III 1608 VALLEYMEDE GREENSBORO 27410 TULANE U	PTH /DMP AC 67 67 78 919 379-4073	BIRD, IGNACIO 207 HOMEWOOD AVENUE GREENSBORO 27403 YALE	R L/RT 30 30 47 919 299-8319	BROOKS, JEAN BAILEY 1100 N. ELM STREET GREENSBORO 27401 BOWMAN GRAY	GYN L/RT 44 44 48 919 273-8658
BADAWI, RAOUF FAHMY 522 N. ELAM AVE., STE. 203 GREENSBORO 27403 CAIRO U	P AC 63 73 81 919 854-2391	BLAND, VEITA JOYCE 1021 E. WENDOVER AVE. STE. 202 MEDICAL ARTS BLDG. GREENSBORO 27405 TEMPLE U	FP AC 78 78 86 919 373-1557	BROWN, FRANK REID 1103 COUNTRY CLUB DRIVE GREENSBORO 27408 VANDERBILT U	IM L/RT 38 38 46 919 272-5048
BAIRD, HAYNES WALLACE 1200 N. ELM STREET GREENSBORO 27401 U OF NC	PTH /CLP AC 69 69 74 919 379-4074	BLIEVERNIGHT, STEPHEN WALDO 1014 PROFESSIONAL VILLAGE GREENSBORO 27401 EMORY U	GS AC 69 71 83 919 373-1078	BROWN, ROBERT CALVIN 223 FLEMINGTON RD. CHAPEL HILL 27514 U OF NC	CLP /PTH AC 59 59 70 919 378-2809
BALLEN, PATRICK LASELVE 1511 WESTOVER TERR., STE. 103 GREENSBORO 27408 CORNELL U	GS AC 75 76 82 919 378-1583	BLOMGREN, PETER FREDERICK 317 W. WENDOVER AVE. GREENSBORO 27408 INDIANA U	FP AC 74 74 85 919 373-1794	BRUCE, JAMES CRAWFORD 1036 PROFESSIONAL VILLAGE GREENSBORO 27401 GEO WASHINGTON U	IM /CD AC 51 55 56 919 378-9180
BARBEE, LEWIS ELISHA 4928 SYLVANGLADE ROAD MCLEANSVILLE 27301 HOWARD U	GP AC 63 64 79 919 375-3434	BLOMQUIST, GUSTAV ARTHUR, JR. 721 GREEN VALLEY RD., STE. 303 GREENSBORO 27408 VANDERBILT U	NS AC 73 74 82 919 275-1111	BRUMBACK, GEORGE FRANKLIN 1105 MONTPELIER GREENSBORO 27401 U OF TENNESSEE	OPH AC 59 64 68 919 274-4626
BARKER, JULIAN 408 PARKWAY GREENSBORO 27401 ST U OF NY-BUFF	GYN AC 57 60 60 919 378-1110	BODNER, WILLIAM RAYMOND, JR. 606 WALTER REED DR. GREENSBORO 27403 ST LOUIS U	P AC 63 72 73 919 299-0107	BRYAN, EDWIN LANCASTER 200 E. NORTHWOOD STREET GREENSBORO 27401 U OF PENN	IM /CD AC 61 61 68 919 274-7609
BARKLEY, KARL LEE 721 GREEN VALLEY RD., STE. 102 GREENSBORO 27408 U OF NC	OBG AC 62 62 67 919 273-2411	BOETTE, RICHARD WALTERS 515 COLLEGE RD., STE. 11 GREENSBORO 27410 MED U OF SC	PD AC 66 66 84 919 852-9630	BUIE, RODERICK MARK, JR. 101-F N. PARK DR. GREENSBORO 27401 BOWMAN GRAY	IM /CD L/RT 44 44 50 919 373-1123
BARRY, PAUL DOUGLAS #2 WALDRON COURT GREENSBORO 27408 U OF NC	DR /NM AC 76 76 81 919 288-9346	BONNER, MERLE DUMONT MEADOWBROOK TERRACE 1915 BOULEVARD ST. GREENSBORO 27407 U OF MARYLAND	PUD /A L/RT 30 31 34 919 854-0947	BUMGARNER, JOHN REED 221 MISTLETOE DR. GREENSBORO 27403 MED COLL OF VA	CD /CD L/RT 39 39 40 919 373-1123
BAXLEY, MARY JOHN 1008 PROFESSIONAL VILLAGE GREENSBORO 27401 U OF NC	IM /PD AC 82 83 87 919 272-2119	BOTERO, ERNESTO MIGUEL 200 E. NORTHWOOD ST. STE. 504 GREENSBORO 27401 U OF CARTAGENA	NS AC 73 73 85 919 272-4578	BURKHART, VERNON ANDERSON 2700 W. MARKET ST. GREENSBORO 27403 U OF TENNESSEE	OM /IM AC 50 51 76 919 379-6961

41. GREENSBORO SOCIETY OF MEDICINE (Continued)

BURNEY, DONALD PATRICK 1317 N. ELM ST., STE. 1 GREENSBORO 27401 WASHINGTON U	CDS /TS AC 70 70 80 919 373-8245	DAVIS, ROBERT NICHOLAS 600 WALTER REED DRIVE GREENSBORO 27403 DUKE	D AC 62 62 68 919 294-6555	FISHER, OTIS NORWOOD P. O. BOX 13005 GREENSBORO 27415 U OF NC	R AC 59 59 69 919 379-4360
CABLE, THOMAS ALLEN 206 FISHER PARK CIRCLE GREENSBORO 27401 U OF FLORIDA	FP AC 76 79 82 919 379-4132	DAVIS, RONALD L., III 200 E. NORTHWOOD ST. STE. 302 GREENSBORO 27401 LA STATE U	U AC 81 87 87 919 275-6115	FOLLO, PAIGE BILL 1209 MAGNOLIA STREET GREENSBORO 27401 HARVARD	PD AC 47 54 54 919 273-2879
CAMPANO, MANUEL OSWALDO P. O. BOX X-3 GREENSBORO 27402 U OF HABANA	PTH AC 51 63 64 919 854-6462	DAVIS, TIMOTHY EUGENE 1317 N. ELM ST., STE. #5 GREENSBORO 27401 U OF ARKANSAS	GS /CRS AC 71 71 78 919 274-8444	FORE, STEVEN RONALD 200 E. NORTHWOOD ST. STE. 216 GREENSBORO 27401 BOWMAN GRAY	OBG AC 68 68 79 919 275-5391
CARANDANG, NAPOLEON VELUZ AT&T TECHNOLOGIES, INC. P. O. BOX 25000 GREENSBORO 27420 U OF PHILIPPINES	IM /OM AC 62 70 78 919 279-3627	DEATON, PHILIP CARL 200 E. NORTHWOOD ST. STE. 204 GREENSBORO 27401 U OF NC	NS AC 66 66 76 919 379-0077	FOREMAN, ROBERT HUGH 603 DOLLEY MADISON RD. GREENSBORO 27410 U OF CINCINNATI	FP AC 73 74 81 919 294-6190
CARDWELL, WILLARD 2312 LAFAYETTE GREENSBORO 27408 MED COLL OF VA	IM /CD L/RT 32 36 37 919 288-4740	DETERDING, JAMES LEROY 208 W. WENDOVER AVENUE GREENSBORO 27401 U OF NEBRASKA	NEP /IM AC 79 79 84 919 379-9708	FORREST, WILLIAM WOMBLE WESLEY LONG HOSPITAL P. O. DRAWER X-3 GREENSBORO 27402 HARVARD	PTH AC 48 48 57 919 854-6463
CARTER, PHILIPS JOHN PO BOX 14580 315 W. WENDOVER AVE. GREENSBORO 27415 TULANE U	ORS AC 62 62 72 919 275-0724	DICKSTEIN, SHERRY ANNE 1305 W. WENDOVER AVE. GREENSBORO 27408 U OF VERMONT	OBG AC 78 82 85 919 275-5391	FORTUNE, BENJAMIN FLETCHER 906 W. CORNWALLIS DRIVE GREENSBORO 27408 JEFFERSON	AN L/RT 41 41 47 919 272-7755
CASSIANO, COLEY JAMES 1016-A PROFESSIONAL VILLAGE GREENSBORO 27401 ST U OF NY-BUFF	FP AC 75 76 87 919 379-1156	DIGBY, DONALD JOE 3312 BATTLEGROUND AVE. GREENSBORO 27410 MED COLL OF GA	OPH AC 76 78 85 919 282-5000	FOX, RICHARD FRANKLIN 208 W. WENDOVER AVE. GREENSBORO 27401 U OF NC	NEP /IM AC 75 76 84 919 379-9708
CHARLTON, JOHN DAVID 1301 W. WENDOVER AVENUE GREENSBORO 27408 U OF W ONTARIO	A L 42 53 55 919 275-0441	DILWORTH, JOHN HERBERT 1505 WESTOVER TERR. GREENSBORO 27408 U OF VIRGINIA	ORS /HS AC 58 58 70 919 275-0927	FOY, JANE M. 300 E. NORTHWOOD ST. GREENSBORO 27401 U OF NC	PD AC 71 71 75 919 373-2000
CHASE, ROBERT EUGENE 1816 PEMBROKE RD., STE. #2 GREENSBORO 27408 M C OF WISCONSIN	AN AC 67 71 76 919 272-3720	DIXON, JAMES WELLINGTON P. O. BOX 20085 GREENSBORO 27420 MEHARRY MED COLL	GS /GP AC 57 57 66 919 378-1957	FRASER, HUGH ERSKINE, JR. 1030 PROFESSIONAL VILLAGE GREENSBORO 27401 MED COLL OF VA	D AC 56 62 62 919 373-1383
CLARK, PRESTON SAMUEL MERRITT MEDICAL PLAZA 1511 WESTOVER TERR., STE. 101 GREENSBORO 27408 NEW YORK U	END /IM AC 73 74 80 919 373-0311	DIXON, SEWELL HINTON, JR. 1317 N. ELM ST., STE. 1 GREENSBORO 27401 EMORY U	CDS /TS AC 64 64 73 919 373-8245	FREDERICK, CHARLES E. 612 WAYCROSS DR. GREENSBORO 27410 U OF IOWA	AN AC 81 82 87 919 299-6343
CLONINGER, KENNETH LEE, JR. 200 E. NORTHWOOD ST., STE. 504 GREENSBORO 27401 U OF MARYLAND	NS AC 61 61 69 919 272-4578	DOOLITTLE, ROBERT PRINCE UNC-G STUDENT HEALTH CTR. GREENSBORO 27412 U OF ALABAMA	ADL /IM AC 74 75 82 919 334-5340	GAMBLE, WILLIAM HEDRICK 920 CHERRY ST. GREENSBORO 27401 U OF NC	CD /IM AC 76 77 85 919 273-7900
CLUTTS, GEORGE ROBERT 344 N. ELM STREET GREENSBORO 27401 NORTHWESTERN U	GS /TS AC 48 48 48 919 275-9554	DOYLE, OWEN WILLIAM 1013 PROFESSIONAL VILLAGE GREENSBORO 27401 YALE	DR AC 47 54 55 919 275-6481	GARBER, RONALD LEWIS 208 W. WENDOVER AVENUE GREENSBORO 27401 MED U OF SC	NEP /IM AC 67 67 75 919 379-9708
COGGESHALL, ALLAN BANCROFT 109 BEVERLY PLACE GREENSBORO 27403 RUSH MED COLL	GS L/RT 40 49 50 919 299-7190	DREILING, DALE T. 522 N. ELAM AVENUE GREENSBORO 27403 MED COLL OF VA	GYN L 33 36 37 919 852-3800	GARRARD, ROBERT LEMLEY 1000 RIDGECREST DR. GREENSBORO 27410 HARVARD	P /N L/RT 32 40 41 919 292-0175
CONNELLY, JERRY HUBBARD 212-C W. WENDOVER AVE. GREENSBORO 27401 INDIANA U	GP /GPM AC 63 64 84 919 275-3828	DUNN, RICHARD BERRY P. O. BOX 190 CLIMAX 27233 MCGILL U	ORS AC 68 68 85 919 674-9745	GARRETT, NORMAN H., JR. 1038 PROFESSIONAL VILLAGE GREENSBORO 27401 DUKE	IM /END AC 50 52 54 919 378-9131
COOPER, ARMAH JAMALE 604-B PASTEUR DR. GREENSBORO 27403 MEHARRY MED COLL	P AC 81 82 85 919 855-7231	DYE, DAVID GODDARD 530 N. ELAM AVE. GREENSBORO 27403 MED COLL OF GA	GE /IM AC 81 82 86 919 292-8824	GARVEY, ALFRED HAMILTON 200 E. NORTHWOOD ST., STE. 302 GREENSBORO 27401 BOWMAN GRAY	U AC 54 54 61 919 275-6115
COURTS, ANDREW JOHNSON 1024 PROFESSIONAL VILLAGE GREENSBORO 27401 U OF NC	CHP /P AC 58 58 66 919 272-4262	EDWARDS, JAMES L., JR. 1511 WESTOVER TERR. STE. 108 GREENSBORO 27408 MED U OF SC	OPH AC 68 68 75 919 378-0713	GAY, ROBERT MILTON 1200 N. ELM STREET GREENSBORO 27401 TULANE U	PTH /CLP AC 63 63 72 919 379-4074
CREWS, DAVID ALLEN 3915 E. HAZEL LANE GREENSBORO 27408 U OF NC	AN AC 81 82 86 919 299-6343	EPES, CHARLES RICHARD 3312 BATTLEGROUND AVE. GREENSBORO 27410 U OF VIRGINIA	P RT 52 52 60 919 282-5000	GEGICK, CHARLES GEORGE 1022 PROFESSIONAL VILLAGE GREENSBORO 27401 LOYOLA U	END /IM AC 69 70 76 919 378-1143
CROSS, ALRED CHARLES, JR. AT&T, PO BOX 25000 GREENSBORO 27420 U OF ARKANSAS	OM /GP AC 53 53 74 919 279-7108	EPPLE, KENNETH HALL 2311 LAFAYETTE AVE. GREENSBORO 27408 U OF VIRGINIA	GS AC 56 64 65 919 288-6215	GILBERT, GEORGE GAYLORD 6 CRANBOURN CT. GREENSBORO 27405 JOHNS HOPKINS	U L/RT 38 38 47 919 282-0168
CROSSLEY, JAMES JOHN 100 E. NORTHWOOD ST. GREENSBORO 27401 CORNELL U	OTO /A AC 67 69 76 919 274-5441	FARLEY, ROBERT HUGH 311 W. WENDOVER AVE. GREENSBORO 27408 ST LOUIS U	FP AC 76 77 86 919 275-8415	GILMORE, BROOKS WEBSTER 342 N. ELM STREET GREENSBORO 27401 U OF PENN	IM AC 56 56 61 919 274-6373
DAVIS, PHILIP BIBB 1125 GATEHOUSE RD. HIGH POINT 27260 JEFFERSON	GS L 26 26 29 305 276-6779	FIELDS, KARL BERTRAND 1411 GARLAND DR. GREENSBORO 27408 U OF KENTUCKY	DR AC 72 72 78 919 379-4133	GIOFFRE, RONALD ANTHONY PO BOX 14580 315 W. WENDOVER AVE. GREENSBORO 27415 M C OF WISCONSIN	ORS AC 65 79 80 919 275-0724

GOODCHILD, NIGEL THOMAS 1200 N. ELM ST. GREENSBORO 27401 U OF LONDON	TR AC 69 69 87 919 379-4143	HENLEY, THOMAS FRANKLIN 1309 N. ELM STREET GREENSBORO 27401 DUKE	OBG AC 68 68 76 919 273-2563	JAROSAK, PETER JAMES THE SAM RAVENEL CLINIC 1307 W. WENDOVER AVENUE GREENSBORO 27408 U OF MINN	PD AC 72 72 77 919 275-6335
GOTTSEGEN, DANIEL LEO 200 E. NORTHWOOD ST., STE. 216 GREENSBORO 27401 TUFTS U	OBG AC 69 70 79 919 275-5391	HENSCHEN, GARY MAYES 606 WALTER REED DR. GREENSBORO 27403 U OF NC	P /PYA AC 75 75 73 919 299-0108	JOHNSON, MARTIN KAY 1904 N. CHURCH ST. GREENSBORO 27405 U OF ALABAMA	IM AC 74 77 00 919 379-4062
GREEN, ARTHUR GERRISH, III 1511 WESTOVER TERRACE GREENSBORO 27408 TULANE U	IM /FP AC 73 74 74 919 373-1184	HENSEL, WILLIAM ARTHUR 1125 N. CHURCH ST. GREENSBORO 27401 OHIO STATE U	FP AC 78 78 84 919 379-4035	JONES, NORMAN NESBETH P. O. BOX 21886 GREENSBORO 27420 HOWARD U	GP /GE AC 47 49 76 919 274-0097
GREEN, EDWIN JAY 1317 N. ELM ST. STE. #2 GREENSBORO 27401 U OF TENNESSEE	IM AC 74 75 79 919 373-1676	HENSON, JOSEPH BASCOM, JR. 1107 W. FRIENDLY AVENUE GREENSBORO 27401 TEMPLE U	IM L/RT 45 46 51 919 274-1567	JOYNER, SAMUEL BALFOUR 200 E. NORTHWOOD STREET GREENSBORO 27401 U OF NC	IM AC 55 65 65 919 274-7609
GRESALFI, THOMAS J., JR. 606 WALTER REED DR. GREENSBORO 27403 COLUMBIA U	P AC 83 85 88 919 299-0108	HERRING, WILLIAM BENJAMIN 1200 N. ELM ST. GREENSBORO 27401 BOWMAN GRAY	IM /HEM AC 53 53 60 919 379-4062	KAPLAN, RICHARD DAVID 408 PARKWAY DR. GREENSBORO 27401 U OF PENN	OBG AC 75 76 80 919 378-1110
GRIER, RAYMOND EDWARD 403 WILLOUGHBY BLVD. GREENSBORO 27408 YALE	AN AC 76 78 85 919 275-9741	HERTLE, XAVER FRANZ 106 E. NORTHWOOD STREET GREENSBORO 27401 LUDWIG MAXIMILLI	P AC 50 58 60 919 275-1614	KARB, KENNETH SAMUEL 1007 PROFESSIONAL VILLAGE GREENSBORO 27401 U OF VIRGINIA	ON /IM AC 72 72 79 919 272-2141
GROAT, RICHARD ARNOLD 1321 N. ELM STREET GREENSBORO 27401 BOWMAN GRAY	PTH AC 52 52 55 919 274-9005	HIATT, JOHN DONALD, JR. 926 GREENWOOD DR. GREENSBORO 27410 BOWMAN GRAY	DR AC 83 83 80 919 855-7707	KASIK, LEE 215 MANCHESTER PL. GREENSBORO 27410 U OF IOWA	AN AC 80 81 83 919 299-6343
GROAT, ROBERT LANIER 1317 N. ELM ST., STE. #4 GREENSBORO 27401 HARVARD	OPH AC 70 74 75 919 378-1442	HICKLING, WILLIAM HENRY 1305 W. WENDOVER AVE. GREENSBORO 27408 CORNELL U	CHN /N AC 78 81 85 919 275-0779	KATZ, JEFFREY DAVID 721 GREEN VALLEY RD. GREENSBORO 27408 U OF PENN	CD /IM AC 76 77 83 919 378-0774
GROVE, DAVID DWIGHT 1511 WESTOVER TERRACE GREENSBORO 27408 U OF CHICAGO	IM AC 70 80 86 919 373-1184	HOLDERNESS, HOWARD, JR. 200 E. NORTHWOOD ST., STE. 400 GREENSBORO 27401 U OF NC	PS /GS AC 65 65 81 919 275-0919	KILPATRICK, GEORGE R.,JR. 1106 MCDOWELL DRIVE GREENSBORO 27408 MEHARRY MED COLL	PUD /IM AC 68 69 77 919 275-7658
GUEST, CHRIS WARREN 102 POMONA DRIVE GREENSBORO 27407 U OF OKLAHOMA	IM /GP AC 74 75 78 919 299-0000	HOLLAND, RICHARD M. 522 N. ELAM AVE. GREENSBORO 27403 U OF KENTUCKY	OBG AC 80 82 87 919 299-2999	KIMBROUGH, HOUSTON M., JR. 1025 PROFESSIONAL VILLAGE GREENSBORO 27401 U OF VIRGINIA	U /GS AC 72 72 78 919 272-3962
HALE, WAYNE A. 1125 N. CHURCH ST. GREENSBORO 27401 U OF PITTSBURGH	FP AC 74 75 87 919 379-3582	HOLLANDER, EDWARD MARSHALL 522 N. ELAM AVE. GREENSBORO 27403 U OF WISCONSIN	OPH AC 62 62 71 919 854-0393	KING, ANNE BRYSON 342 N. ELM STREET GREENSBORO 27401 U OF NC	PD AC 80 82 88 919 272-9447
HALL, JOHN HOWLAND 1301 W. WENDOVER AVE. WENDOVER MEDICAL PK. GREENSBORO 27408 DUKE	D AC 64 64 69 919 272-3152	HOLMES, MIRIAM LENZ 1609 MAPLE RIDGE COURT GREENSBORO 27405 ALBANY MED COLL	GP AC 41 43 82 919 288-7318	KISER, JEFFERSON B., JR. 1910 N. CHURCH ST. GREENSBORO 27405 MED COLL OF VA	N AC 71 72 77 919 273-2511
HAMBRIGHT, RUFUS ROBERTS 1309 N. ELM STREET GREENSBORO 27401 DUKE	GYN AC 50 58 58 919 273-2563	HOPPER, WILLIAM FALCON 721 GREEN VALLEY RD. GREENSBORO 27408 WEST VA U	PUD /IM AC 72 72 77 919 378-0774	KITCHENS, THOMAS RUSSELL 1507 WESTOVER TERR., STE. A GREENSBORO 27408 MED COLL OF GA	PS AC 69 69 77 919 373-0566
HARKINS, PAUL DUANE 1505 WESTOVER TERR. GREENSBORO 27408 U OF PITTSBURGH	ORS /HS AC 62 63 74 919 275-0927	HOUSTON, FRANK MATT 1030 PROFESSIONAL VILLAGE GREENSBORO 27401 LA STATE U	D AC 64 64 71 919 373-1383	KOHUT, WALTER DENNIS 1511 WESTOVER TERRACE GREENSBORO 27408 U OF CINCINNATI	IM /END AC 73 82 84 919 373-1054
HARRIS, CARLTON MCKENZIE 1026 PROFESSIONAL VILLAGE GREENSBORO 27401 BOWMAN GRAY	IM AC 47 48 54 919 272-7108	HUNTER, JOHN GRAY 2311 GRANVILLE RD. GREENSBORO 27408 U OF PENN	GS /CRS L/RT 43 43 51 919 274-7998	KRAUS, ERIC MARSHALL 321 W. WENDOVER AVENUE GREENSBORO 27408 U OF PITTSBURGH	OTO /HNS AC 77 77 84 919 379-9445
HARSHAW, CHARLES W., JR. P. O. BOX 20928 GREENSBORO 27420 U OF NC	CD /IM AC 71 73 78 919 275-8581	IMBUS, HAROLD ROGER 4605-E DUNDAS DRIVE GREENSBORO 27407 U OF CINCINNATI	OM AC 54 54 70 919 845-2303	KREGE, JOHN WILSON 1505 WESTOVER TERR. GREENSBORO 27408 EMORY U	ORS AC 66 6

41. GREENSBORO SOCIETY OF MEDICINE (Continued)

LAROCHE, LAURENT P. 3303 HENDERSON ROAD GREENSBORO 27410 MED U OF SC	OM /GPM AC 51 51 79 919 852-3770	LITTLE, ALFRED BOYD 1016 N. ELM ST. GREENSBORO 27401 U OF NC	CD /IM AC 78 79 84 919 272-6153	MASSAGEE, JAMES TERRILL 1600 INDEPENDENCE RD. GREENSBORO 27401 U OF NC	AN AC 82 83 86 919 299-6343
LASHLEY, CURTIS R. JEFFERSON-PILOT LIFE INS.CO. PO BOX 21008 GREENSBORO 27420 U OF NC	OM AC 59 59 60 919 378-2193	LITTLE, EDGAR WATSON 1307 W. WENDOVER AVE. GREENSBORO 27408 U OF NC	PD AC 71 71 77 919 275-8621	MATTHEWS, JOHN DAIL 3312 BATTLEGROUND AVE. GREENSBORO 27410 MED U OF SC	OPH AC 79 80 85
LAVENDER, DICK REDMOND 201 E. WENDOVER AVENUE GREENSBORO 27401 BOWMAN GRAY	ORS AC 61 61 78 919 275-6318	LITTLE, KEVIN L. 603 DOLLEY MADISON RD. GREENSBORO 27410 GEO WASHINGTON U	FP AC 84 84 88 919 294-6190	MAULTSBY, JAMES A. 200 E. NORTHWOOD ST., STE. 410 GREENSBORO 27401 BOWMAN GRAY	ORS /PM AC 57 57 69 919 373-0312
LAWRENCE, ROBERT L. 321 W.WENDOVER AVENUE GREENSBORO 27408 VANDERBILT U	OTO /HNS AC 63 63 73 919 379-9445	LLOYD, CLARENCE 4503 BROOKHAVEN DR. GREENSBORO 27406 U OF NC	DR AC 74 74 79 919 275-9741	MAXWELL, JAMES HEATH 2313 PRINCESS ANN ST. GREENSBORO 27408 U OF KENTUCKY	DR AC 78 79 83 919 854-6546
LAWSON, JAMES DOUGLAS 1317 N. ELM ST., STE. 1 GREENSBORO 27401 U OF TENNESSEE	VS /GS AC 74 75 82 919 373-8245	LOCKWOOD, MARILYN ANN UNC-G STUDENT HEALTH CTR. GREENSBORO 27412 ST U OF NY-BUFF	PD /ADL AC 64 64 78 919 379-5340	MAYER, NORMAN MICHAEL P. O. BOX 29066 GREENSBORO 27408 BOWMAN GRAY	EM AC 75 75 82 919 379-4040
LEBAUER, EDMUND JOSEPH 721 GREEN VALLEY RD. GREENSBORO 27408 DUKE	CD /IM AC 60 60 68 919 378-0774	LOMAX, CHARLES WESTON 522 N. ELAM AVE. GREENSBORO 27403 BOWMAN GRAY	OBG AC 68 69 77 919 299-2999	MAYNARD, DAVID RUSSELL 213 MISTLETOE DR. GREENSBORO 27403 DUKE	AN AC 65 65 73 919 855-0767
LEBAUER, EUGENE SHANER 721 GREEN VALLEY RD. GREENSBORO 27408 DUKE	IM /A AC 65 65 81	LONDON, HOWARD B. 1511 WESTOVER TERR. GREENSBORO 27408 CHICAGO MED SCH	OPH AC 68 73 84 919 378-1632	MCCOMB, JOHN SANFORD 522 N. ELAM AVE. GREENSBORO 27403 BOWMAN GRAY	OBG AC 80 83 85 919 273-0936
LEBAUER, MAURICE LEON 2023 ST. ANDREWS RD. GREENSBORO 27408 U OF VIRGINIA	GS L/RT 29 30 32 919 273-3258	LONG, PAUL DEMARS 1505 WESTOVER TERR. GREENSBORO 27408 U OF MICHIGAN	ORS AC 62 62 71 919 275-0927	MC GEE, JULIAN MURRILL 1101 N ELM ST., APT. 508 GREENSBORO 27401 U OF PENN	GP L/RT 25 27 28 919 272-0787
LEBAUER, SAMUEL M. 721 GREEN VALLEY RD. GREENSBORO 27408 U OF VIRGINIA	GE /IM AC 67 67 81 919 378-0774	LONON, ROBERT WARREN, JR. 5501 WESTFIELD DR. GREENSBORO 27410 DUKE	AN AC 69 73 77 919 373-8555	MC KEOWN, WILLIAM DAVID 1511 WESTOVER TERR., STE. 108 GREENSBORO 27408 BOWMAN GRAY	IM /GER AC 76 76 76 919 378-9906
LEBAUER, SIDNEY FERRING 721 GREEN VALLEY RD. GREENSBORO 27408 U OF VIRGINIA	IM L 29 30 32 919 378-0774	LOVE, JAMES MCLEAN 2007 LAFAYETTE DRIVE GREENSBORO 27408 DUKE	N /IM AC 72 72 81 919 275-0779	MCPHAIL, SCHUBERT DEAN 1517 N. CHURCH ST. GREENSBORO 27408 MED U OF SC	OBG AC 63 63 75 919 379-8460
LEE, J. GARY 321 W. WENDOVER AVENUE GREENSBORO 27408 U OF IOWA	OTO /HNS AC 67 68 76 919 379-9445	LUND, HERBERT ZACHAREUS 1200 N. ELM ST. GREENSBORO 27401 U OF PENN	PTH /D L 31 32 53 919 379-4074	MCRAE, MARVIN EVERETT 1009 COUNTRY CLUB DR. GREENSBORO 27408 MED COLL OF VA	D L/RT 38 38 49
LEE, JAMES MOBLEY 1317 N. ELM ST., STE. 1 GREENSBORO 27401 DUKE	TS AC 58 58 65 919 373-8245	LUPTON, CARROLL CRESCENT 3300 STARMOUNT DRIVE GREENSBORO 27403 TEMPLE U	CRS L/RT 32 32 34 919 299-9255	MCRAE, WILLIAM KENNETH UNC-G STUDENT HEALTH CTR. GREENSBORO 27412 BOWMAN GRAY	GP AC 64 64 68 919 334-5340
LENNON, HERSHEL C. 911 SUNSET DR. GREENSBORO 27408 U OF PENN	PTH L/RT 31 31 41 919 272-5038	LUPTON, EMMETT STEVENSON P. O. BOX 177 ALAMANCE 27201 NEW YORK U	D L/RT 38 38 40 919 228-1288	MEDOFF, JEFFREY ROY 721 GREEN VALLEY RD. GREENSBORO 27408 NEW YORK MED COL	GE AC 77 77 85 919 378-0774
LEONARD, DONALD DEAN 1200 N. ELM STREET GREENSBORO 27401 CASE WESTERN RES	PTH AC 56 63 63 919 379-4074	LUSK, JOHN ALEXANDER, III 1007 PROFESSIONAL VILLAGE GREENSBORO 27401 U OF ALABAMA	ON /IM AC 51 58 59 919 272-2141	MEZER, HOWARD CABITT 1305 W. WENDOVER AVENUE GREENSBORO 27408 TUFTS U	OBG /END AC 77 78 84 919 273-2835
LEONE, MICHAEL RALPH 1317 N. ELM ST., STE. 5 PO BOX 10037 GREENSBORO 27401 JEFFERSON	GS AC 67 68 74 919 274-8444	LYDAY, RUSSELL OSBORNE 1915 BOULEVARD ST. C/O MEADOWBROOK TERR. GREENSBORO 27407 U OF PENN	GS L/RT 20 20 27 919 854-2115	MILLER, STEPHEN MAURICE 603 DOLLY MADISON GREENSBORO 27410 U OF NC	FP /EM AC 74 76 78 919 852-7530
LEPORE, RALPH 4801 FOREST OAKS DR. GREENSBORO 27406 NEW YORK MED COL	GP AC 63 66 86 919 674-7117	MABRY, EDWARD BLOXTON 1305 W. WENDOVER AVENUE GREENSBORO 27408 DUKE	OBG AC 53 57 60 919 274-6355	MILLS, WARDELL HARDEE 1202 COUNTRY CLUB DRIVE GREENSBORO 27408 DUKE	OPH L/RT 40 40 48 919 274-3391
LEVITIN, PETER MARK 1904 N. CHURCH STREET GREENSBORO 27405 U OF PENN	IM /RHU AC 69 70 76 919 274-3241	MANESS, ARCHIBALD KELLY, JR. 1305 W. WENDOVER AVENUE GREENSBORO 27408 U OF PENN	OBG AC 62 62 70 919 273-3624	MITCHELL, LEWIS DEAN 1016 PROFESSIONAL VILLAGE GREENSBORO 27401 U OF SOU FLORIDA	FP AC 82 84 87 919 379-1156
LEWIS, ARCH RITCHIE 3100 ROUND HILL RD. GREENSBORO 27408 BOWMAN GRAY	OM /IM AC 65 65 72 919 668-3782	MARKS, EDGAR SEYMOUR 1511 WESTOVER TERR., STE. 108 GREENSBORO 27408 BOWMAN GRAY	IM AC 45 48 48 919 378-9906	MOORE, JOHN ANDREW 1511 WESTOVER TERRACE GREENSBORO 27408 MED COLL OF VA	IM /RHU AC 48 54 55 919 373-0951
LHOTSKY-BRODIE, DORA 721 GREEN VALLEY RD. GREENSBORO 27408 DUKE	GE /IM AC 75 75 85 919 378-0774	MARSHALL, BERNARD ANTHONY P. O. BOX 21922 GREENSBORO 27406 HOWARD U	OBG AC 72 73 81 919 271-8455	MOORE, WILLIAM LOCKE 616 PASTEUR DRIVE GREENSBORO 27403 HARVARD	PD AC 52 52 56 919 292-1353
LINDER, DONALD EARLE 5500 OLD BRANDT TRACE RD. GREENSBORO 27405 BOWMAN GRAY	AN AC 74 74 77 919 288-6565	MARSICANO, THOMAS H. 721 GREEN VALLEY RD. STE. 400 GREENSBORO 27408 OHIO STATE U	CDS /VS AC 73 73 86 919 271-8455	MORCOS, VICTOR HANNA 522 N. ELAM AVE., STE. 203 GREENSBORO 27403 EIN SHAMS U	P AC 64 73 81 919 854-2391
		MARTIN, MATTHEW BRUNSON 311 W. WENDOVER AVE. GREENSBORO 27408 U OF TEXAS-SW	GS AC 79 79 79 919 275-8415	MORRELL, ROBERT X., JR. MOSES CONE HOSPITAL 1200 N. ELM ST. GREENSBORO 27401 U OF LOUISVILLE	PM AC 83 84 86 919 379-3667

41. GREENSBORO SOCIETY OF MEDICINE (Continued)

MORRIS, MARSHALL G., JR. 806 NOTTINGHAM DR. GREENSBORO 27408 BOWMAN GRAY	GS /TS L/RT 46 46 52 919 379-1478	PATTERSON, DAVID READ 721 GREEN VALLEY RD. GREENSBORO 27408 U OF NC	GE /IM AC 73 73 79 919 378-0774	ROGERS, SEYMOUR SHULMAN 1503 ALLENDALE ROAD GREENSBORO 27408 NEW YORK U	GS L/RT 36 36 49 919 273-6695
MORTENSON, RODNEY ALLEN 2017 ST. ANDREWS ROAD GREENSBORO 27408 U OF SOU CALIF	ORS /HS AC 67 67 74 919 275-6318	PAUL, VINCENT EDGAR 530 N. ELAM AVENUE GREENSBORO 27403 U OF NC	ORS AC 76 76 82 919 292-8824	ROLLINS, HAL JUDD, JR. 348 N. ELM STREET GREENSBORO 27401 DUKE	OPH AC 58 58 65 919 274-4626
MURINSON, DONALD S. 1511 WESTOVER TERRACE GREENSBORO 27408 U OF VERMONT	ON /HEM AC 72 72 86 919 373-0611	PELLIGRA, SALVATORE JOHN 1200 N. ELM ST. GREENSBORO 27401 ALBANY MED COLL	PM AC 81 83 85 919 379-3667	ROSEN, RICHARD JAMES 1032 PROFESSIONAL VILLAGE GREENSBORO 27401 GEO WASHINGTON U	IM /HEM AC 55 65 78 919 273-9758
MURPHY, DANIEL F. 530 N. ELAM AVE. PO BOX 29523 GREENSBORO 27403 TEMPLE U	SM /SM AC 81 82 86 919 292-8824	PENDSE, PRABHAKAR D. 1018 PROFESSIONAL VILLAGE GREENSBORO 27401 U OF BOMBAY	PDS /GS AC 59 60 72 919 272-6161	ROSS, ALLAN 408 PARKWAY GREENSBORO 27401 U OF PENN	OBG AC 75 79 79 919 378-1110
MURRAY, WILLIAM GRAY 1808 CARLISLE ROAD GREENSBORO 27408 DUKE	IM L/RT 44 47 48 919 274-5155	PETERSON, LLOYD JOHN 200 E. NORTHWOOD ST., STE. 302 GREENSBORO 27401 NORTHWESTERN U	U AC 69 73 79 919 275-6115	ROWE, WILLIAM THOMAS 1511 WESTOVER TERRACE GREENSBORO 27408 U OF NC	RHU /IM AC 69 69 83 919 378-1461
NADEL, SCOTT MARTIN 721 GREEN VALLEY RD. GREENSBORO 27408 U OF MIAMI	IM /PUD AC 75 76 82 919 378-0774	PIERSON, GEORGE HERMAN, JR P. O. BOX 13005 GREENSBORO 27415 DUKE	R /DR AC 54 54 73 919 379-4140	RUSKIN, JEROME 1904 N. CHURCH STREET GREENSBORO 27405 ALBERT EINSTEIN	CD AC 60 60 70 919 274-3241
NEAL, WILLIAM RONALD 1507 WESTOVER TERR. GREENSBORO 27408 U OF NC	OBG AC 74 74 81 919 273-3661	POOLE, GORDON JOSEPH PO BOX 13005 DECEASED--5-5-88 GREENSBORO 27415 BOWMAN GRAY	DR 64 64 74 919 379-4140	RUSSELL, EUGENE FAIRCHILD, III 1309 N. ELM STREET GREENSBORO 27401 U OF VIRGINIA	OBG AC 65 65 75 919 273-2563
NEIJSTROM, ERIC SHERWOOD 1007 PROFESSIONAL VILLAGE GREENSBORO 27401 U OF VIRGINIA	ON /IM AC 76 78 82 919 272-2141	PREFONTAINE, J. EDOUARD 830 SOUTHEASTERN BLDG. GREENSBORO 27401 LAVAL U	OPH L/RT 27 31 34 919 272-3523	SARDI, CARL ANTHONY 7100 BETHLEHEM CHURCH RD. CLIMAX 27233 TEMPLE U	OTO /A L 52 56 56 919 674-2509
NESI, MARC HENRY 200 E. NORTHWOOD ST., STE. 206 GREENSBORO 27401 U OF HAITI	U AC 71 76 85 919 373-0871	PRESSON, THOMAS LEMUEL PO BOX 14580 315 W. WENDOVER AVE. GREENSBORO 27415 U OF NC	ORS AC 65 65 74 919 275-0724	SAWYER, JOHN WILSON 609 WALTER REED DRIVE GREENSBORO 27403 CASE WESTERN RES	IM AC 52 52 56 919 299-2815
NEWELL, MCARTHUR 1710 E. BESSEMER AVE. PO BOX 21503 GREENSBORO 27420 U OF NC	OBG AC 73 74 82 919 274-1558	PRICE, THOMAS BAKER 200 E. NORTHWOOD ST., STE. 304 GREENSBORO 27401 DUKE	GS AC 64 64 71 919 378-9811	SCHAAL, JENNIFER C. 1507 WESTOVER TERR., STE. C GREENSBORO 27408 U OF NC	OBG AC 82 84 87 919 273-0936
NEWMAN, DAVID HAROLD 200 E. NORTHWOOD ST., STE. 304 GREENSBORO 27401 BOWMAN GRAY	GS AC 80 81 86 919 378-9811	RABOLD, LEONARD JAMES 209 HOMEWOOD AVENUE GREENSBORO 27403 VANDERBILT U	IM L/RT 41 48 49 919 379-4025	SCHALL, STEWART ALLAN 1200 N. ELM ST. MOSES CONE MEM. HOSP. GREENSBORO 27401 U OF PENN	PDC /PD AC 64 72 86 919 379-4060
NOLAN, CLYDE, JR. 1317 N. ELM ST. STE. 9 GREENSBORO 27401 U OF NC	D AC 74 75 80 919 379-1193	RANSOM, JAMES LAURENCE 1200 N. ELM ST. GREENSBORO 27401 BOWMAN GRAY	NPM /PHO AC 73 73 88 919 379-3977	SCHWEIZER, DONALD CONRAD 4 CHESAPEAKE CT. GREENSBORO 27410 MED COLL OF VA	GYN L/RT 43 47 48 919 379-8460
NOWLAN, FAGG BERNARD 4308 KIMMIDGE ROAD GREENSBORO 27406 BOWMAN GRAY	FP RT 46 46 49 919 674-5100	RAVENEL, SAMUEL DUBOSE 624 QUAKER LANE HIGH POINT 27262 DUKE	PD AC 64 64 71 919 882-4171	SCOTT, CORIDALIA WALD 2803 LAKE FOREST DR. GREENSBORO 27408 U OF PANAMA	PTH AC 70 77 83 919 854-6455
OLIN, DAVID BAKER 208 W. WENDOVER AVENUE GREENSBORO 27401 OHIO STATE U	NEP /IM AC 68 68 77 919 379-9708	RAY, WALTER CARROLL 522 N. ELAM AVE. GREENSBORO 27403 U OF ALABAMA	GYN AC 61 62 67 919 299-3101	SCOTT, JOHN LAYNE 2803 LAKE FOREST DR. GREENSBORO 27408 BOWMAN GRAY	DR /NM AC 67 67 74 919 855-8972
OSBORNE, JAMES C. 1904 N. CHURCH ST. GREENSBORO 27405 U OF NC	IM AC 83 84 86 919 274-3241	REGISTER, JOHN FRANCIS 310 ROCKFORD ROAD GREENSBORO 27401 MED U OF SC	ORS L 31 31 37 919 274-0161	SEELY, THOMAS J. 606 WALTER REED DR. GREENSBORO 27403 U OF NC	P AC 81 82 87 919 299-5400
OWENS, BERNARD JAMES, III 1017 PROFESSIONAL VILLAGE GREENSBORO 27401 DOWNSTATE ME CTR	CDS /GS AC 72 73 84 919 274-2933	REID, WILLIAM JOSEPH 2301 DANBURY ROAD GREENSBORO 27408 NEW YORK MED COL	FP L 48 49 51 919 274-6171	SETHI, SHASHI K. 111 W. WENDOVER AVE. GREENSBORO 27401 MAULANA AZAD	OPH AC 67 67 86 919 275-5673
PANOSH, WANDA KOTVAN ANNA GOVE HEALTH CENTER UNC AT GREENSBORO GREENSBORO 27412 U OF PITTSBURGH	PD /IM AC 78 82 84 919 334-5340	RENDALL, JOHN LLOYD, III 108 KEMP ROAD, EAST GREENSBORO 27410 DUKE	ORS AC 73 78 80 919 275-6318	SEVIER, ROBERT ENGLISH 200 E. NORTHWOOD ST., STE. 312 GREENSBORO 27401 U OF NC	END /IM AC 66 66 75 919 274-7609
PARKER, HERMAN RICHARD, JR. 408-B PARKWAY DRIVE GREENSBORO 27401 U OF NC	IM AC 67 67 73 919 275-9804	RHOADS, EDWARD JOHN 606 WALTER REED DR. GREENSBORO 27403 DUKE	P /PYA AC 75 78 83 919 299-0511	SHAFER, DONALD THORNTON 5 MONMOUTH COURT GREENSBORO 27410 BOWMAN GRAY	AN AC 74 75 77 919 373-8555
PASCALE, JAMES A. 3710 HAZEL LN. GREENSBORO 27408 BOWMAN GRAY	PD /NPM AC 72 72 88 919 854-6115	ROBINSON, STEPHEN CARY 200 E. NORTHWOOD, SUITE 504 GREENSBORO 27401 DUKE	NS AC 67 67 75 919 272-4578	SHAPIRO, MARK THOMAS 1311 N. ELM ST. GREENSBORO 27401 OHIO STATE U	OPH AC 70 70 85 919 378-9993
PATSEAVOURAS, LOUIE LEE 522 N. ELAM AVENUE GREENSBORO 27403 U OF NC	PSF AC 61 61 67 919 299-4907	ROGERS, CHARLES STEWART 1200 N. ELM STREET GREENSBORO 27401 U OF NC	IM AC 73 73 85 919 379-4062	SHARPLESS, EDWARD ARTHUR DRAWER X-3 GREENSBORO 27402 U OF NC	PTH AC 61 61 67 919 299-6815
				SHARPLESS, MARTHA KORNEGAY MOSES CONE HOSPITAL GREENSBORO 27401 U OF NC	PD AC 59 59 69 919 379-4064

41. GREENSBORO SOCIETY OF MEDICINE (Continued)

SHELBURNE, PALMER FRIEND 1011 PROFESSIONAL VILLAGE GREENSBORO 27401 U OF NC	CD AC 55 55 62 1919 272-6133	STREETS, JULIA SINK 1511 WESTOVER TERR., STE. 108 GREENSBORO 27408 U OF NC	IM AC 84 84 88 1919 378-9906	WEATHERLY, WILLIAM JESSE 1014 PROFESSIONAL VILLAGE GREENSBORO 27401 U OF NC	GS AC 70 70 81 1919 373-1078
SHEPHERD, ROBERT EDWARD P. O. BOX 13005 GREENSBORO 27415 BOWMAN GRAY	DR AC 79 80 78 1919 273-0325	STRINGER, ARTHUR V. 914 MONTICELLO ST. GREENSBORO 27410 DUKE	DBG AC 82 84 85 1919 379-3641	WEIN, ROBERT MICHAEL 408 PARKWAY GREENSBORO 27401 U OF VIRGINIA	OBG AC 72 72 79 1919 378-1110
SILLMON, DAVID WILDE 1511 WESTOVER TERRACE GREENSBORO 27408 U OF NC	IM /HEM AC 63 63 71 1919 373-0611	SUE, SAMUEL ARTHUR, JR. PO BOX 14580 315 W. WENDOVER AVE. GREENSBORO 27415 BOWMAN GRAY	ORS AC 56 56 64 1919 275-0724	WEINTRAUB, RICHARD ALAN 721 GREEN VALLEY RD. GREENSBORO 27408 GEORGETOWN U	CD /IM AC 70 71 78 1919 378-1244
SIMEL, PAUL JOSEPH 111 W. WENDOVER AVENUE GREENSBORO 27401 BOSTON U	OPH AC 55 61 81 1919 275-5673	SULLIVAN, RAYMOND C., JR. 1511 WESTOVER TERRACE GREENSBORO 27408 U OF FLORIDA	IM /AM AC 69 69 74 1919 378-1461	WEISS, JOSEPH WALTON 522 N. ELAM AVENUE, STE. 203 GREENSBORO 27403 MED COLL OF OHIO	P AC 77 78 85 1919 854-2391
SINGER, JAMES WILLARD 1209 MAGNOLIA STREET GREENSBORO 27401 OHIO STATE U	PD AC 61 66 67 1919 274-0106	SURAL, RONALD FRANK 1006 PROFESSIONAL VILLAGE GREENSBORO 27401 U OF MICHIGAN	U AC 67 68 75 1919 373-8323	WEISSMAN, JAMES MICHAEL 1904 N. CHURCH STREET GREENSBORO 27405 U OF ILLINOIS	GE /IM AC 70 71 79 1919 274-3241
SLOTNICK, LAWRENCE SHELDON 1018 N. ELM STREET GREENSBORO 27401 DOWNSTATE ME CTR	PUD /A AC 70 72 78 1919 275-7238	SYPPER, ROBERT V., JR. 409-E PARKWAY DR. GREENSBORO 27401 SUNY-SYRACUSE	HS /ORS AC 77 78 85 1919 378-0811	WELBORN, JULIUS WARREN, JR. 200 E. NORTHWOOD ST., STE. 310 GREENSBORO 27401 MED U OF SC	IM /OM AC 51 52 52 1919 273-0872
SMITH, DALLAS AARON, JR. 4507 KENBRIDGE DRIVE GREENSBORO 27410 BOWMAN GRAY	DR AC 76 76 83 1919 854-1311	TANNENBAUM, SIGMUND IAN 1904 N. CHURCH STREET GREENSBORO 27405 DUKE	U AC 75 76 83 1919 274-1114	WELLS, RHEUDOLPH JAMES 602 PASTEUR DRIVE GREENSBORO 27403 MED COLL OF VA	OTO /PS AC 56 62 62 1919 292-5818
SMITH, DONALD DEWEY 1200 N. ELM ST. GREENSBORO 27401 DUKE	PD AC 60 61 67 1919 379-4025	TAYLOR, SHAHANE R., JR 348 N. ELM STREET GREENSBORO 27401 U OF NC	OPH AC 59 59 63 1919 274-4626	WHITENER, ROBERT WILFONG 1024 PROFESSIONAL VILLAGE GREENSBORO 27401 NORTHWESTERN U	P AC 54 54 62 1919 274-1250
SMITH, HENRY W. B., III 1904 N. CHURCH ST. GREENSBORO 27405 HARVARD	CD /IM AC 78 80 87 1919 274-3241	TENNANT, STANLEY NEAL 1011 PROFESSIONAL VILL. GREENSBORO 27401 BOWMAN GRAY	CD AC 78 80 84 1919 299-0111	WHITFIELD, PETER WHITE 201 E. WENDOVER AVE. GREENSBORO 27401 GEO WASHINGTON U	ORS AC 74 76 81 1919 274-1957
SMITH, O. NORRIS 202 W. BESSEMER AVENUE GREENSBORO 27401 U OF PENN	IM L/RT 33 33 38 1919 273-7494	THACKER, ROBERT KELLER 603 DOLLEY MADISON GREENSBORO 27410 U OF FLORIDA	FP AC 73 74 81 1919 294-6190	WILLIAMS, JOHN DUDLEY, JR. 1715-A W. MARKET ST. GREENSBORO 27403 TEMPLE U	GYN L 30 31 59 1919 272-8833
SMITH, WILLIAM SIEGFRIED, JR. 104 W. NORTHWOOD STREET GREENSBORO 27401 DUKE	GYN AC 61 61 68 1919 378-1843	TOWNSEND, MURPHY FURMAN, JR. 1007 PROFESSIONAL VILLAGE GREENSBORO 27401 BOWMAN GRAY	IM AC 61 62 65 1919 272-2141	WILSON, CHARLES HARRISON 1317 N. ELM ST., STE. 1 GREENSBORO 27401 MED COLL OF VA	CDS /TS AC 73 77 82 1919 373-8245
SPANGLER, ERNEST BURTON DRAWER X-3 GREENSBORO 27402 U OF PENN	R AC 52 59 62 1919 854-6546	TROXLER, EULYSS ROBERT 2314 PRINCESS ANN ST. GREENSBORO 27408 DUKE	ORS L 38 47 48 1919 288-5521	WINTER, KENNETH HOWE 3307 WALDRON DRIVE GREENSBORO 27408 U OF NC	R AC 75 75 81 1919 855-8972
SPARROW, HARRY WARD 342 N. ELM STREET GREENSBORO 27401 NORTHWESTERN U	IM AC 44 44 47 1919 275-8436	TRUESDALE, GERALD LYNN 901 N. ELM ST. GREENSBORO 27401 U OF CHICAGO	PS /GS AC 75 79 84 1919 274-2757	WOLFF, GEORGE THOMAS 1016-A PROFESSIONAL VILLAGE GREENSBORO 27401 JEFFERSON	FP AC 52 52 56 1919 379-1156
STAFFORD, WILLIE RANSOME, JR. 948 WALKER AVENUE GREENSBORO 27403 U OF NC	FP /OM AC 56 56 60 1919 275-7665	TURNER, WILLIAM HARRISON, III 1030 PROFESSIONAL VILLAGE GREENSBORO 27401 MED COLL OF VA	D /IM AC 68 68 77 1919 373-1384	WOLICKI, KAROL T. 321 W. WENDOVER AVE. GREENSBORO 27408 U OF VIRGINIA	OTO AC 81 81 87 1919 379-9445
STARR, HENRY FRANK, JR. 3106 ALAMANCE RD. GREENSBORO 27407 JEFFERSON	OM AC 48 48 51 1919 299-4305	TYSINGER, JOHN REED 1511 WESTOVER TERRACE GREENSBORO 27408 MED U OF SC	CD /IM AC 70 72 85 1919 373-1562	WOOLFITT, SANDRA S. 604 WALTER REED RD. GREENSBORO 27403 WEST VA U	ON AC 70 72 88 1919 294-2670
STEUTERMAN, MARY CHRISTINE 1200 N. ELM ST. GREENSBORO 27401 ST LOUIS U	PTH AC 78 79 85 1919 379-4074	VATZ, BENJAMIN 1904 N. CHURCH STREET GREENSBORO 27405 DUKE	IM AC 45 45 50 1919 274-3241	WORLAND, DAVID ERIC 1816 PEMBROKE RD., STE. #2 GREENSBORO 27408 INDIANA U	AN AC 74 76 78 1919 272-3720
STEVENS, ELLIOTT WALKER, JR. 1018 N. ELM STREET GREENSBORO 27401 U OF NC	PUD /AI AC 66 66 73 1919 275-7238	VAUGHAN, EDWIN WARNER 2632 WALKER AVENUE GREENSBORO 27403 U OF VIRGINIA	IM /RIP L/RT 37 37 40 1919 299-7909	YARBROUGH, JOHN WARD 2750 LAUREL STREET, STE. 305 COLUMBIA, SC 29204 BOWMAN GRAY	TS AC 67 67 77 803 254-5140
STEVENS, JOSEPH BLACKBURN 102 IRVING PARK CT. GREENSBORO 27408 DUKE	IM /N L 36 40 40 1919 272-7292	VOGT, JOEL ALAN 522 N. ELAM AVE., STE. 203 GREENSBORO 27403 TEXAS A/M U	P AC 81 81 85 1919 854-2391	YOUNG, CLINTON DRIVER 1018 N. ELM STREET GREENSBORO 27401 U OF VIRGINIA	PUD /A AC 74 74 81 1919 275-7238
STIEFEL, JOSEPH WALTER 1910 N. CHURCH ST. GREENSBORO 27405 U OF TENNESSEE	N AC 58 60 66 1919 273-2511	WAINER, HOWARD SCHEYER 1904 N. CHURCH STREET GREENSBORO 27405 BOWMAN GRAY	IM /GE AC 54 54 60 1919 274-3241	YOUNG, KYLE ALLEN P. O. BOX 13005 GREENSBORO 27415 BOWMAN GRAY	DR AC 69 69 73 1919 379-4144
STINSON, HELEN MARIE 1021 E. WENDOVER AVE. STE. 303 GREENSBORO 27405 U OF TENNESSEE	PS AC 66 66 79 1919 272-3169	WARWICK, HIGHT CLAUDIUS 2320 KIRKPATRICK PLACE GREENSBORO 27408 MED COLL OF VA	AN L/RT 34 34 36 1919 272-4220	YOUNG, PETER RUSSELL 1317 N. ELM ST., STE. 5 PO BOX 10037 GREENSBORO 27404 EMORY U	GS AC 61 61 69 1919 274-8444
STRECK, CHRISTIAN JOHN 311 W. WENDOVER AVE. GREENSBORO 27408 U OF FLORIDA	GS AC 71 76 79 1919 275-8415				

42. HALIFAX COMPONENT SOCIETY

OFFICERS—**President:** Alton Anderson, M.D., 11 West 3rd St., Weldon 27890**Secretary:** J. Stewart Watson, M.D., 250 Smith Church Rd., Roanoke Rapids 27870**Executive Secretary:** Kathy King, 115 Long Circle, Roanoke Rapids 27870 (919 537-8193)

ANDERSON, PAULINE M. RT. #2, BOX 441 ROANOKE RAPIDS 27870 MED SCH-UMDNJ	OBG AC 82 84 88 919 535-1099	COVINGTON, JOHN M.C. 506 FRANKLIN STREET ROANOKE RAPIDS 27870 U OF VIRGINIA	OPH L/RT 29 29 33 919 537-3644	MANLAPAS, HECTOR CHAN PO DRAWER 158 ROANOKE RAPIDS 27870 U OF SANTO TOMAS	IM AC 63 63 72 919 537-0135
ANTONY, JOSE KANDANATT 238 OLD FARM ROAD PO BOX 1175 ROANOKE RAPIDS 27870 U OF ROMA	CD /IM AC 79 81 87 919 537-9268	DEEPE, ROBERT PO BOX 458 ROANOKE RAPIDS 27870 U OF CINCINNATI	GS AC 79 80 85 919 535-1585	PANDARINATH, GUPTA PO DRAWER 158 ROANOKE RAPIDS 27870 BANGALORE MED CO	GE /IM AC 72 75 78 919 537-0135
BISSRAM, GANESH 130 CARDINAL DR. ROANOKE RAPIDS 27870 U OF WEST INDIES	ORS AC 72 81 85 919 535-3091	DEVILLA, AMADA RUIZ 115 LONG CIRCLE ROANOKE RAPIDS 27870 U OF KENTUCKY	OPH AC 79 80 84 919 537-8193	PATEL, MAHENDRA S. PO DRAWER 158 ROANOKE RAPIDS 27870 BARODA U	IM /ON AC 76 79 85 919 537-0134
BLOWE, RALPH BOYD, SR. 10 WEST 6TH STREET WELDON 27890 MED COLL OF VA	FP L 38 38 41 919 536-3820	ELMORE, WILLIAM GLENN P. O. BOX 249 ROANOKE RAPIDS 27870 DUKE	DR AC 68 68 75 919 535-2121	POWER, BHASKAR DAYARAM 240 SMITH CHURCH ROAD ROANOKE RAPIDS 27870 U OF BOMBAY	OTO /A AC 57 58 84 919 535-1411
BOONE, JOHN WOODIE, JR. 120 PROFESSIONAL DRIVE ROANOKE RAPIDS 27870 BOWMAN GRAY	FP AC 51 51 54 919 537-9176	ESTOYE, TERESITA FERRER ROANOKE WOMENS PAVILION PROFESSIONAL DR. ROANOKE RAPIDS 27870 U OF PHILIPPINES	OBG /NPM AC 63 71 76 919 535-2200	SHANKER, KASTURI GIRIJA 117 WEST SEVENTH STREET ROANOKE RAPIDS 27870 MADRAS MED COLL	U AC 60 73 78 919 537-0023
BROWN, WILLIAM LEE PO DRAWER 158 ROANOKE RAPIDS 27870 U OF NC	IM AC 61 61 71 919 537-0135	FIORILLI, MARIO GRAZIA 220 SMITH CHURCH ROAD ROANOKE RAPIDS 27870 U DESACRO CUORO	ID /IM AC 71 74 81 919 535-3001	SUMPTER, EDWIN ALLEN BOX 848 WELDON 27890 U OF VIRGINIA	PD AC 56 56 82 919 536-2557
BYRD, WILLIAM EUGENE 1724 E. 10TH ST. PO BOX 1093 ROANOKE RAPIDS 27870 U OF NC	RHU /IM AC 70 70 84 919 535-1082	FRAZIER, RICHARD ELLIS 120 PROFESSIONAL DRIVE ROANOKE RAPIDS 27870 BOWMAN GRAY	FP AC 62 62 67 919 537-9176	TAYLOR, THOMAS JEFFERSON 616 FRANKLIN ST. ROANOKE RAPIDS 27870 JEFFERSON	GP L/RT 34 34 37 919 535-8403
BYRUM, GRAHAM VANCE P. O. BOX 540 SCOTLAND NECK 27874 BOWMAN GRAY	FP AC 52 52 56 919 826-3143	FU, HUNG-JEN 525 BECKER DR. PO BOX 1322 ROANOKE RAPIDS 27870 KAOHSIUNG ME COL	GS /TS AC 61 72 85 919 537-2153	THORNE, DARLENE CHERYL HALIFAX MEMORIAL HOSPITAL ROANOKE RAPIDS 27870 U OF NC	PTH AC 74 74 88 919 535-8403
CACERES, MARCO ANTONIO PO BOX 458 ROANOKE RAPIDS 27870 U OF HONDURAS	GS /TS AC 63 71 76 919 537-6525	FUSSELL, FITZHUGH LEE, JR. 120 PROFESSIONAL DRIVE ROANOKE RAPIDS 27870 U OF NC	GP AC 60 60 65 919 537-9176	WATSON, SUSAN A. 115 LONG CIRCLE ROANOKE RAPIDS 27870 U OF CINCINNATI	OPH AC 81 82 87 919 539-8193
CHAUDHRY, HASHMAT ALI 725-C HAMILTON ST. ROANOKE RAPIDS 27870 NISHTAR MED COLL	OPH AC 69 76 84 919 537-0522	JARMAN, FONTAINE GRAHAM, JR. 12 LONGSTREET ROAD WELDON 27890 MED COLL OF VA	GS L/RT 43 52 52 919 536-2884	WILLIAMS, RHODERICK T., JR 114 WOODLAND ROAD ROANOKE RAPIDS 27870 U OF NC	DR AC 67 67 76 919 535-2121
				WOOD, SHERROD NEWBERRY 111 RAILROAD STREET ENFIELD 27823 JEFFERSON	GP AC 50 50 52 919 445-5233

43. HARNETT COMPONENT SOCIETY

OFFICERS—**President:** Barbara A. Lowe, M.D., 700 Tilghman Dr., Dunn 28334 (919 892-1056)**Secretary:** Thomas L. Taylor, M.D., 116 Jones Dr., Dunn 28334 (919 892-7161)

ADAIR, WILLIAM EDWARD, JR. P. O. BOX 578 ERWIN 28339 TEMPLE U	GP /GS L 38 38 41 919 897-5521	DUNCAN, MARGARETA JOHNSON 306 W. EDGERTON STREET DUNN 28334 U OF NC	FP AC 56 56 60 919 892-2567	MOORE, WILLIAM DONALD PO BOX 819 COATS 27521 MED COLL OF VA	FP AC 44 47 50 919 897-6423
AMSELLEM, DAVID GOOD HOPE HOSPITAL PO BOX 668, DENIM DR. ERWIN 28339 U OF MONTEPELLIER	P AC 73 73 85 919 897-6151	DUNCAN, STACY ALLEN, JR. 306 W. EDGERTON STREET DUNN 28334 U OF NC	FP AC 56 56 60 919 892-2151	ROBINSON, LINDA MOORE COATS MEDICAL CLINIC P. O. BOX 280 COATS 27521 U OF NC	FP AC 76 76 75 919 897-6423
BATZER, GABRIELLE B. PO BOX 280 BUIES CREEK 27506 GEORGETOWN U	P AF 81 82 87 919 893-5727	HANCOCK, RICHARD PAUL 702 TILGHMAN DR. DUNN 28334 JOHNS HOPKINS	GS /TS AC 61 65 67 919 892-8120	SEDDON, JOHN MICHAEL 714 TILGHMAN DR. DUNN 28334 U OF EDINBURGH	U AC 67 69 85 919 892-1068
BLACKMON, BRUCE BERNARD P. O. BOX 8 BUIES CREEK 27506 BOWMAN GRAY	FP AC 51 51 53 919 893-3543	JOHNSON, GALE DENNING 119 LUCKNOW SQUARE DUNN 28334 JEFFERSON	GS AC 44 44 47 919 892-7893	SEEMAN, BRIAN ANDREW 702 TILGHMAN DR. DUNN 28334 DOWNSTATE ME CTR	AN AC 82 83 86 919 892-9261
BROWN, DAVID HOUSTON PO BOX 399 BUIES CREEK 27506 AUTONOMA UNIV	IM AC 76 81 88 919 893-5141	LEE, THOMAS CHEN-YAO 703 TILGHMAN DRIVE P. O. BOX 1501 DUNN 28334 TAIWAN U-TAIPEI	GS AC 58 58 79 919 892-1631	SHULER, JIMMIE BLAKE 518 EAST H STREET PO BOX 687 ERWIN 28339 MEHARRY MED COLL	PD AC 78 82 83 919 897-8061
DOFFERMYRE, LUTHER RANDOLPH P. O. BOX 1011 DUNN 28334 TEMPLE U	FP L 38 38 39 919 892-4151	LOWE, BARBARA ANN 700 TILGHMAN DR. DUNN 28334 U OF NC	IM AC 82 83 85 919 892-1056	TAYLOR, THOMAS LEE 116 JONES DRIVE DUNN 28334 CORNELL U	DR AC 53 53 72 919 892-7161

43. HARNETT COMPONENT SOCIETY (Continued)

VYAS, PANKAJ K. 109 S. RAILROAD ST. PO BOX 667 BENSON 27504 KERALU UNIV.	IM AC 82 82 88 919 894-5787	WILSON, STEPHEN GLENN, SR. P. O. BOX 158 ANGIER 27501 MED COLL OF VA	GP L/RT 30 30 32 919 639-2574	ZICH, MICHAEL JOHN 608 TILGHMAN DR. DUNN 28334 U OF ILLINOIS	OBG AC 75 77 84 919 892-4092
WILLIFORD, JOHN KENNETH P. O. BOX 579 LILLINGTON 27546 BOWMAN GRAY	FP AC 46 46 48 919 893-3392				

44. HAYWOOD COMPONENT SOCIETY

OFFICERS—President: Richard J. Valenziano, M.D., 1600 N. Main St., Waynesville 28786 (704 456-3511)

Secretary: Richard A. Bremer, M.D., 90 Hospital Dr., Clyde 28721

Executive Secretary: Katherine Smith, 90 Hospital Dr., Clyde 28721 (704 452-0821)

BORDER, CLINTON LARRY, JR. P. O. BOX 538 WAYNESVILLE 28786 U OF LOUISVILLE	GS RT 52 58 70 704 452-4500	GEHWEILER, JOHN ANDREW, JR. P. O. BOX 231 WAYNESVILLE 28786 DUKE	R AC 56 56 68 704 452-1517	OWEN, ROBERT HARRISON 127 1/2 MAIN STREET CANTON 28716 U OF PENN	ABS /GP L 31 31 35 704 648-2142
BRASWELL, WILLIAM KELLEY MIDWAY MEDICAL CENTER P. O. BOX 1409 CANTON 28716 U OF MIAMI	GS /TS AC 77 78 81 704 627-2211	GILLIGAN, KENDALL ALLEN 109 ROBIN LANE WAYNESVILLE 28786 U OF CALIF-LA	EM AC 77 77 82 704 456-6021	OWEN, WILLIAM BOYD PO BOX 780 OWEN-SMITH CLINIC, PA WAYNESVILLE 28786 U OF PENN	GP AC 42 42 46 704 456-8601
BROWN, ALAN REID 3721 THUNDERBIRD HILL CIR. SEBRING, FL 33870 U OF MICHIGAN	DR L/RT 41 53 53 704 456-6021	HARLEY, STEWART JACQUES 114 HOSPITAL DRIVE CLYDE 28721 U OF MICHIGAN	ORS AC 69 69 77 704 452-2218	OWEN, WILLIAM BOYD, JR. 106 GALLOWAY STREET WAYNESVILLE 28786 BOWMAN GRAY	ORS AC 71 71 78 704 452-2207
BROWN, GEORGE WALLACE 102 BROWN AVENUE HAZELWOOD 28738 U OF NC	FP AC 54 54 58 704 456-6021	HILL, STEPHEN THOMAS PO BOX 427 LAKE JUNALUSKA 28745 WEST VA U	OBG AC 80 80 84 704 456-7369	QUEEN, KATE TAYLOR 102 HOSPITAL DR. CLYDE 28721 U OF NC	RHU /IM AC 81 84 86 704 452-0331
CALLAGHAN, WILLIAM M. PO BOX 427 LAKE JUNALUSKA 28745 OHIO STATE U	OBG AC 81 84 85 704 456-7369	LIPHAM, HARRY GLENN 102 HOSPITAL DRIVE CLYDE 28721 BOWMAN GRAY	PUD /IM AC 76 76 81 704 452-0331	ROBERSON, ROBERT STUART 305 GRIMBALL DR. HAZELWOOD 28738 MED COLL OF VA	PH L 30 30 30 704 456-3662
CAMP, EDWARD HAYS 112 BALSAM DRIVE WAYNESVILLE 28786 U OF CHICAGO	GS L/RT 39 50 51 704 456-9858	MASTERS, MICHAEL JASON 102 HOSPITAL DR. SUITE #6 CLYDE 28721 HAHNEMANN	D AC 75 76 83 704 456-7343	ROGERS, TED 79 PARAGON PARKWAY CLYDE 28721 U OF NC	OPH AC 67 67 73 704 456-9423
DENNIS, KENNETH MICHAEL 1 SMATHERS STREET CLYDE 28721 U OF FLORIDA	PD /ADL AC 74 77 78 704 627-9226	MATHEWS, HERSCHELL F. ROUTE #1, BOX 564 SYLVA 28779 BOWMAN GRAY	FP /EM AC 60 60 80 704 586-8352	SHARPTON, BENNIE REEVES 106 BROADVIEW RD. WAYNESVILLE 28786 MED COLL OF GA	GS AC 71 73 80 704 456-8633
DICKERSON, ANDREW J. 110 WAYNEWOOD DR. WAYNESVILLE 28786 BOWMAN GRAY	GS /TS L/RT 48 49 55 704 456-5002	MCKINNEY, ALEXANDER STUART 102 HOSPITAL DR. CLYDE 28721 COLUMBIA U	N AC 59 60 85 704 452-0331	STEVENS, HUGH L. C. 204 DEPOT ST., SUITE C WAYNESVILLE 28786 TEMPLE U	IM /GE AC 46 46 72 704 452-5124
DIXSON, GEORGE RANDALL 90 HOSPITAL DR. CLYDE 28721 DUKE	DR AC 76 77 85 704 452-2260	MILLING, JAMES REAVES 718 BRUNSWICK DRIVE WAYNESVILLE 28786 MED U OF SC	FP AC 55 55 81 704 456-5566	STRINGFIELD, JAMES KING P. O. BOX 900 WAYNESVILLE 28786 JEFFERSON	FP AC 51 51 53 704 456-3222
DYER, DAVID PATTERSON 2436 ASHEVILLE ROAD WAYNESVILLE 28786 VANDERBILT U	PD /A AC 44 58 58 704 456-9041	MORRISON, FRANK CRAWFORD P. O. BOX 1549, MEDICAL BLDG. CANTON 28716 U OF NC	GP AC 55 55 58 704 648-5215	TANNEHILL, JOHN FRANKLIN 120 HOSPITAL DRIVE CLYDE 28721 TULANE U	OTO /HNS AC 64 64 77 704 452-1406
EARNEST, ROBERT RHEA 102 HOSPITAL DR., STE. 9 CLYDE 28721 EMORY U	PD /ADL AC 68 69 74 704 452-2211	NATHAN, HENRY PAUL 102 HOSPITAL DRIVE CLYDE 28721 ALBERT EINSTEIN	IG /IM AC 77 77 83 704 452-0331	WENZEL, FREDERICK GEORGE 102 HOSPITAL DR., STE. 12 CLYDE 28721 NORTHWESTERN U	GS AC 59 66 66 704 456-8624
FREEMAN, NANCY ROUSER PO BOX 1409 CANTON 28716 U OF NC	FP AC 82 84 86 704 627-2211	NERNEY, JOHN JOSEPH 116 HOSPITAL DRIVE CLYDE 28721 MED COLL OF GA	OPH AC 70 71 78 704 452-5816	ZERVAS, JEFFREY PAUL 116 HOSPITAL DR. CLYDE 28721 U OF MINN	OPH AC 77 78 87 704 452-5816

45. HENDERSON COMPONENT SOCIETY

OFFICERS—President: Rodney J. Hawk, M.D., 512 Park Hill Ct., Hendersonville 28739 (704 693-0706)

Secretary: J. Crit Harley, M.D., 1003 Fifth Ave., W., Hendersonville 28739 (704 692-8042)

ALBERS, CHARLES ALLEN 835 FLEMING STREET HENDERSONVILLE 28739 BAYLOR	GS AC 76 76 82 704 692-0238	ANDREWS, THOMAS J. 1612 ASHEVILLE HWY, STE. 4 HENDERSONVILLE 28739 LOMA LINDA U	P AC 79 80 86 704 697-2673	BAILEY, ROBERT WOODWARD 611 FIFTH AVE. WEST HENDERSONVILLE 28739 EAST CAROLINA U	FP AC 83 84 80 704 697-1508
ALEXANDER, WILLIAM MCKINLEY P. O. BOX 627 HENDERSONVILLE 28739 MED U OF SC	IM L/RT 45 49 54 704 692-7201	AUSTIN, STEPHEN BRAWNER 414 N. CHURCH STREET HENDERSONVILLE 28739 BOWMAN GRAY	IM AC 76 78 79 704 693-1768	BAILEY, ROYCE K. PO BOX 217 NAPLES 28760 LOMA LINDA U	CD AC 80 81 87 704 684-1046

45. HENDERSON COMPONENT SOCIETY (Continued)

BAKER, EDGAR 510-A FLEMING STREET HENDERSONVILLE 28739 U OF TENNESSEE	FP AC 62 66 67 704 693-9973	GLASSMAN, STUART LEWIS 835 FLEMING ST. HENDERSONVILLE 28739 U OF MIAMI	GS /VS AC 73 73 87 704 692-1191	MCCONNACHIE, CHARLES CHRIS. 1027 FLEMING STREET HENDERSONVILLE 28739 U OF LONDON	ORS H 61 61 73 704 692-5781
BELL, JOHN DAVIS 401 SIXTH AVE., WEST HENDERSONVILLE 28739 U OF NC	AN AC 72 72 77 704 693-7848	GLEATON, HUGH ELBERT, JR. 643 FIFTH AVENUE, WEST HENDERSONVILLE 28739 MED COLL OF GA	OPH AC 65 65 73 704 692-9146	MOORE, PIERCE JONES, JR #1 P.J.'S PLACE HENDERSONVILLE 28739 LOMA LINDA U	GS AC 44 47 53 704 687-0355
BLAKELY, GENE THORNTON MARGARET PARDEE HOSPITAL HENDERSONVILLE 28739 TULANE U	EM AC 54 54 70 704 693-6522	GLENN, DAVID LOCKE, JR. 561 FLEMING ST. HENDERSONVILLE 28739 MED U OF SC	GS AC 76 76 85 704 693-1778	NERNESS, JOHN LAVON 513 N. JUSTICE ST. HENDERSONVILLE 28739 LOMA LINDA U	OBG AC 63 64 74 704 693-0736
BRABHAM, FELICIA B. 518 SIXTH AVE. WEST HENDERSONVILLE 28739 MED U OF SC	IM AC 84 85 87 704 697-7805	GODEHN, DONALD JOHN, JR., 506 PARK HILL CT., STE. #1 HENDERSONVILLE 28739 BOWMAN GRAY	D AC 72 75 77 704 693-0275	PORTER, RICHARD ALLISON 1107 WOODMONT DR. HENDERSONVILLE 28739 CASE WESTERN RES	FP L/RT 43 47 48 704 693-5128
BROWN, FRANK MAC 1027 FLEMING STREET HENDERSONVILLE 28739 LOMA LINDA U	ORS AC 63 74 82 704 692-5781	GOODFIELD, PETER 510 7TH AVENUE, WEST HENDERSONVILLE 28739 NEW YORK U	CD AC 79 80 86 704 692-2231	POSSINGER, CLIVE FRANCIS, JR. P. O. BOX 217 NAPLES 28760 LOMA LINDA U	IM AC 65 65 75 704 684-1030
BURCH, LARRY THOMAS GLASSY MOUNTAIN DR. PO BOX 160 FLAT ROCK 28731 U OF MICHIGAN	P AC 64 65 77 704 692-4900	GRANT, GREGORY 2561 HENDERSONVILLE RD. PO BOX 549 ARDEN 28074 TULANE U	OBG AC 79 79 88 704 687-1435	PYLES, JERALD DENNIS 510 7TH AVENUE, WEST HENDERSONVILLE 28739 DUKE	IM AC 74 77 78 704 692-2231
BURCH, WILLIAM HOBART BOX 285, HARRIS RD AND 74 LAKE LURE 28746 CASE WESTERN RES	FP AC 50 53 54 704 625-9121	HAWK, RODNEY JAMES 512 PARK HILL CT. HENDERSONVILLE 28739 U OF PITTSBURGH	OTO AC 70 71 77 704 693-0706	RAIFORD, FLETCHER LINDSAY 1023 FOREST HILL RD. HENDERSONVILLE 28739 MED COLL OF VA	PD L 41 51 51 704 693-3296
BUSH, RONALD EARL PO BOX 537 ARDEN 28704 LOMA LINDA U	IM AC 67 68 76 704 684-0011	HELPPIE, JOANNE E. 510 7TH AVENUE, WEST HENDERSONVILLE 28739 U OF MICHIGAN	IM AC 83 84 87 919 692-2232	ROME, BRUNO JOSEPH 501 SIXTH AVENUE, WEST HENDERSONVILLE 28739 NEW YORK U	IM /NM L 42 51 53 704 693-3483
CALDEMEYER, JOHN EVERETT 715 FLEMING ST. HENDERSONVILLE 28739 INDIANA U	DR AC 78 78 85 704 693-1441	HILL, PAUL EDWARD 559 N. JUSTICE STREET HENDERSONVILLE 28739 DUKE	IM /FP AC 54 54 56 704 692-0587	ROSS, JOHN MARION 630 FIFTH AVENUE, WEST HENDERSONVILLE 28739 MED U OF SC	OBG AC 55 55 63 704 692-2258
CASERIO, JAMES JOSEPH 547 N. JUSTICE ST. HENDERSONVILLE 28739 U OF PITTSBURGH	IM AC 78 79 86 704 692-5096	HOPKINS, RICHARD GLENN PO BOX 770, WALKER ST. COLUMBUS 28722 U OF MICHIGAN	GP AC 55 56 83 704 894-8266	SACCO, RUSSELL JOHN 506 PARK HILL COURT HENDERSONVILLE 28739 ST U OF NY-BUFF	IM AC 47 48 76 704 692-3538
CHANDLER, WILLIAM M., JR. PO BOX 2680 HENDERSONVILLE 28739 MED COLL OF GA	R /AM AC 68 69 79 704 693-1441	IRVING, RICHARD CARROLL RT. #9, 2589 HEBRON RD. HENDERSONVILLE 28739 DUKE	AN /GER L/RT 41 57 58 704 692-9806	SANDBORN, WILLIAM DEAL P. O. BOX 5400 FLETCHER 28732 LOMA LINDA U	GS AC 65 67 73 704 687-1418
COSGROVE, KENNETH EDWARD 510 7TH AVENUE, WEST HENDERSONVILLE 28739 NEW YORK U	IM /CD AC 46 53 53 704 692-2231	JONES, MICHAEL CHARLES 835 FLEMING STREET HENDERSONVILLE 28739 U OF NC	GS AC 72 72 82 704 692-0238	SELLERS, PHILLIP ALAN 510 7TH AVENUE, WEST HENDERSONVILLE 28739 BOWMAN GRAY	IM AC 57 57 64 704 692-2231
CRAWFORD, JOHN L., III 1701 OLD VILLAGE ROAD HENDERSONVILLE 28739 BOWMAN GRAY	OPH AC 74 74 71 704 693-1773	KEPPLER, C. BURTON 334 BROOKSIDE CAMP RD. HENDERSONVILLE 28739 LOMA LINDA U	AN AC 65 66 86 704 692-8688	SHEALY, FRED GRAY, JR. 561 FLEMING STREET HENDERSONVILLE 28739 MED U OF SC	GS /VS AC 72 72 78 704 693-1778
DENNISON, HERBERT EUGENE 630 FIFTH AVENUE, WEST HENDERSONVILLE 28739 U OF MICHIGAN	OBG AC 61 68 68 704 692-2258	KIRKLEY, MARGARET ANNE 518 SIXTH AVENUE, WEST HENDERSONVILLE 28739 U OF EDINBURGH	FP AC 68 71 76 704 697-7805	SHETTERLY, ROGER DAVIS 1027-B FLEMING STREET HENDERSONVILLE 28739 U OF CINCINNATI	OPH AC 67 67 75 704 693-4161
DOWDESWELL, ROBERT HORTON 735 SIXTH AVE., WEST HENDERSONVILLE 28739 MED U OF SC	PTH AC 70 70 78 704 697-6781	KIRKLEY, SIDNEY EUGENE 518 SIXTH AVENUE, WEST HENDERSONVILLE 28739 MED U OF SC	IM AC 66 66 76 704 697-7805	SIGMON, LEE MERRELL 121 TIMBER CREEK ROAD HENDERSONVILLE 28739 MED U OF SC	PTH /DMP AC 72 73 81 704 693-6522
DUNN, JACK NEWTON 512 SIXTH AVENUE, WEST HENDERSONVILLE 28739 MED U OF SC	U AC 60 60 72 704 692-6262	KRISHINGNER, GENE LAVERE ROUTE #8, BOX 81-A HENDERSONVILLE 28739 LOMA LINDA U	GS AC 65 65 76 704 693-1729	SMOLOWITZ, EDWIN LARRY 735 6TH AVE. WEST HENDERSONVILLE 28739 MED COLL OF VA	U AC 75 76 84 704 697-0527
EATON, ROBERT FARRELL 1027 FLEMING STREET HENDERSONVILLE 28739 LA STATE U	ORS AC 66 66 76 704 692-5781	KRUM, RONALD EUGENE P. O. BOX 5420 FLETCHER 28732 LOMA LINDA U	FP AC 60 60 70 704 687-1416	SPENGLER, JOHN ROBERT PO BOX 876 FLAT ROCK 28731 ST LOUIS U	R AC 53 65 66 704 693-6522
ELLIS, DAVID A. 630 5TH AVE. WEST HENDERSONVILLE 28739 TULANE U	OBG AC 83 83 87 704 692-2258	LATOURETTE, KENNETH ABRAM P. O. BOX 177 FLAT ROCK 28731 NEW YORK U	PTH L/RT 39 39 55 704 692-1641	STOUT, JAMES STEVENS E.I. DUPONT DENEMOURS, INC. BREVARD 28712 MED COLL OF GA	OM /EM AC 57 57 75 704 885-5349
FALVO, SAMUEL CATANZARO 511 SIXTH AVENUE, WEST HENDERSONVILLE 28739 GEORGETOWN U	CRS /GS AC 52 59 59 704 693-9566	LOVE, DAVID EUGENE 513 N. JUSTICE ST. HENDERSONVILLE 28739 LOMA LINDA U	OBG AC 65 65 72 704 687-0122	STRANGE, JOHN NELSON, JR. 561 FLEMING ST. HENDERSONVILLE 28739 U OF MISSISSIPPI	GS /VS AC 77 77 86 704 693-1778
FRANCIS, ROBERT DEAN 1027 FLEMING STREET HENDERSONVILLE 28739 DUKE	ORS /HS AC 77 78 84 704 692-5781	LUTZ, JAMES DWIGHT 401 SIXTH AVENUE, WEST HENDERSONVILLE 28739 DUKE	AN AC 45 48 49 704 693-9669	STRICKLAND, WILLIAM H., JR. 510 FLEMING STREET HENDERSONVILLE 28739 BOWMAN GRAY	FP AC 54 54 57 704 692-8410
GIBSON, LLOYD R. 20 HOSPITAL DR. BREVARD 28712 U OF MICHIGAN	ORS AC 82 84 88 704 884-2055	MACKEL, DAVID FREDERICK 1027 FLEMING STREET HENDERSONVILLE 28739 INDIANA U	ORS AC 74 74 83 704 692-5781	THOMAS, COLIN EDWARD 512 SIXTH AVENUE, WEST HENDERSONVILLE 28739 LA STATE U	U AC 67 67 74 704 692-6262

45. HENDERSON COMPONENT SOCIETY (Continued)

VAN KIRK, MARION P. 1701 OLD VILLAGE RD. HENDERSONVILLE 28739 U TX-SAN ANTONIO	OPH AC 83 83 87 704 693-1773	VOLK, JAMES VICTOR 722 W. FIFTH AVE. HENDERSONVILLE 28739 BOWMAN GRAY	PD AC 72 75 86 704 693-3296	WILLIAMS, DAVID R. 512 6TH AVE. WEST HENDERSONVILLE 28739 U OF SOU ALA	U AC 82 83 88 704 692-6262
VANDERWERF, JOSEPH NELSON 611 FIFTH AVE., WEST HENDERSONVILLE 28739 GEO WASHINGTON U	FP AC 73 74 84 704 692-5068	WALKER, PAUL CREASY 510 FLEMING ST. HENDERSONVILLE 28739 BOWMAN GRAY	FP AC 81 82 86 704 693-7287	WILLIAMS, JOHN HOWARD PARDEE MEMORIAL HOSPITAL HENDERSONVILLE 28739 BAYLOR	R AC 64 69 73 704 693-0797
VEAZEY, ALEX H., JR. 1228 CHANTELOUP DR. HENDERSONVILLE 28739 U OF PENN	FP RT 51 51 56 704 693-6124	WALL, ANTOINETTE WILKES PO BOX 1004 SKYLAND 28776 U OF MIAMI	EM AC 72 73 77	WYMAN, JOHN SHELDON 715 FLEMING ST. HENDERSONVILLE 28739 U OF MICHIGAN	EM /IM AC 36 36 74 704 693-6522
VEAZEY, DANIEL BURT 611 FIFTH AVE., WEST HENDERSONVILLE 28739 U OF NC	FP AC 81 82 85 704 692-7111	WEADON, PRESTON STENZ 475 KING WILLIAM ROAD HENDERSONVILLE 28739 CORNELL U	NS RT 41 51 82 704 697-6857	ZINKE, DAVID PO BOX 40 EDNEYVILLE 28727 LOMA LINDA U	FP AC 47 47 87 704 685-7045

47. HOKE COMPONENT SOCIETY

OFFICERS—**President:** Robert G. Townsend, Jr., M.D., 504 S. Main St., Raeford 28376 (919 875-5105)**Secretary:** Ramniklal J. Zota, M.D., 116 Campus Ave., Raeford 28376 (919 875-8106)

BARTH, GEORGE BITTMAN, II 940 FEDERAL RD. BROOKFIELD, CT 06804 MED SCH-UMDNJ	FP AC 82 83 85 919 875-5101	RICHARDSON, LUCILE WELSH 355 PEACH STREET PINEBLUFF 28373 MED COLL OF VA	PUD /IM L/RT 43 56 57 919 281-3236	TOWNSEND, ROBERT GLENN, JR. 405 S. MAIN ST. PO BOX 665 RAEFORD 28376 U OF LOUISVILLE	FP AC 61 64 64 919 875-5101
JORDAN, RILEY MOORE 303 PATTERSON ST. PO BOX 669 RAEFORD 28376 BOWMAN GRAY	FP AC 51 51 53 919 875-5151	RICHER, CHARLOTTE MARTHA DIV. OF HEALTH SERVICES STE. 506, WACHOVIA BLDG. FAYETTEVILLE 28301 U OF HEIDELBERG	PUD /PD AC 46 62 63 919 486-1191	ZOTA, RAMNIKAL JECHAND 116 CAMPUS AVENUE RAEFORD 28376 BARODA U	FP AC 71 71 75 919 875-8106

49. IREDELL COMPONENT SOCIETY

OFFICERS—**President:** F. Stafford Wearn, M.D., 230 W. Glen Eagles Rd., Statesville 28677 (704 872-9494)**Secretary:** James S. Foushee, M.D., 414 Holland Dr., Statesville 28677 (704 872-5729)

ABELL, JAMES CURTIS 925 THOMAS STREET STATESVILLE 28677 U OF NC	PD AC 66 66 73 704 872-9595	BOYD, RICHARD ARMISTEAD STATESVILLE MEDICAL GROUP PO BOX 1460 STATESVILLE 28677 U OF NC	OBG AC 56 56 63 704 878-2011	DUNLAP, BENJAMIN EMERSON 925-C THOMAS STREET STATESVILLE 28677 U OF NC	FP AC 63 63 69 704 872-7636
ADAMS, RICHARD WESLEY 770 HARTNESS ROAD STATESVILLE 28677 BOWMAN GRAY	ORS AC 62 63 68 704 873-1851	BRADFORD, JAMES HEDRICK 738-A BRYANT ST. STATESVILLE 28677 BOWMAN GRAY	CD /IM AC 75 75 81 704 873-1189	ECKLEY, GEORGE MORGAN, JR. 110-P STOCKTON STREET STATESVILLE 28677 U OF PENN	IM AC 43 60 61 704 873-4334
ALFORD, JAMES DAVID 427 E. STATESVILLE AVENUE MOORESVILLE 28115 U OF NC	GS /TS AC 66 66 81 704 663-4065	BRINTON, LEWIS FLOYD 603 E. CENTER AVE. MOORESVILLE 28115 NEW YORK MED COL	GS /GYN AC 58 63 65 704 664-1414	EDWARDS, ALLEN RICHARD RT. #3, BOX B-240 STATESVILLE 28677 U OF NC	FP /EM AC 79 80 86 704 873-0281
BARKER, ROGER WILLIAM 702 HARTNESS ROAD STATESVILLE 28677 U OF TENNESSEE	OTO /HNS AC 67 69 74 704 873-5224	BROWN, ROBERT CALVIN PO BOX 5686 STATESVILLE 28677 U OF NC	IM AC 83 84 86 704 663-4443	FERGUSON, STEPHEN DEXTER 403 E. STATESVILLE AVE. MOORESVILLE 28155 BOWMAN GRAY	IM AC 84 84 88 704 663-4443
BENFIELD, RONALD WM. 520 BROOKDALE DR. STATESVILLE 28677 GEO WASHINGTON U	ORS /HS AC 81 86 87 704 872-7492	CALHOUN, AUBREY DANIEL 403 E. STATESVILLE AVE. MOORESVILLE 28115 U OF NC	IM AC 83 84 86 704 663-4443	FOREMAN, FRANK LEROY 706 HARTNESS ROAD STATESVILLE 28677 MED U OF SC	D AC 71 78 80 704 873-0545
BENTLEY, RALPH LUTHER 332 N. CENTER STREET STATESVILLE 28677 U OF NC	PD AC 60 60 67 704 878-2011	CAMPBELL, FRANCIS MICHAEL 503 E. STATESVILLE AVE. MOORESVILLE 28115 MED U OF SC	GS AC 79 81 86 704 663-7905	FULGHUM, EDWIN MORTON, JR. PO BOX 1460 STATESVILLE 28677 U OF NC	OBG AC 75 74 80 704 878-2011
BERMAN, JEFFREY MICHAEL 750-D HARTNESS RD. STATESVILLE 28677 U OF BARCELONA	AN AC 77 82 88 704 873-5651	CANUPP, TONY WAYNE PO BOX 729 MOORESVILLE 28115 BOWMAN GRAY	IM /EM AC 73 73 73 704 663-5566	GOFF, JACOB BENJ. M., JR. P. O. BOX 1727 STATESVILLE 28677 LA STATE U	U AC 63 63 73 704 873-3766
BEVIS, CHARLES ALAN 1835 DAVIE AVE., STE. 415 STATESVILLE 28677 BOWMAN GRAY	ORS AC 69 69 74 704 872-7676	CASH, DAVID WAYNE 310 DAVIE AVE. STATESVILLE 28677 U OF NC	FP AC 82 83 80 704 873-3269	GOODE, THOMAS VANCE, III P. O. BOX 1068 STATESVILLE 28677 MED COLL OF VA	GS AC 43 47 49 704 873-7253
BOWEN, BENJAMIN CURETON RT. #9, BOX 183-H STATESVILLE 28677 MED U OF SC	FP AC 63 63 69 704 878-6592	CAUSEY, ANDREW JACKSON 210 VALLEY STREAM ROAD STATESVILLE 28677 VANDERBILT U	OPH /OTO L 43 46 56 704 873-8337	GOODSON, PHILLIP RICHARD 1308 DAVIE AVENUE STATESVILLE 28677 BOWMAN GRAY	OBG AC 76 76 81 704 873-1436
BOWEN, SAMUEL T. PO BOX 490 DAVIDSON 28036 U OF TEXAS	IM AC 84 85 87 704 664-5151	DICKEY, RICHARD ALLEN PO BOX 1460 OLD MOCKSVILLE RD. STATESVILLE 28677 COLUMBIA U	END /IM AC 63 63 84 704 878-2011	GREEN, RAY LYMAN 1216 DAVIE AVE. STATESVILLE 28677 BOWMAN GRAY	OBG AC 72 72 75 704 873-1436
				GRIFFIN, THOMAS RAY P. O. BOX 328 TROUTMAN 28166 BOWMAN GRAY	FP AC 47 48 50 704 528-4588

49. IREDELL COMPONENT SOCIETY (Continued)

GRIMM, RUBY ANN 738 BRYANT ST. STATESVILLE 28677 WEST VA U	ON /HEM AC 75 77 82 704 873-2219	LITTLE, LONNIE MARCUS 206 ST. ANDREWS ROAD STATESVILLE 28677 JEFFERSON	GP L/RT 25 25 27 704 873-7442	ROWE, CHARLES ROY, JR. 750 HARTNESS ROAD STATESVILLE 28677 VANDERBILT U	GS AC 50 50 57 704 873-3929
HAMILTON, BUFORD L., JR. P. O. BOX 8 STONY POINT 28678 U OF PENN	FP /GP AC 61 62 74 704 585-2953	MCLAIN, BILL REID ROUTE #2, BOX 542 MOORESVILLE 28115 BOWMAN GRAY	FP RT 55 55 58 704 663-3584	RYMUZA, JEFFREY PO BOX 1460 OLD MOCKSVILLE RD. STATESVILLE 28677 HAHNEMANN	IM /PUD AC 74 75 84 704 878-2011
HARBERTS, ARTHUR STANLEY P. O. BOX 1460 STATESVILLE 28677 U OF ZURICH	OBG AC 57 61 74 704 878-2011	MCNABB, JAMES WILLIAM RT. #7, BOX 720 MOORESVILLE 28115 U OF SOU FLORIDA	FP AC 82 83 86 704 663-7328	SCHERER, IRVIN GEORGE P. O. BOX 7 UNION GROVE 28689 U OF KANSAS	FP AC 54 57 57 704 539-4731
HARDAWAY, JOHN STEGER 527 BROOKDALE DR. STATESVILLE 28677 BOWMAN GRAY	FP AC 52 52 54 704 872-7429	MEADORS, WALTER V., JR. RT. 9, BOX 183-M OLD MOCKSVILLE PROF. CTR. STATESVILLE 28677 U OF NC	OBG AC 79 79 87 704 873-7250	SERENE, JAMES WILLIAM 141 N. KELLY STREET STATESVILLE 28677 BOWMAN GRAY	ORS AC 75 75 81 704 872-7492
HARRIS, BRUCE C. PO BOX 1460 STATESVILLE MEDICAL GROUP STATESVILLE 28677 U OF MISSOURI	GS AC 81 86 87 704 878-2011	MILLER, HERSEY EUGENE 702 HARTNESS ROAD STATESVILLE 28677 BOWMAN GRAY	OTO /HNS AC 70 70 78 704 873-5224	SERENE, MARY BRUCE M. 141 N. KELLY STREET STATESVILLE 28677 BOWMAN GRAY	AN AC 75 75 83 704 873-5661
HARTNESS, ALBERT R. RT. #2, BOX 386-B DENVER 28037 BOWMAN GRAY	FP AC 61 61 65 919 483-9385	NEAL, DEMAR AUSTIN, III 708 HARTNESS ROAD STATESVILLE 28677 OHIO STATE U	GS /CDS AC 78 79 84 704 873-1024	SHAFER, IRVING EVERETT, JR. P. O. BOX 588 STATESVILLE 28677 MED COLL OF VA	R AC 49 49 50 704 873-5661
HENDERSON, ANDREW M., JR. 252 W. MCLELLAND AVENUE MOORESVILLE 28115 BOWMAN GRAY	GP AC 50 50 52 704 664-5477	NICHOLSON, JOHN HARVEY, II 760-G HARTNESS ROAD STATESVILLE 28677 MED COLL OF VA	IM AC 45 45 54 704 873-8368	†SHAW, LLOYD ROOSEVELT 533 CAROLINA AVE. S. DECEASED -- 3-3-88 STATESVILLE 28677 MED COLL OF VA	GYN 30 30 31 704 873-9642
HILL, PATRICIA KAYE PO BOX 821 STATESVILLE 28677 U OF NC	P AC 79 80 86 704 873-8446	OGBURN, PAUL LANIER PO BOX 1460 STATESVILLE 28677 DUKE	GS AC 46 46 60 704 878-2011	SKEEN, WILLIAM WALDO 417 E. STATESVILLE AVENUE MOORESVILLE 28115 GEO WASHINGTON U	FP AC 60 60 65 704 663-3063
HOLBROOK, JOSEPH SAM 211 N. RACE STREET STATESVILLE 28677 U OF PENN	IM /CD L 32 32 34 704 872-1000	PARKIN, CHARLES EVAN 737 ST. CLOUD STATESVILLE 28677 U OF TENNESSEE	AN AC 63 62 80 704 873-5661	SLIWINSKI, STANLEY F., JR. P. O. BOX 1460 STATESVILLE 28677 JOHNS HOPKINS	OPH AC 66 66 77 704 878-2011
HOLLAND, WALTER BOWLIN IREDELL EYE CLINIC PO BOX 591 STATESVILLE 28677 BOWMAN GRAY	OPH AC 75 76 83 704 872-4108	PETROZZA, JOSEPH ANTHONY 110-H STOCKTON ST. STATESVILLE 28677 JEFFERSON	GE /IM AC 78 80 84 704 873-1904	STEGALL, JOHN THOMAS 310 DAVIE AVENUE STATESVILLE 28677 U OF MARYLAND	FP L/RT 43 47 48 704 873-3269
JARMAN, WAYNE THOMAS 708 HARTNESS ROAD STATESVILLE 28677 BOWMAN GRAY	GS AC 74 74 80 704 873-1024	PITTMAN, ERIC WILLIAMS IREDELL MEM. HOSP. BOX 1460 STATESVILLE 28677 BOWMAN GRAY	PTH AC 66 66 76 704 873-5661	STEVENSON, ROBERT MCL. 743 SPRINGDALE RD., EAST STATESVILLE 28677 U OF NC	R AC 59 59 65 704 872-4306
KEARNS, PAUL RUTHERFORD 750-H HARTNESS ROAD STATESVILLE 28677 BOWMAN GRAY	OBG AC 46 46 49 704 872-6389	PORTO, CAMILLE WARREN STATESVILLE MEDICAL GROUP OLD MOCKSVILLE RD. STATESVILLE 28677 U OF NC	IM /PD AC 80 81 82 OTO AC	STEWART, JOHN REAGAN 515 WALNUT ST. STATESVILLE 28677 TULANE U	OTO /OPH L 35 35 52 704 873-6376
KEPLEY, MICHAEL AVERY 750-H HARTNESS RD. STATESVILLE 28677 U OF NC	OBG AC 80 82 85 704 872-6389	PRENDERGAST, MARK L. 702 HARTNESS RD. STATESVILLE 28677 BAYLOR	OTO AC 80 81 87 704 873-5224	STINSON, CHARLES S. PO BOX 1460 STATESVILLE 28677 U OF NC	IM AC 83 84 87 704 878-2011
KIRKMAN, PAUL MADISON 740 BRYANT ST. STATESVILLE 28677 BOWMAN GRAY	CD /IM AC 65 66 70 704 872-8147	PRESSLY, DAVID LOWRY 1109 DAVIE AVENUE STATESVILLE 28677 JEFFERSON	FP L 42 42 46 704 872-5671	SWANEY, PAUL EUGENE 1318 DAVIE AVE. STATESVILLE 28677 OHIO STATE U	GS /VS AC 78 79 84 704 872-0182
KOGUT, DAVID GENE 1835 DAVIE AVE. STATESVILLE 28677 HAHNEMANN	GE /IM AC 75 77 86 704 872-2768	PRITCHARD, DOUGLAS DUSSEL 504 CATS PAW LN., RT. 10 STATESVILLE 28677 BOWMAN GRAY	AN AC 72 72 86 919 873-0281	TEMPLETON, THOMAS BREVARD 521 BROOKDALE DR. STATESVILLE 28677 JEFFERSON	IM AC 55 55 62 704 872-3455
KUTNER, WILLIAM A., JR. 417 E. STATESVILLE AVE. MOORESVILLE 28115 DUKE	ORS AC 70 75 87 704 664-1060	RAM, BERNARD ALLEN 760 HARTNESS ROAD STATESVILLE 28677 U OF N DAKOTA	U AC 78 83 84 704 873-4741	TRITICO, ROCCO JOSEPH P. O. BOX 803 STATESVILLE 28677 U OF TX-HOUSTON	DR AC 76 76 81 704 872-4057
LAI, CHI-KWONG P. O. BOX 1460 STATESVILLE 28677 NATL CTR-TAIPEI	CD /IM AC 72 74 81 704 873-0281	RAM, CECIL CASPER 774 HARTNESS ROAD STATESVILLE 28677 MED U OF SC	U AC 54 54 76 704 873-3231	WALKER, HARRY GORDON 310 DAVIE AVENUE STATESVILLE 28677 U OF VIRGINIA	FP AC 49 49 53 704 873-3269
LEWIS, DOCKERY DURHAM, JR. P. O. BOX 1460 STATESVILLE 28677 BOWMAN GRAY	PD AC 55 55 60 704 878-2011	RHYNE, JAMES MOODY 757 BRYANT ST. STATESVILLE 28677 U OF NC	IM /N AC 68 68 75 704 873-5658	WALTERS, HENRY CEPHAS, JR. 509 BROOKDALE DR. STATESVILLE 28677 MED U OF SC	IM AC 76 78 82 704 872-6343
LEWIS, NEWMAN MAXVILLE P. O. BOX 1460 STATESVILLE 28677 BOWMAN GRAY	IM AC 57 57 64 704 878-2011	ROARK, ROGER LEE 750 E. HARTNESS ROAD STATESVILLE 28677 BOWMAN GRAY	GS AC 75 75 86 704 873-2516	WEARN, FRANKLIN STAFFORD P. O. BOX 1746 STATESVILLE 28677 HARVARD	GS /EM AS 32 33 77 704 872-9494
LIEU, CHONG HIEUN 146 E. MCLELLAND AVE. MOORESVILLE 28115 SEOUL NATL U	PD /GP AC 70 75 81 704 663-1155	ROBERTSON, JAMES MEBANE PO BOX 150 HARMONY 28634 TEMPLE U	GP L 32 32 34 704 546-7587	WHITE, RUSSELL A. 515 E. STATESVILLE AVE. MOORESVILLE 28115 MED COLL OF VA	OBG AC 83 86 87 704 664-5134

49. IREDELL COMPONENT SOCIETY (Continued)

WILLHIDE, MARGARET JANE PD /A AC
P. O. BOX 1460 62 62 69
STATESVILLE 28677
MED COLL OF VA 704 873-0281

50. JACKSON COMPONENT SOCIETY

OFFICERS—President: Ronald Servoss, M.D., 59 Hospital Rd., Sylva 28779 (704 586-8941)
Secretary: Benjamin Douglas, M.D., 103 Asheville Hwy., Sylva 28779 (704 586-7474)

CHOI-CHUNG, MOON SOOG PM AC EASTGATE CENTER 66 83 85 SYLVA 28779 EWA WOMANS U 704 586-5508	HAN, GWANG SOO OBG AC 19 CENTRAL STREET 63 74 75 SYLVA 28779 SEOUL NATL U 704 586-4096	MORGAN, RALPH SILER CD /IM L/RT P. O. BOX 668 41 41 48 SYLVA 28779 RUSH MED COLL 704 586-2134
CHUNG, IL WHAN U AC SYLVA UROLOGICAL CLINIC, PA 63 73 75 EASTGATE CENTER SYLVA 28779 SEOUL NATL U 704 586-5507	HEFFINGTON, MARK WILLIAM FP AC P. O. BOX 510 78 79 84 CASHIERS 28717 U OF TENNESSEE 704 743-2491	NASH, WILL LIGHT FP AC 34 FISHER CREEK ROAD 58 58 75 SYLVA 28779 U OF TEXAS-SW 704 586-4012
CORLEY, MALCOLM OSBOURNE DR AC ROUTE #1, BOX 391 68 68 75 SYLVA 28779 MED U OF SC 704 586-6371	HENNING, EMIL HELLER, JR. GP /GER AC P. O. BOX 126 40 64 70 SYLVA 28779 U OF MARYLAND 704 586-4035	PHILLIPS, HERBERT ORLANDAH, IV ORS AC SYLVA ORTHOPEDIC ASSOC. 81 82 85 SYLVA 28779 U OF NC 704 586-5531
DOUGLAS, BENJAMIN OTO /HNS AC 103 ASHEVILLE HIGHWAY 75 83 86 SYLVA 28779 U OF NC 704 586-7474	HOOVER, ROBERT LESLIE R AC C. J. HARRIS HOSPITAL, INC. 64 64 72 SYLVA 28779 BOWMAN GRAY 704 586-7000	SECOSAN, CRAIG JOHN OPH AC PO BOX 517 81 82 86 SYLVA 28779 WASHINGTON U 704 586-2129
DURR, WALTER JACOB GS L P. O. BOX 455 37 37 52 SYLVA 28779 DOWNSTATE ME CTR 704 586-6060	HURT, JOE PAUL PTH /NA AC 163 MONTEITH BRANCH ROAD 65 65 72 SYLVA 28779 U OF NC 704 586-8721	SERVOSS, RONALD LEE AN AC P. O. BOX 984 70 73 76 SYLVA 28779 LOMA LINDA U 704 586-8941
EL-BAYADI, NAGUI R. GS AC SKYLAND MED. BLDG. 57 69 70 SKYLAND DRIVE SYLVA 28779 U OF AIN SHAMS 704 586-2156	JACKSON, MURRAY T., JR. R AC P. O. BOX 1043 51 51 79 SYLVA 28779 DUKE 704 586-8941	SERVOSS, SUE ANNE BOYNTON FP /PH AC P. O. BOX 984 67 68 77 SYLVA 28779 LOMA LINDA U 704 586-4083
FAULL, CLIFFORD EDWARD ORS AC 3 EASTGATE 74 75 84 SYLVA 28779 SUNY-SYRACUSE 704 586-5531	JONES, FRANK COLLINS, JR. GS H KILIMANJARO MED. CTR 60 60 73 THE GOOD SAMARITAN FOUNDATION MOSHI, TANZANIA, E.AFRICA EMORY U 704 586-6665	SMALLWOOD, JAMES CLAYTON OBG /IM AC 10 EASTGATE CENTER 75 76 84 SYLVA 28779 MED COLL OF GA 704 586-2135

51. JOHNSTON COMPONENT SOCIETY

OFFICERS—President: Mark E. Mayer, M.D., 307 W. Main, Benson 27504 (919 984-2011)
Secretary: Joseph Thomas Liverman, M.D., 706 Wilkins St., Smithfield 27577

ALDERMAN, EDWARD HATCHER IM /FP AC P. O. BOX 278 45 45 48 FOUR OAKS 27524 MED COLL OF VA 919 963-3148	FAN, JACK J. FP AC P. O. BOX 807 68 74 76 CLAYTON 27520 CHINA MED COLL 919 553-5711	LEE, ALLEN HENRY GP AC P. O. BOX 8 46 47 49 SELMA 27576 JEFFERSON 919 965-3251
BASS, THOMAS RECTOR FP AC P. O. BOX 849 57 60 61 CLAYTON 27520 U OF TENNESSEE 919 553-7158	HARTMAN, EDWIN LONZO IM AC 515 N. EIGHTH STREET 75 78 80 SMITHFIELD 27577 U OF BOLOGNA 919 934-1211	LIVERMAN, JOSEPH T., JR. FP AC 706 WILKINS STREET 80 81 85 SMITHFIELD 27577 BOWMAN GRAY 919 934-5149
BATTEN, WOODROW IM AC 601-B N. EIGHTH STREET 44 49 49 SMITHFIELD 27577 BOWMAN GRAY 919 934-8977	IBRAHIM, KAISSAR SLEIMEN GS /CDS AC 712 WILKINS STREET 57 65 66 SMITHFIELD 27577 U OF MONTEPELLIER 919 934-2360	MARZBANI, SIAMAK OBG AC 601-A N. EIGHTH ST. 80 80 88 SMITHFIELD 27577 AUTONOMA UNIV 919 934-3015
BYLCIW, STANLEY ROBERT ORS AC PO BOX 1538 75 77 86 SMITHFIELD 27577 U OF ROMA 919 934-1094	JOHNSON, THOMAS MILTON FP AC 709 NORTH STREET 57 57 62 SMITHFIELD 27577 U OF NC 919 934-8556	MAYER, MARK EDWARD IM AC 307 W. MAIN ST. 82 84 84 BENSON 27504 U OF ILLINOIS 919 894-2011
CATZ, NITZAN D. OTO /HNS AC 607 BERKSHIRE RD. 81 83 87 SMITHFIELD 27577 AUTONOMA UNIV 919 934-0948	JONES, DONNIE HUE, JR. GP AC P. O. BOX 158 42 42 47 PRINCETON 27569 U OF VIRGINIA 919 936-5171	MISULIA, ANDREW G. FP AC 115-A N. WILSON 81 82 84 DUNN 28334 U OF MARYLAND 919 892-4096
CREECH, JOSEPH JAN IM AC 707 LASSITER ST. 78 80 85 SMITHFIELD 27577 DES MOINES OST 919 934-0212	JORDAN, LYNDON KIRKMAN FP AC P. O. BOX 760 61 61 65 SMITHFIELD 27577 DUKE 919 934-7687	MOHAMED, ADEL WAGDI U AC 415 N. SEVENTH STREET 65 65 76 SMITHFIELD 27577 CAIRO U 919 934-5955
DANIEL, THOMAS MANNING PD AC 501 SELMA RD. 51 54 54 PO BOX 568 SMITHFIELD 27577 DUKE 919 934-7123	LAL, MADAN OPH AC 925 SELMA RD. 67 82 83 PO BOX 239 SMITHFIELD 27577 M C OF AMRITSAR 919 934-3108	MOTAPARTHY, V. C. GE 2419-C E. ASH ST. 74 79 84 GOLDSBORO 27530 KARNATAK U 919 731-2526
DHILLON, TEJPAL SINGH ORS AC P. O. BOX 1688 63 73 76 SMITHFIELD 27577 M C OF AMRITSAR 919 934-3091	LASSITER, WILL HARDEE, JR. GP L/RT ROUTE #3, BOX 90 38 38 39 FOUR OAKS 27524 MED COLL OF VA 919 934-8783	OLSON, ROBERT MORTIMER OPH L/RT ROUTE #1, BOX 229-R 32 51 51 KENLY 27542 GEO WASHINGTON U 919 284-2526

51. JOHNSTON COMPONENT SOCIETY (Continued)

PEREZ-SELDEN, ALICE R. 601-A BERKSHIRE RD. SMITHFIELD 27577 TEMPLE U	GS AC 79 81 86 919 934-0281	SHARMA, DEVENDRA P. O. BOX 1690 SMITHFIELD 27577 M C OF AMRITSAR	IM AC 64 64 74 919 934-5568	WOODARD, BARNEY LELON P. O. BOX 129 KENLY 27542 U OF MARYLAND	GP L 33 33 35 919 284-3080
PITTARD, JESSE C. 706 WILKINS ST. SMITHFIELD 27577 U OF NC	FP AC 77 72 86 919 934-5149	SINGH, MANMOHAN 713 NORTH ST. PO BOX 1196 SMITHFIELD 27577 M C OF AMRITSAR	GS AC 60 60 74 919 934-2616	WYMAN, ROBERT WEST 110 WADDELL STREET SELMA 27576 U OF MICHIGAN	FP AC 67 68 73 919 965-3055
POTEAT, HUBERT MCNEILL, JR. P. O. BOX 88 SMITHFIELD 27577 JEFFERSON	GS L/RT 40 40 51 919 934-2524	SOX, CARL CAUGHMAN P. O. BOX 429 KENLY 27542 GEO WASHINGTON U	GP L 32 32 36 919 284-4149	ZEEDICK, JOHN FRANCIS IVAN P. O. BOX 1950 SMITHFIELD 27577 U OF PITTSBURGH	AN/PUD AC 54 55 85 919 934-5213
RANGAR, JITINDER SINGH P. O. BOX 58 SMITHFIELD 27577 M C OF AMRITSAR	DR /NM AC 64 64 82 919 934-8171	WHARTON, C. WATSON 201 W. MEADOWBROOK DRIVE SMITHFIELD 27577 LA STATE U	GP L/RT 37 37 37 919 934-8257	ZUBER, THOMAS JOHN PO BOX 699 BENSON 27504 U OF NC	FP AC 83 84 86 919 894-2011
SHAFTNER, KIMBERLY K. PO BOX 2363 SMITHFIELD 27577 OHIO STATE U	AN/EM AC 80 81 88 919 934-8171	WOODALL, LEONARD SCHMICH 711 NORTH STREET SMITHFIELD 27577 U OF NC	OBG AC 56 56 63 919 934-7696		

53. LEE COMPONENT SOCIETY

OFFICERS—**President:** S. David Ciliberto, M.D., 101 S. Vance St., Sanford 27330 (919 776-0551)**Secretary:** Edward S. Stanton, M.D., 1816 Doctors Dr., Sanford 27330 (919 775-7146)

AINSLEY, THELLIE RUPERT, JR. 1007 CARTHAGE ST. SANFORD 27330 U OF NC	IM AC 78 81 82 919 774-4343	DUMMIT, ELDON STEVEN, JR. P. O. BOX 1378 SANFORD 27330 VANDERBILT U	PTH AC 59 59 72 919 774-2272	LITTLE, DOUGLAS JONATHAN 136-A CARBONTON ROAD SANFORD 27330 U OF NC	IM /CD AC 71 71 80 919 776-0719
ALEXANDER, LAWRENCE M. 555 CARTHAGE STREET SANFORD 27330 DUKE	FP AC 52 54 54 919 774-6518	EBKEN, RICHARD KEPPLER P. O. BOX 1169 SANFORD 27330 U OF PITTSBURGH	GS /TS AC 68 68 85 919 775-7146	LUTTERLOH, ISAAC HAYDEN, JR. P. O. BOX 1269 SANFORD 27330 JEFFERSON	IM AC 52 52 53 919 775-3911
BEEMER, CHARLES T. PO BOX 1169 1816 DOCTORS' DR. SANFORD 27330 MED U OF SC	ORS AC 74 77 87 919 775-7232	ESPORAS, DEMOSTHENES C. 1610 LORD ASHLEY DR. SANFORD 27330 CEBU INST OF MED	U AC 68 72 75 919 775-7146	MACINTOSH, VICTOR HENRY 207 E. MAIN ST. SANFORD 27330 DUKE	FP AC 75 78 85 919 774-6282
BLUE, JOHN FREDERICK P. O. BOX 820 SANFORD 27330 GEO WASHINGTON U	FP AC 51 52 53 919 775-7522	FOUSHEE, JOHN CALDWELL 1710 CARTHAGE ST. SANFORD 27330 BOWMAN GRAY	GS L/RT 44 44 53 919 775-7146	MALLIS, GARY CRAIG 555 CARTHAGE ST. SANFORD 27330 ALBERT LUDWIGS U	PD AC 83 84 87 919 776-7534
BUTLER, LARRY STEPHEN 1832 DOCTOR'S DR. SANFORD 27330 U OF KENTUCKY	OBG AC 79 79 85 919 774-8761	GANTT, CHARLES BERNARD, JR. 1606 LORD ASHLEY DR. SANFORD 27330 U OF ALABAMA	DR AC 66 68 76 919 775-2234	MANGUM, JOHN ROWLAND 555 CARTHAGE ST. SANFORD 27330 U OF NC	FP AC 81 82 86 919 774-6518
BYERLY, JAMES HAMPTON P. O. BOX 340 SANFORD 27330 NORTHWESTERN U	GP L 35 35 38 919 775-5932	GIBSON, JAMES FRANKLIN 1916 WILKINS DRIVE SANFORD 27330 DUKE	GS /ADM AC 56 56 63 919 776-5191	MCCONVILLE, ROBERT H., JR. 611 WICKER ST. PO BOX 387 SANFORD 27330 INDIANA U	FP AC 72 73 80 919 774-6023
CHEESBOROUGH, JOHN D. 827 S. HORNER BOULEVARD SANFORD 27330 DUKE	D AC 75 77 82 919 775-7926	GORDON, MICHAEL ALAN 1816 DOCTORS DR. SANFORD 27330 TUFTS U	GS AC 76 76 88 919 775-7146	MCLEOD, MARY MARGARET P. O. DRAWER 1047 SANFORD 27330 VANDERBILT U	PD /A L/RT 35 35 46 919 775-7642
CILIBERTO, SAMUEL DAVID 101 S. VANCE STREET SANFORD 27330 DOWNSTATE ME CTR	ORS AC 67 68 76 919 776-0551	HALL, WILLIAM ERNEST 611 WICKER STREET SANFORD 27330 U OF ILLINOIS	FP AC 73 74 84 919 774-6023	OELRICH, AUGUST M. P. O. BOX 1169 SANFORD 27330 U OF IOWA	GS L 39 47 48 919 775-7146
CLINE, ROBERT SEITZ 555 CARTHAGE STREET SANFORD 27330 U OF NC	FP AC 57 57 61 919 774-6518	HARTNESS, WILLIAM RUFUS, JR. 615 CARR STREET SANFORD 27330 U OF LOUISVILLE	FP L 38 38 39 919 775-3491	PARROTT, OLSON, II 1832 DOCTORS DR. SANFORD 27330 U OF KENTUCKY	OBG AC 75 76 88 919 774-8761
COVINGTON, MARTIN CADE 212 W. MAIN STREET SANFORD 27330 MED COLL OF VA	FP AC 50 50 51 919 776-1412	HOWARD, PAUL OSMON 555 CARTHAGE STREET SANFORD 27330 U OF VIRGINIA	FP AC 55 57 57 919 774-6518	PATE, MARION BUTLER, III 555 CARTHAGE ST. SANFORD 27330 BOWMAN GRAY	GE /IM AC 81 82 80 919 774-4511
COX, STEPHEN HAMPTON 2208 BROOKWOOD TRAIL SANFORD 27330 MED COLL OF VA	FP /A AC 77 84 86 919 258-6521	JESSUP, PAMELA KAY H. 555 CARTHAGE ST. SANFORD 27330 BOWMAN GRAY	R AC 55 55 62 919 776-1210	PATTERSON, ROBERT WILLIAM 110 FIELDS DR. PO BOX 1860 SANFORD 27330 U OF NC	FP /OM AC 78 79 75 919 774-6320
DOTTERER, ELIZABETH JAMES 118 HAWKINS AVENUE SANFORD 27330 U OF PENN	IM /GYN L 39 39 44 919 776-5723	JORDAN, ROBERT CALHOUN, JR. P. O. BOX 1007 SANFORD 27330 U OF NC	OBG AC 66 66 73 919 775-2304	PURVIS, WILLIAM HENRY 1816 DOCTORS DR. SANFORD 27330 U OF NC	U AC 73 73 80 919 776-7534
DOTTERER, JOHN EMANUEL 118 HAWKINS AVENUE SANFORD 27330 U OF PENN	GER /FP L 38 39 46 919 776-5723	KESLER, ARCHIE DEAN, JR. 109-A S. VANCE STREET SANFORD 27330 MED COLL OF VA	OTO /OT AC 74 78 87 919 774-6829	REESE, MITCHELL CRAWFORD 555 CARTHAGE STREET SANFORD 27330 MED COLL OF VA	PD AC 77 78 84
		LELIEVER, WM. CHARLES 1911 K. M. WICKER DR. SANFORD 27330 QUEENS U			

53. LEE COMPONENT SOCIETY (Continued)

SIMMONS, JAMES SLATER	FP L/RT	STANTON, EDWARD SPIRES	GS /TS AC	†WRIGHT, ROBERT L.	OPH
P. O. BOX 850	34 34 66	1816 DOCTORS DR.	79 81 84	409 CARTHAGE ST.	56 57 83
SANFORD 27330		P. O. BOX 1169		DECEASED--5-15-88	
MEHARRY MED COLL	919 775-7425	SANFORD 27330		SANFORD 27330	
SIMON, KEITH JAMES	ORS AC	DUKE	919 775-7146	U OF MARYLAND	919 776-7549
1716 LYNNWOOD COURT	79 80 88	TYLER, MICHAEL JOSEPH	FP AC	WROCZYNSKI, BRIAN F.	EM /FP AC
SANFORD 27330		RT. #5, BOX 7	79 79 84	1524 PHILLIPS DR.	79 82 88
M C OF WISCONSIN	919 775-7232	PITTSBORO 27312		SANFORD 27330	
SMITH, ERASTUS, JR.	IM AC	TEMPLE U	919 542-2731	WEST VA U	919 775-7140
136-A CARBONTON RD.	73 76 80	WHITE, WILLIAM HENRY, JR.	OBG AC		
PO BOX 1768		109-A S. VANCE STREET	61 61 69		
SANFORD 27330		SANFORD 27330			
TEMPLE U	919 775-5457	U OF NC	919 775-2304		

54. LENOIR-GREENE COMPONENT SOCIETY

OFFICERS—**President:** George W. Riddick, M.D., Kinston Clinic, N., Kinston 28501 (919 522-1611)**Secretary:** Charles Classen, M.D., Kinston Clinic, N., Kinston 28501 (919 522-2020)

AGSTEN, JOSEPH EDWARD	FP AC	CRANZ, OSCAR WILLIAM	GS L/RT	GILMORE, SAMUEL JOSEPH	OBG AC
107 AIRPORT ROAD	73 73 78	1605 DUBOSE DR.	31 31 36	KINSTON CLINIC, NORTH, STE. E	68 68 76
KINSTON 28501		PO BOX 1316		KINSTON 28501	
U OF NC	919 527-4146	KINSTON 28501		INDIANA U	919 522-4333
ANAND, RAKESH TARLOK	AN AC	MED COLL OF VA	919 523-3677	HAGINS, DAVID MICHAEL	OBG AC
LENOIR MEMORIAL HOSPITAL	79 79 87	CUMMINGS, RICHARD EDWARD	PS AC	KINSTON CLINIC NORTH	81 82 86
KINSTON 28501		2508 N. QUEEN STREET	77 78 87	KINSTON 28501	
U OF NAIROBI	919 522-7373	KINSTON 28501		MED COLL OF GA	919 522-4333
ANEJA, BELA LAROA	IM AC	U OF MIAMI	919 523-7082	HARPER, MATT CLEVELAND, JR.	GP AC
P.O. BOX 658	82 87 84	DALE, FREDERICK PAYNE	GS RT	CHERRY HOSP., CALLER BOX 8000	53 55 59
SNOW HILL 28580		P. O. BOX 1316	46 47 53	GOLDSBORO 27530	
LADY HARDINGE	919 747-2921	KINSTON 28501		DUKE	919 522-3162
ATCHLEY, WILLIAM D.	IM AC	TEMPLE U	919 522-1626	HENDERSON, JOHN PERCY, JR.	U AC
109 AIRPORT RD.	83 85 86	DALTON, HORACE MILTON	OPH L/RT	1701 SABRA DR.	51 51 53
KINSTON 28501		KINSTON CLINIC, NORTH	39 48 48	KINSTON 28501	
EASTERN VA	919 522-3661	KINSTON 28501		BOWMAN GRAY	919 527-3043
BAKER, JOAN MARGO	OBG AC	U OF VIRGINIA	919 522-1611	HERRING, CHARLES LEONIDAS	IM AC
105 AIRPORT RD.	79 80 84	DALY, JAMES KEARNEY	DR /P AC	310 GLENWOOD AVENUE	55 55 61
KINSTON 28501		2711 WESTBROOKE DR.	65 65 74	KINSTON 28501	
U OF NC	919 523-8383	KINSTON 28501		U OF NC	919 523-0026
BARKER, MARSHALL JAY	OBG AC	MED COLL OF VA	919 522-3443	HOLYK, PETER ROMAN	OPH AC
400 GLENWOOD AVE. STE. #15	80 81 84	DEAN, ROBERT JAMES	AN AC	DOCTORS DR., STE. B	78 79 83
KINSTON 28501		2321 STALLINGS DR.	47 47 79	KINSTON 28501	
WVA OSTEO SCH	919 527-7208	KINSTON 28501		TUFTS U	919 522-1611
BEASLEY, CHARLES BRITTON	OTO AC	ST U OF NY-BUFF	919 522-3177	HOSEA, ROBERT HAYWOOD	OTO /HNS AC
KINSTON CLINIC, NORTH	74 75 79	DECLERCK, PAUL ALBERT	FP AC	KINSTON CLINIC, SUITE K	73 73 79
KINSTON 28501		2503 N. QUEEN STREET	75 78 83	KINSTON 28501	
U OF NC	919 523-0687	KINSTON 28501		TULANE U	919 523-0687
BHOTIWIHOK, PREECHA	AN AC	U OF BRUXELLES	919 522-3717	JILCOTT, RUPERT WADSWORTH, III	IM AC
P. O. BOX 1043	70 75 78	DENNIS, PATRICK MICHAEL	OPH AC	KINSTON CLINIC NORTH, STE. H	74 76 78
KINSTON 28501		DOWN EAST EYE CENTER, PA	76 80 81	KINSTON 28501	
U OF ADELAIDE	919 522-7800	2104 N. HERRITAGE ST.		EMORY U	919 522-1404
BOUZIGARD, RAY JOSEPH	R /TR AC	KINSTON 28501		KING, MICHAEL BRIAN	CD /IM AC
KINSTON CLINIC, NORTH	66 66 76	GEORGETOWN U	919 523-9599	313 AIRPORT ROAD	71 71 78
DOCTORS DRIVE		DICKSON, ROBERT TRULOCK	GE AC	KINSTON 28501	
KINSTON 28501		806 WESTMINSTER LANE	79 80 86	U OF NC	919 522-2578
LA STATE U	919 527-7077	KINSTON 28501		KNOTT, LAWRENCE H., JR.	GS /CDS AC
BROOKS, CHARLES MICHAEL	OBG AC	MED COLL OF GA	919 522-3072	P. O. BOX 1316	72 72 80
KINSTON CLINIC NORTH	81 81 79	DUBOSE, JOHN MCNEELY	TS /GS AC	KINSTON 28501	
DOCTORS DR., STE. E		P. O. BOX 1316	59 60 68	BOWMAN GRAY	919 522-1626
KINSTON 28501		KINSTON 28501		KONDOS, FRANK DAVID	FP
BOWMAN GRAY	919 522-3373	JOHNS HOPKINS	919 522-1626	102 PARKWOOD DR.	83 83 00
CARRASCO, LEONOR C.	A AC	DUMAS, MARK NEAL	IM AC	SNOW HILL 28580	
1306 N. HERRITAGE	63 73 87	313 AIRPORT RD.	81 82 87	U OF OKLAHOMA	919 797-8817
KINSTON 28501		KINSTON 28501		KOONTZ, JACK ALEXANDER	OM
U OF SANTO TOMAS	919 523-5461	U OF ALABAMA	919 522-3072	PO BOX 800	64 64 69
CASEY, DENNIS NELSON	DR AC	EVERETT, ROY NATHAN	PUD AC	KINSTON 28501	
KINSTON CLINIC, NORTH	82 86 81	109 AIRPORT ROAD	79 80 84	U OF NC	919 522-6100
KINSTON 28501		KINSTON 28501		KROEGER, RICHARD JAMES	GE /IM AC
U OF NC	919 527-7077	EASTERN VA	919 522-4094	1802 OXFORD ROAD	78 78 84
CLASSEN, CHARLES HENRY, JR.	ORS AC	FLOURNOY, JOHN EPPES	R AC	KINSTON 28501	
KINSTON CLINIC, NORTH, STE. F	66 75 76	KINSTON CLINIC, NORTH	66 66 71	SUNY-SYRACUSE	919 522-0285
KINSTON 28501		DOCTORS DRIVE		LANGLEY, JOHN THOMAS	ORS AC
U OF MARYLAND	919 522-2020	KINSTON 28501		KINSTON CLINIC, NORTH, STE. F	55 55 63
COOPER, EDWIN BRANAN, JR.	ORS /PM AC	MED COLL OF VA	919 527-7077	DUKE	919 522-2020
1902 STANTON RD.	66 66 78	FOGLEMAN, ROSS LEE, JR.	FP AC	LAPRADE, BENNETT WATTERSON	OBG AC
KINSTON 28501		KINSTON CLINIC	53 55 55	123 DOGWOOD LANE	56 63 63
DUKE	919 522-2020	KINSTON 28501		KINSTON 28501	
CRAIG, ISAAC ALAN	PTH AC	DUKE	919 527-7194	U OF VIRGINIA	919 527-7605
LENOIR MEMORIAL HOSPITAL	68 68 76	FORD, CHARLES PHILLIP, JR.	OM AC	LITTLE, EDWIN PAUL	FP AC
KINSTON 28501		5216 EMERALD DR.	43 61 61	P. O. BOX 415	80 81 87
U OF NC	919 522-7141	EMERALD ISLE 28594		PINK HILL 28572	
		MED COLL OF VA	919 354-3018	JEFFERSON	919 568-4111

54. LENOIR-GREENE COMPONENT SOCIETY (Continued)

MCGIRT, MURPHY FRANK, JR. KINSTON CLI., NORTH KINSTON 28501 U OF NC	ORS AC 64 64 72 919 522-4155	PIERCE, HUBERT GAINES 313 AIRPORT ROAD KINSTON 28501 BOWMAN GRAY	IM /CD AC 58 58 65 919 522-3072	THOMPSON, JOHN HARGETT P. O. BOX 220 TRENTON 28585 U OF NC	FP RT 59 59 62 919 448-4321
MINTZ, RUDOLPH IVEY, JR. 1906 STANTON ROAD KINSTON 28501 U OF NC	OBG AC 67 67 74 919 522-3373	PULLY, ROSE 805 ROUNTREE ST. KINSTON 28501 U OF PENN	FP L/RT 51 51 54 919 523-2569	TROUTMAN, BELK CONNOR P. O. BOX 429 GRIFTON 28530 U OF MARYLAND	GP AC 52 52 53 919 524-4273
MYERS, DAN ALLEN KINSTON CLINIC, NORTH DOCTORS DRIVE KINSTON 28501 U OF NC	U AC 75 76 82 919 527-3043	RIDDICK, GEORGE WALTON, JR. KINSTON CLINIC, NORTH KINSTON 28501 U OF VIRGINIA	OPH AC 66 66 72 919 522-1611	WARD, JOHN CHARLES 410 LAKE PINES DRIVE LAGRANGE 28551 U OF NC	OM RT 54 54 55 919 566-3119
NYE, SYLVANUS WILLIAM 700 ROUNDTREE STREET KINSTON 28501 U OF ROCHESTER	PTH /CLP AC 57 58 66 919 522-7141	SABISTON, FRANK, JR. KINSTON CLINIC, NORTH BOX 1316 KINSTON 28501 U OF NC	GS /TS AC 64 64 71 919 522-1626	WEST, GEORGE HARPER 109 AIRPORT ROAD KINSTON 28501 BOWMAN GRAY	IM /CD AC 67 67 74 919 522-3661
PARKER, SAMUEL LESTER, JR. KINSTON CLINIC, NORTH KINSTON 28501 GEO WASHINGTON U	OBG L 42 42 50 919 522-4333	SABISTON, WALTER ROBERTS KINSTON CLINIC, NORTH, STE. K KINSTON 28501 U OF NC	OTO AC 67 67 78 919 523-0687	WILLIAMS, LYNWOOD EARL 2114 HARDEE ROAD KINSTON 28501 U OF PENN	IM L/RT 40 40 43 919 522-3753
PARROTT, WILLIAM THOMAS, JR. 905 N. QUEEN STREET KINSTON 28501 JOHNS HOPKINS	IM L 43 43 49 919 523-4269	SENAY, BRUCE ALAN KINSTON CLINIC NORTH KINSTON 28501 MED COLL OF PENN	U AC 79 80 85 919 527-3043	WITHERINGTON, DEXTER T. P. O. BOX 1316 KINSTON 28501 HARVARD	GS RT 48 48 55 919 522-1626
PATE, EUGENE WESLEY, JR. KINSTON CLINIC, NORTH KINSTON 28501 U OF NC	ORS AC 63 63 70 919 522-4155	SPIGNER, PRESCOTT BUSH, JR. P. O. BOX 1062 KINSTON 28501 MED U OF SC	ORS AC 53 58 59 919 522-4155	WITHERS, SYDNOR TERRY, SR. 905 N. QUEEN STREET KINSTON 28501 MED COLL OF VA	D AC 45 46 56 919 523-3289
PATRICK, SIMMONS ISLER KINSTON CLINIC, NORTH DOCTOR'S DRIVE KINSTON 28501 DUKE	R AC 50 51 55 919 527-7077	TEJANO, FELIPE MAZON KINSTON CLINIC, NORTH DOCTOR'S DRIVE KINSTON 28501 U OF PHILIPPINES	U AC 63 63 74 919 527-3043	WOOTEN, CECIL WILLIAM, JR. P. O. BOX 1577 KINSTON 28501 HARVARD	GP L/RT 45 45 48 919 523-3496
				WRIGHT, WALTER LEE 1908 ELEANOR ST. KINSTON 28501 U OF NC	OPH AC 80 80 86 919 522-1611

55. LINCOLN COMPONENT SOCIETY

OFFICERS—**President:** Sharon Colton, M.D., P.O. Box 677, Lincolnton 28092 (704 732-3348)**Secretary:** David Nachamie, M.D., P.O. Box 677, Lincolnton 28092

ARI, ABDULLAH NECIP 300 LABANS LANE LINCOLNTON 28092 U OF ANKARA	OBG AC 54 75 75 704 732-0777	CRUZ, CORAZON SAMODIO ROUTE #2, BOX 310 LINCOLNTON 28092 FAR EAST U	R /GP AC 61 61 83 704 435-4586	MOFRAD, ALI SABOORTINAT P. O. BOX 1160 LINCOLNTON 28093 U OF TEHRAN	PD /PHO AC 66 76 82 704 735-1441
CANADAY, MAURICE LEWIS 110 DOCTOR'S PARK PO BOX 578 LINCOLNTON 28092 U OF NC	FP /CD AC 58 58 63 704 735-7413	FARLEY, DYER JACKSON, JR. P. O. BOX 757 LINCOLNTON 28092 LA STATE U	GS AC 55 55 71 704 735-0481	NACHAMIE, DAVID A. 117-B DOCTORS' PARK PO BOX 937 LINCOLNTON 28093 U OF BOLOGNA	U AC 71 77 82 704 732-2661
CHANG, JOHN SHYUEYI P. O. BOX 715 LINCOLNTON 28092 KAOHSIUNG M COLL	OBG AC 71 71 79 704 732-3346	FITZGERALD, JOHN HILL 626 CLARK DRIVE LINCOLNTON 28092 U OF VIRGINIA	GP /PD L 38 38 41 704 735-8257	REID, ROBERT LEARY 110 DOCTOR'S PARK P. O. BOX 578 LINCOLNTON 28092 BOWMAN GRAY	FP /CD AC 54 54 59 704 735-7414
COLTON, SHARON ANN PO BOX 1566 LINCOLNTON 28092 U OF OREGON	IM AC 70 72 86 704 732-3348	GAMBLE, JOHN REEVES, JR. P. O. BOX 250 LINCOLNTON 28092 U OF MARYLAND	GS /GP AC 46 46 46 704 735-3023	REID, ROBERT LEARY, JR. 110 DOCTOR'S PARK P. O. BOX 578 LINCOLNTON 28092 BOWMAN GRAY	FP AC 79 81 83 704 735-7413
CRONLAND, MURPHY ALAN P. O. BOX 488 LINCOLNTON 28092 U OF NC	GP AC 55 55 59 704 735-3048	GRIGGS, BOYCE POWELL 334 W. SYCAMORE STREET LINCOLNTON 28092 BOWMAN GRAY	FP AC 43 43 46 704 735-3691	SMITH, THOMAS WARREN P. O. BOX 1510 LINCOLNTON 28092 ST U OF NY-BUFF	IM AC 64 65 78 704 735-6939
CROWELL, GORDON CAMERON ROUTE #4, BOX 999 LINCOLNTON 28092 U OF NC	IM AC 57 57 57 704 735-1430	LAWING, DANIEL PHILMON 212 E. WATER STREET LINCOLNTON 28092 U OF NC	GP AC 62 62 64 704 735-5888	WILSON, SAMUEL ALLEN 710 E. PARK DR. LINCOLNTON 28092 EMORY U	GP L/RT 37 37 40 704 735-8548
CRUMLEY, CHARLES EDWIN P. O. BOX 1309 LINCOLNTON 28093 U OF NC	IM AC 70 70 76 704 735-3081	LEE, JOSEPH DAVID P. O. BOX 954 LINCOLNTON 28092 TEMPLE U	R AC 68 69 78 704 735-6654		

56. MACON-CLAY COMPONENT SOCIETY

OFFICERS—**President:** Frederick A. Berger, M.D., 28 Riverview St., #114, Franklin 28734 (704 524-8474)**Secretary:** Trent A. Johnson, M.D., Angel Community Hosp., Franklin 28734

BAUMRUCKER, JOHN FREDERICK P. O. BOX 1060 HIGHLANDS 28741 U OF CINCINNATI	FP AC 70 70 70 704 526-2125	BERGER, FREDERICK ALLEN 28 RIVERVIEW STREET, #114 FRANKLIN 28734 ST LOUIS U	PD AC 72 72 75 704 524-8474	CHOI, SAN HO 8 RIVERVIEW ST., STE. 202 FRANKLIN 28734 YONSEI U	GS AC 63 64 73 704 524-7464
---	--	---	--	--	--

56. MACON-CLAY COMPONENT SOCIETY (Continued)

FISHER, ERNEST WOODROW	FP	L/RT	MANGUM, CARLYLE THOMAS, JR.	GP	AC	MORRIS, EDWIN LEE	FP	AC
102 GEORGIA ROAD	41	41 47	P. O. BOX 429	47	47 49	8 RIVERVIEW ST., STE. 201	74	78 79
FRANKLIN 28734			HIGHLANDS 28741			FRANKLIN 28734		
MED U OF SC	704	524-5752	HARVARD	704	526-2125	U OF NC	704	369-9531
KAHN, JOSEPH WILLIAM	FP	L/RT	MARTONE, ARLENE RAE	OBG	AC			
P. O. BOX 147	42	42 46	28 RIVERVIEW ST., STE. 110	72	73 84			
FRANKLIN 28734			FRANKLIN 28734					
U OF CINCINNATI	704	524-4427	LOMA LINDA U	704	335-0064			

57. MADISON COMPONENT SOCIETY

OFFICERS—**President:** William E. Powell, M.D., 1 Chestnut St., Mars Hill 28754 (704 689-2581)

Secretary: William E. Powell, M.D., 1 Chestnut St., Mars Hill 28754 (704 689-2581)

CATALANO, PHILIP M.	D	AC	JONES, FRIEDEN BERTIE, III	FP	AC	POWELL, WILLIAM ERNEST, JR.	GP	AC
1416 59TH ST. WEST	60	81 86	LAUREL MEDICAL CENTER	76	76 85	1 CHESTNUT STREET	50	50 52
BRADENTON, FL 34209			MARSHALL 28753			MARS HILL 28754		
U OF PENN	792	293-4000	U OF NC	704	656-2611	JEFFERSON	704	689-2581
DUCK, WALTER OTIS	FP	L/RT						
DRAWER 729	43	43 46						
MARS HILL 28754								
HAHNEMANN	704	689-2411						

59. McDOWELL COMPONENT SOCIETY

OFFICERS—**President:** Stanley C. Topple, M.D., 600-B Medical Ct., Marion 28752 (704 652-3310)

Secretary: William V. Fowler, M.D., P.O. Box 39, Marion 28752 (704 652-8727)

ALI, SHAMSHAD	PD /NPM	AC	ELLIS, GEORGE GREENE	FP	AC	RUDD, EUGENE GREGORY	OBG	AC
1200 MEDICAL CTR. #B	60	74 76	P. O. BOX 789	62	65 66	PO BOX 1413	77	82 86
MARION 28752			OLD FORT 28762			MEDICAL COURT SOUTH		
PRINCE OF WALES	704	652-6386	U OF LOUISVILLE	704	668-7694	MARION 28752		
ALLEN, JOHN O. HENRY	FP /IM	AC	MCCALL, MICHAEL ALVIN	FP	AC	MED U OF SC	704	652-3019
31 STATE ST.	51	51 53	P. O. BOX 1229	52	53 56	TOPPLE, ANE MARIE	D	AC
PO BOX 1189			MARION 28752			600-B MEDICAL COURT	55	57 85
MARION 28752			DUKE	704	433-2492	MARION 28752		
BOWMAN GRAY	704	652-5251	MCENTIRE, JERRILL LEE	FP	AC	U OF OSLO		
CHUNG, JOSEPH YANGSOO	GS /GP	AC	DRAWER 789	71	71 74	TOPPLE, STANLEY CRAIG	ORS	AC
1200 MEDICAL COURT	66	72 73	OLD FORT 28762			600-B MEDICAL COURT	57	57 82
MARION 28752			U OF NC	704	668-7694	MARION 28752		
SEOUL NATL U	704	652-5818	MCINTOSH, ARCHIBALD NOCK	GP	AC	EMORY U	704	652-3310
DENUNA, VICENTE BOGADOR	GS /ABS	AC	219 S. MAIN STREET	44	48 48	YUN, PAUL TAJEN	GP	AC
28 N. LOGAN STREET	64	73 74	MARION 28752			PO BOX 1284	68	75 77
MARION 28752			DUKE	704	652-4211	MARION 28752		
U OF SANTO TOMAS	704	652-5797	RAGAZ, FLORIAN JOHN	GP /CD	AC	U OF SINGAPORE	704	652-3351
DIOQUINO, RENATO MERCADO	IM /PUD	AC	315 E. COURT STREET	49	50 54			
240 S. MAIN STREET	64	74 76	MARION 28752					
MARION 28752			U OF WISCONSIN	704	652-4420			
U OF SANTO TOMAS	704	652-2214						

60. MECKLENBURG COUNTY SOCIETY

OFFICERS—**President:** Jared N. Schwartz, M.D., P.O. Box 33549, Charlotte 28233 (704 371-4814)

Secretary: Ophelia Garmon-Brown, M.D., 402 E. Sugar Creek Rd., Charlotte 28213 (704 535-8245)

Executive Director: Carolyn Scruggs, 118 Colonial Ave., Charlotte 28207 (704 376-3688)

ADCOCK, JIMMIE WARREN	IM	AC	ALDERMAN, JAMES F.	PD	AC	ALEXANDER, MARGARET C.	R	AC
217 TRAVIS AVE.	82	83 82	101 W. T. HARRIS BLVD. #201C	82	82 88	C/O MERCY HOSPITAL	81	82 87
CHARLOTTE 28204			CHARLOTTE 28213			2001 VAIL AVE.		
U OF NC	704	372-3350	MED U OF SC	704	547-9568	CHARLOTTE 28207		
ADICKES, GEORGE CARTWRIGHT	IM	AC	ALEXANDER, HENCY C., JR.	IM /PUD	RT	MED U OF SC	704	327-6342
1100 BLYTHE BOULEVARD	45	45 78	5136 STRAWBERRY HILL DR.	49	53 56	ALLEN, FRED HUNTLEY, JR.	N	AC
CHARLOTTE 28203			CHARLOTTE 28211			2608 E. SEVENTH ST.	59	59 65
MED U OF SC	704	338-4330	DUKE	704	366-6499	CHARLOTTE 28204		
ADKINS, HENRY THOMAS, JR.	R	AC	ALEXANDER, JAMES FROSST	IM /GE	AC	COLUMBIA U	704	377-9323
2114 MARRYAT COURT	65	65 73	3535 RANDOLPH ROAD	63	63 70	ALMQUIST, PERRY F.	PD	AC
CHARLOTTE 28211			CHARLOTTE 28211			1700 ABBEY PLACE	82	85 87
MED COLL OF GA	704	371-4056	MCGILL U	704	365-0760	CHARLOTTE 28209		
ALBERGOTTI, JULIAN S., JR.	OM /FP	AC	ALEXANDER, JAMES MOSES	IM	L/RT	U OF VIRGINIA	704	523-7232
SOUTHERN BELL MED. DEPT.	55	55 58	255 COLVILLE RD.	34	34 37	ALPERT, ERIC DAVID	R	AC
ROOM 414 SNC-PO BOX 30188			CHARLOTTE 28207			3535 RANDOLPH ROAD	71	71 80
CHARLOTTE 28230			MCGILL U	704	365-0760	CHARLOTTE 28211		
U OF NC	704	378-7320	ALEXANDER, JAMES PORTER	IM /OM	AC	DUKE	704	365-0343
ALBRIGHT, HAROLD DOWE, III	IM	AC	DUKE POWER COMPANY	50	50 56	ALTANY, FRANKLIN EDWARD	PS	AC
1851 E. THIRD ST., SW #101	82	83 80	P. O. BOX 33189			2027 RANDOLPH ROAD	52	57 57
CHARLOTTE 28204			CHARLOTTE 28242			CHARLOTTE 28207		
EAST CAROLINA U	704	333-4175	U OF PENN	704	373-4329	DUKE	704	377-3091

60. MECKLENBURG COUNTY SOCIETY (Continued)

ANDERSON, JACK D. 1937 DEMBRIGH LANE CHARLOTTE 28213 NORTHWESTERN U	PD AC 71 72 87 704 372-3383	BARTON, FORBES MARSHALL, JR. 2115 E. 7TH ST., STE. 103 CHARLOTTE 28204 U OF TENNESSEE	GS AC 63 63 71 704 375-3728	BLOUNT, CHARLES WHITNER, JR. 6708 ALBEMARLE ROAD CHARLOTTE 28212 MED COLL OF GA	FP AC 73 75 76 704 536-4903
ANDERSON, JAMES DICK 1023 EDGEHILL ROAD, SOUTH CHARLOTTE 28207 U OF FLORIDA	OBG AC 63 63 72 704 373-1541	BAUCOM, MARY PADGETT PO BOX 32861 CHARLOTTE 28232 U OF NC	IM AC 80 81 84 704 338-3165	BOATRIGT, JAMES RICHARD 1822 BRUNSWICK AVENUE CHARLOTTE 28207 WASHINGTON U	HS /ORS AC 66 66 74 704 373-0544
ANDERSON, RICHARD DAWSON 2001 VAIL AVE. CHARLOTTE 28207 COLUMBIA U	R /NM AC 60 63 78 704 379-5860	BEARD, JOHN NICHOLS 1350 KINGS DRIVE CHARLOTTE 28207 U OF NC	OM /PD AC 64 64 70 704 372-8750	BOEHM, O. ROBERT 1012 KINGS DR., STE. 302 CHARLOTTE 28283 U OF KANSAS	A /IM AC 73 74 77 704 332-7731
ANDREWS, D. SCOTT 301 HAWTHORNE LANE CHARLOTTE 28204 OHIO STATE U	CDS /TS AC 75 75 84 704 375-8413	BEASLEY, MICHAEL EDWARD 2215 RANDOLPH RD. CHARLOTTE 28207 U OF NC	PS AC 80 82 79 704 372-6846	BOGGS, LAWRENCE KENNEDY 1012 KINGS DRIVE CHARLOTTE 28283 JEFFERSON	U AC 49 54 56 704 333-3825
ANDRINOPOULOS, GEORGE C. 1900 RANDOLPH RD. STE. 804 CHARLOTTE 28207 U OF ATHENS	OBG /NPM AC 66 66 84 704 372-5800	BEDRICK, JAMES JOSEPH 1900 RANDOLPH RD., STE. 1016 CHARLOTTE 28207 U OF NC	OPH AC 77 79 83 704 334-2020	BOLON, CHARLES GORDON 2711 RANDOLPH RD., STE. 512 CHARLOTTE 28207 OHIO STATE U	GYN AC 48 56 56 704 333-4104
ARMSTRONG, BEVERLY WELLES 3034 HAMPTON RD. CHARLOTTE 28207 SUNY-SYRACUSE	OT L/RT 41 48 49 704 377-2267	BELL, MICHAEL JOHN 2001 VAIL AVENUE CHARLOTTE 28207 U OF MINN	R /NM AC 63 63 72 704 379-5860	BOLZ, EVERETT ARTHUR 1350 KINGS DRIVE CHARLOTTE 28207 OHIO STATE U	OTO AC 66 66 73 704 372-8750
ARNOLD, ROBERT EDGAR 10724 PARK RD. CHARLOTTE 28210 U OF MISSISSIPPI	FP AC 73 73 79 704 542-6577	BELL, RALPH MONROE 8223 BONDS GROVE CHURCH RD. WAXHAW 28173 JEFFERSON	IM L/RT 41 41 49 704 377-6569	BONGARDT, HENRY F., JR. 7234 LANCER DRIVE CHARLOTTE 28226 U OF MARYLAND	IM /A AC 56 56 70 704 364-6812
ASRAEL, GERSON 1350 KINGS DRIVE CHARLOTTE 28207 U OF MARYLAND	U AC 59 66 70 704 372-8750	BELLOWS, ROWLAND THOMPSON 3529 PARK ROAD CHARLOTTE 28209 CORNELL U	NS L/RT 30 40 41	BONNER, STEVEN PAUL 211 S. SHARON AMITY RD. CHARLOTTE 28211 U OF ARKANSAS	FP AC 79 79 86 704 663-0261
AUSTIN, WALTER KENNETH, JR. 1960 RANDOLPH ROAD CHARLOTTE 28207 MED COLL OF GA	CD /IM AC 77 78 83 704 373-1503	BENEDUM, JOHN LOYLE 1900 BRUNSWICK AVE. CHARLOTTE 28207 WEST VA U	IM AC 73 75 78 704 364-7037	BOS, JOHN FREMONT P. O. BOX 220349 CHARLOTTE 28222 MED COLL OF VA	PTH /CLP AC 51 55 57 704 846-2552
BACH, PHILIP JOHN 120 PROVIDENCE ROAD CHARLOTTE 28207 U OF WISCONSIN	ORS AC 66 66 71 704 377-0351	BENJAMIN, EUGENE E. 2115 E. 7TH ST., SUITE #101 CHARLOTTE 28204 MCGILL U	N AC 78 85 86	BOURGEOIS, JOHN ELLIOTT 1600 E. THIRD ST. CHARLOTTE 28204 U OF VIRGINIA	OPH AC 79 82 85 704 372-3300
BAIRD, HARRY HAYNES 1012 KINGS DRIVE CHARLOTTE 28283 WASHINGTON U	U L 42 42 44 704 334-6449	BENJAMIN, SANFORD PHILIP 2001 VAIL AVE. CHARLOTTE 28207 WAYNE STATE U	PTH /CLP AC 68 68 78 704 379-5982	BOX, PATRICK 2310 RANDOLPH ROAD CHARLOTTE 28207 U OF FLORIDA	RHU /IM AC 73 74 85
BAKER, DAVID STANFORD, II 2600 E. 7TH ST. PO BOX 35228 CHARLOTTE 28235 U OF ARKANSAS	HS /ORS AC 76 77 82 704 372-9820	BENNETT, WILLIAM TYSON 3626 LATROBE DR. CHARLOTTE 28211 TULANE U	CD /IM AC 65 65 73 704 364-0057	BOYD, BASIL MANLY, JR. 1822 BRUNSWICK AVENUE CHARLOTTE 28207 BOWMAN GRAY	ORS AC 53 53 58 704 373-0544
BAKER, JOHN WOODWARD CHARLOTTE MEMORIAL HOSP. P. O. BOX 32861 CHARLOTTE 28232 U OF VIRGINIA	EM /IM AC 71 71 75 704 338-3181	BENSON, TERRY LEE 2315 RAMA ROAD CHARLOTTE 28212 MED SCH-UMDNJ	FP AC 75 76 88 704 563-1290	BOYD, JAMES FRANCIS 125 BALDWIN AVE. CHARLOTTE 28204 DUKE	IM /ON AC 74 76 85 704 374-1696
BALKENTYNE, KEITH PO BOX 36351 1620 SCOTT AVE. CHARLOTTE 28236 U OF EDINBURGH	AN AC 58 80 86 704 377-5772	BERKOWITZ, GERALD PHILLIP 200 HAWTHORNE LANE P. O. BOX 33549 CHARLOTTE 28233 U OF TENNESSEE	NPM /PD AC 74 74 85 704 371-4025	BOYLSTON, JAMES ALAN PRESBYTERIAN HOSP.-PTH P. O. BOX 33549 CHARLOTTE 28233 DUKE	PTH AC 69 69 75 704 371-4814
BARHAM, BERLIN FRANCIS, JR. 301 HAWTHORNE LANE CHARLOTTE 28204 U OF NC	CDS /TS AC 71 71 78 704 375-8413	BERRYHILL, BRUCE HOLT 1600 E. THIRD STREET CHARLOTTE 28204 U OF NC	OTO AC 64 64 72 704 372-3300	BRABSON, JOHN ANDERSON 1900 RANDOLPH RD. STE. 1004 CHARLOTTE 28207 HARVARD	GS /GYN L 39 43 44 704 333-0611
BARRETT, GEORGE CARLYLE 958 CHEROKEE ROAD CHARLOTTE 28207 BOWMAN GRAY	R AC 52 52 56 704 371-4056	BIGHAM, ROY STINSON, JR. 4000 MCKEE ROAD CHARLOTTE 28226 U OF VIRGINIA	IM L/RT 41 41 46 704 846-2233	BRADFORD, EDWARD AYERS 201 E. MATTHEWS STREET MATTHEWS 28105 U OF FLORIDA	OBG /AN AC 66 75 79 704 365-0760
BARRETT, JOHN ALBERT, JR. 3535 RANDOLPH ROAD, #200 CHARLOTTE 28211 DUKE	IM /RHU AC 54 54 73 704 366-8240	BLACK, BILLY GENE P. O. BOX 365 MATTHEWS 28105 LUDWIG U	OBG /AN AC 66 75 79 704 847-7102	BRADFORD, WILLIAMSON Z., JR. 150 PROVIDENCE ROAD CHARLOTTE 28207 U OF PENN	R AC 70 70 81 704 365-0343
BARRINGER, THOMAS AVERY, III 10724 PARK ROAD CHARLOTTE 28210 U OF NC	FP AC 79 80 83 704 542-6577	BLACK, EDWARD BARNWELL 3535 RANDOLPH RD., STE 102 CHARLOTTE 28211 DUKE	R AC 70 70 81 704 365-0343	BRADY, JOSEPH L., JR. 426 CLARKSON GREEN CHARLOTTE 28202 U OF NC	IM /NEP AC 63 63 69 704 374-1696
BARTLETT, CURTIS FREDERICK 6725 FAIRVIEW ROAD CHARLOTTE 28210 TEMPLE U	FP AC 53 54 75 704 365-0677	BLACK, JAMES HAMPTON 125 BALDWIN AVE. CHARLOTTE 28204 BOWMAN GRAY	IM AC 72 72 87 704 376-4852	BRAWLEY, BOBBY WATSON 1010 EDGEHILL RD, NORTH CHARLOTTE 28207 U OF NC	NS AC 59 59 72 704 376-1605
BARTHOLOMEW, CYNTHIA L. 7108 PINEVILLE-MATTHEWS RD. CHARLOTTE 28226 HAHNEMANN	PD AC 82 83 87 704 542-1952	BLANK, ROY CRARY 335 N. CASWELL RD. CHARLOTTE 28204 U OF MARYLAND	N AC 82 86 88 704 377-9323	BRENIZER, ADDISON G., JR. 1333 QUEENS RD. #101 CHARLOTTE 28207 HARVARD	GS /TS L/RT 40 48 48 704 376-4942

60. MECKLENBURG COUNTY SOCIETY (Continued)

BREWSTER, VANN ALLEN DUKE POWER COMPANY P. O. BOX 33189 CHARLOTTE 28242 MED COLL OF GA	OM AC 60 60 84 704 373-6192	CARMICHAEL, DENNIS D. 2711 RANDOLPH RD., STE. 205 CHARLOTTE 28207 U OF ABERDEEN	CHP /P AC 50 57 58 704 372-5238	CLARK, WILLIAM MACKEY 647 LLEWELLYN PLACE CHARLOTTE 28207 HARVARD	R AC 71 72 78 704 371-4058
BRITTIAN, LOWELL ELLIS 1900 CLOISTER DRIVE CHARLOTTE 28211 U OF MARYLAND	GP L/RT 52 52 54 704 366-1809	CARR, THOMAS A. 217 TRAVIS AVE. CHARLOTTE 28204 MISSOURI U-KC	GE AC 82 82 88 704 372-3350	CLEGG, HERBERT WILLIAM, II 2711 RANDOLPH RD. STE. 501 CHARLOTTE 28207 DUKE	PD /ID AC 75 76 83 704 374-1747
BROOKS, WILLIAM LESTER, JR. 1851 E. THIRD STREET CHARLOTTE 28204 DUKE	IM /RHU AC 47 48 55 704 333-4175	CARTER, COLEMAN DELYNNE 217 TRAVIS AVENUE CHARLOTTE 28204 U OF NC	IM AC 71 71 76 704 372-3350	CLINTON, HOWARD LESLIE, JR. 2001 VAIL AVE. CHARLOTTE 28207 EMORY U	FP /EM AC 73 74 79 704 379-5917
BROWN, ANN CARLSON 6934 BURLEWOOD RD. DECEASED-7-88 CHARLOTTE 28211 CASE WESTERN RES	P /CHP AC 56 56 82 704 333-7722	CATES, BANKS RALEIGH, JR. 1012 S. KINGS DR. STE. 522 CHARLOTTE 28283 DUKE	IM AC 44 49 50 704 377-4578	CLONINGER, TIMOTHY EARL P. O. BOX 35291 CHARLOTTE 28235 U OF NC	TR AC 66 66 76 704 338-2272
BROWN, CHARLES WILLIAM 2127 QUEENS ROAD, EAST CHARLOTTE 28207 GEORGETOWN U	GYN /OBS L/RT 41 41 46 704 333-9852	CAUDLE, JOHN ALLEN 1900 RANDOLPH RD., STE. 918 CHARLOTTE 28207 BOWMAN GRAY	P AC 67 67 72 704 333-7722	CLONTZ, TED HAMILTON 402 E. SUGARCREEK RD. CHARLOTTE 28213 BOWMAN GRAY	FP AC 80 83 81 704 596-0822
BROWN, RONALD LAUCHLIN 2711 RANDOLPH RD. STE. 305 CHARLOTTE 28207 MED U OF SC	OBG AC 74 75 84 704 372-8020	CAUGHRAN, JOHN HAMILTON 120 PROVIDENCE ROAD CHARLOTTE 28207 INDIANA U	ORS AC 51 58 59 704 377-0351	COBEY, WILLIAM GRAY 2024 RANDOLPH ROAD CHARLOTTE 28207 DUKE	PD AC 53 56 56 704 375-4453
BROWN, VASCUE O'NEIL 3532 MOUNTAINBROOK ROAD CHARLOTTE 28210 BOWMAN GRAY	P AC 65 65 71 704 553-1179	CHAMBLEE, DONALD VANCE 211 S. SHARON AMITY ROAD CHARLOTTE 28211 U OF TENNESSEE	FP AC 56 56 61 704 366-7586	COHEN, ARTHUR R. 200 HAWTHORNE RD. PRESBYTERIAN HOSPITAL CHARLOTTE 28211 BAYLOR	PTH AC 77 77 86 704 371-4814
BROWNING, DAVID JUDSON 1600 E. THIRD ST. CHARLOTTE 28204 DUKE	OPH AC 81 82 87 704 371-3138	CHANDLER, JOE THURSTON 928 BAXTER STREET CHARLOTTE 28204 MED U OF SC	NEP /IM AC 63 63 72 704 374-1321	COLLAWN, THOMAS HERBERT 1901 RANDOLPH RD. CHARLOTTE 28207 U OF MARYLAND	AN AC 56 59 61 704 366-5311
BRYAN, WILLIAM BLAIR 1700 ABBEY PLACE CHARLOTTE 28209 DUKE	PD AC 56 56 62 704 523-7232	CHAPLIN, CHARLES HAL 2215 RANDOLPH ROAD CHARLOTTE 28207 JEFFERSON	PS /GS AC 53 53 54 704 372-6846	COLLIN, CHARLES F. 1350 S. KINGS DR. CHARLOTTE 28207 TULANE U	GS AC 75 75 87 704 372-8750
BRYANT, WILLIAM FRANKLIN, JR. 1700 ABBEY PLACE CHARLOTTE 28209 DUKE	PD AC 58 58 63 704 523-7232	CHAPMAN, CHARLES GRANGER 6134 DEVERON DRIVE CHARLOTTE 28211 MED U OF SC	BLB RT 40 57 57 704 366-2057	CONARD-CORKEY, ELIZABETH M. 519 HERMITAGE COURT CHARLOTTE 28207 U OF MICHIGAN	PH /GPM L 29 48 49 704 375-7831
BULLINGTON, WALTER GRAHAM 4335 COLWICK RD. CHARLOTTE 28211 MED COLL OF VA	OPH /AM AC 57 58 66 704 364-7400	CHAPMAN, TODD MASTERS 1822 BRUNSWICK AVE. CHARLOTTE 28207 BOWMAN GRAY	HEM /ON AC 75 76 87 704 372-8750	CONARD, DAVID LLOYD 101 W. T. HARRIS BLVD. C-101 CHARLOTTE 28213 U OF ROCHESTER	ORS AC 79 79 77 704 547-1462
BULLOCK, WILLIAM ROBERT 217 TRAVIS AVENUE CHARLOTTE 28204 U OF TENNESSEE	IM /OM AC 68 68 72 704 372-3350	CHEN, TONG YONG PO BOX 33549 CHARLOTTE 28233 KAHSHIUNG M COLL	AN AC 68 76 79 704 371-4049	COOK, JOSEPH WILLIAM 1960 RANDOLPH ROAD CHARLOTTE 28207 DUKE	TS /CDS AC 68 68 75 704 373-1500
BURGESS, WILLIAM PATRICK 928 BAXTER STREET CHARLOTTE 28204 U OF MIAMI	NEP /IM AC 77 78 83 704 374-1321	CHENEY, PAUL R., JR. 7108 PINEVILLE-MATTHEWS RD. CHARLOTTE 28211 EMORY U	IM AC 77 78 88 704 542-1952	COOPER, TIM ERVIN, JR. 3535 RANDOLPH ROAD CHARLOTTE 28211 DUKE	IM /PUD AC 59 59 67 704 366-8240
BURKE, PATRICK 5950 FAIRVIEW RD. STE. 100 3 FAIRVIEW PLAZA CHARLOTTE 28210 HAHNEMANN	PD AC 77 78 86 704 551-4200	CHEWNING, SAMUEL J., JR. 1822 BRUNSWICK AVE. CHARLOTTE 28207 U OF KENTUCKY	ORS AC 79 80 84 704 372-9820	COPELAND, DONALD LEE RT. #1, BOX 684 DAVIDSON 28036 U OF NC	DR AC 47 47 51 704 892-3723
BURNS, STANLEY SHERMAN, JR. 1600 E. THIRD STREET CHARLOTTE 28204 HARVARD	OTO AC 48 54 55 704 372-3300	CHILDERS, MELVIN DAVIS, JR 1928 RANDOLPH RD., STE. 109 CHARLOTTE 28207 MED COLL OF VA	OPH AC 58 62 62 704 372-3070	COPPEDGE, THOMAS OLIVER, JR. 4067 ABINGDON RD. CHARLOTTE 28211 BOWMAN GRAY	PD AC 61 61 68 704 366-0504
BURQUEST, BRET 7401 CARMEL EXEC. PK. STE. 208 CHARLOTTE 28226 U OF MIAMI	P AC 61 61 86 704 541-0800	CHRISTENBURY, JONATHAN D. 1900 RANDOLPH RD. STE. 706 CHARLOTTE 28207 DUKE	OPH AC 80 81 83 704 332-9365	COUNCIL, JOHN CROMARTIE, JR. 1851 E. THIRD ST., STE. 103 CHARLOTTE 28204 U OF NC	OBG AC 72 73 80 704 333-6659
BUTER, THOMAS HENRY 120 PROVIDENCE ROAD CHARLOTTE 28207 U OF MICHIGAN	ORS AC 75 76 81 704 377-0351	CHRISTOPHER, WILLIAM E., JR 242 S. COLONIAL AVE. CHARLOTTE 28207 BOWMAN GRAY	P AC 61 61 68 704 375-4405	CRADDOCK, LARRY WAYNE 449 N. WENDOVER RD. CHARLOTTE 28211 U OF ALABAMA	GYN /END AC 66 66 85 704 364-3760
BYRNE, JOHN JACOB PO BOX 32861 CHARLOTTE 28232 ALBANY MED COLL	AN AC 78 79 83 704 338-2372	CHRYSLER, CHARLES OTIS 3894 E. INDEPENDENCE BLVD. CHARLOTTE 28205 OHIO STATE U	FP AC 56 60 60 704 537-5424	CRAIN, JACK LEE PO BOX 32861 CHARLOTTE 28232 U OF ARKANSAS	P AC 56 56 82 704 333-7722
CALLAWAY, CLIFFORD KAY 4600 HOLBROOK DR. CHARLOTTE 28212 U OF OKLAHOMA	EM AC 70 71 79 704 588-3418	CITRON, DAVID SANFORD 8116 RISING MEADOW RD. MATTHEWS 28105 WASHINGTON U	IM /FP L/RT 44 52 53 704 338-3146	CRANDALL, ROBERT GORDON 1900 RANDOLPH RD. STE. 900 CHARLOTTE 28207 DALHOUSIE U	GS AC 75 79 80 704 377-3900
CAMPBELL, JAMES ARCHIBALD 1955 RANDOLPH ROAD CHARLOTTE 28207 U OF NC	OBG AC 60 60 69 704 376-3536	CLARK, JOHN BLUE, JR. 3830 SILVERBELL DR. CHARLOTTE 28211 VANDERBILT U	EM /IM AC 73 74 79 704 371-4160	CRAVEN, DALLAS CLIFFORD, JR. 2104 RANDOLPH ROAD CHARLOTTE 28207 U OF NC	GYN AC 61 64 71 704 365-0110

60. MECKLENBURG COUNTY SOCIETY (Continued)

CULPEPPER, FRED CARROLL, III 1851 E. THIRD ST., STE. 103 CHARLOTTE 28204 LA STATE U	PD AC 67 67 73 704 333-6659	DOUGLAS, JOHN MUNROE 4107 POMFRET LN. CHARLOTTE 28211 DUKE	IM L/RT 39 49 50 704 366-0267	FAGAN, JAMES ARTHUR PO BOX 33549 CHARLOTTE 28233 MED U OF SC	DR /NM AC 66 66 73 704 371-4056
CULTON, JULIAN CLARK 1600 E. THIRD STREET CHARLOTTE 28204 DUKE	OPH AC 56 56 63 704 372-3300	DOWDY, DAVID A. 6720 CISCAYNE PLACE CHARLOTTE 28211 U OF CONNECTICUT	CD AC 76 80 88 704 322-5117	FARMER, CHARLES DUDLEY 928 BAXTER ST. CHARLOTTE 28204 INDIANA U	NEP /IM AC 58 58 67 704 374-1321
CURRY, CLAYTON SMITH 1309 PLAZA CHARLOTTE 28205 U OF TENNESSEE	GYN L 44 46 50 704 376-5698	DOWNES, POSEY EDGAR, JR. 1928 RANDOLPH ROAD CHARLOTTE 28207 BOWMAN GRAY	OBG AC 52 52 56 704 376-1612	FARNHAM, ROBERT, III PRESBYTERIAN HOSP PATHOLOGY DEPT. CHARLOTTE 28233 U OF PENN	PTH AC 74 75 74 704 371-4814
DALTON, CLAUDETTE ELLIS H. 3205 GLEN TERRACE CHARLOTTE 28211 U OF VIRGINIA	AN AC 74 82 83 704 364-6228	DUDLEY, ALLISON JOHNSON 2317 RANDOLPH ROAD CHARLOTTE 28207 U OF NC	PD AC 78 79 77 704 376-5572	FEDOR, JOHN MICHAEL 1960 RANDOLPH ROAD CHARLOTTE 28207 DUKE	CD /IM AC 76 76 84 704 373-1500
DASHER, GEORGE ALBERT 1333 ROMANY ROAD CHARLOTTE 28204 MED COLL OF GA	U AC 73 74 80 704 372-5180	DULIN, THOMAS LEROY 200 GREENWICH RD. CHARLOTTE 28211 DUKE	FP AC 57 57 61 704 366-5002	FEE, BRUCE EDGAR 1350 S. KINGS DRIVE CHARLOTTE 28207 CREIGHTON U	R AC 72 73 79 704 372-8750
DAUGHERTY, HARRY KARRICK 1960 RANDOLPH ROAD CHARLOTTE 28207 U OF LOUISVILLE	CDS /TS AC 59 63 65 704 373-1500	DUNAWAY, HOWARD YATES, III 120 PROVIDENCE RD. CHARLOTTE 28207 BOWMAN GRAY	ORS AC 77 79 84 704 377-0351	FEEZOR, CHARLES NOEL, JR. 3535 RANDOLPH ROAD, STE. 101 CHARLOTTE 28211 BOWMAN GRAY	U AC 62 62 70 704 366-4631
DAVENPORT, JOHN EMMETT 3535 RANDOLPH RD. CHARLOTTE 28207 U OF NEW MEXICO	IM AC 74 80 83 704 847-3380	DUPUY, DAVID NORRIS 3535 RANDOLPH ROAD CHARLOTTE 28211 U OF MIAMI	ORS AC 70 71 76 704 365-2111	FEHRING, THOMAS K. 120 PROVIDENCE ROAD CHARLOTTE 28207 U OF TEXAS	ORS AC 80 80 86 704 377-0351
DEHOFF, PHILIP WILLIAM 3535 RANDOLPH RD., STE. 105 CHARLOTTE 28211 U OF SOU FLORIDA	OBG AC 80 81 84 704 365-0470	DUPUY, SAMUEL STUART 301 HAWTHORNE LANE CHARLOTTE 28204 U OF FLORIDA	U AC 69 72 76 704 374-0236	FELKNER, RICHARD S. 1600 E. THIRD STREET CHARLOTTE 28204 WASHINGTON U	OTO AC 60 67 67 704 372-3300
DELTA, BASIL GEORGE 249 BILLINGSLEY ROAD CHARLOTTE 28211 ISTANBUL U	GPM /PD AC 52 60 80 704 375-1885	EASTON, EDWARD JAMES, JR. PO BOX 32861 CHARLOTTE 28232 TUFTS U	NM /DR AC 69 71 77 704 373-2430	FENNING, ROBERT LAWRENCE 3535 RANDOLPH ROAD CHARLOTTE 28211 U OF VERMONT	ON /ON AC 64 64 69 704 365-0760
DEMAS, RONALD CHARLES 2115 EAST 7TH ST., STE. 101 CHARLOTTE 28204 INDIANA U	N /PM AC 65 66 72 704 372-3714	EDWARDS, CHARLES H., II 301 HAWTHORNE LANE CHARLOTTE 28204 U OF NC	CDS /TS AC 73 73 84 704 375-8413	FERNANDEZ, CHARLES RAYMOND 1350 S. KINGS DRIVE CHARLOTTE 28207 TULANE U	ID /IM AC 68 68 76 704 372-8750
DENNIS, RONALD GREENE 3535 RANDOLPH ROAD CHARLOTTE 28211 BOWMAN GRAY	OTO AC 71 71 79 704 365-0711	EDWARDS, ELLISON FRANCIS 3535 RANDOLPH ROAD, STE. 204 CHARLOTTE 28211 U OF NC	PS /MFS AC 61 61 68 704 332-8111	FERREE, CHARLES ELLIOT 3535 RANDOLPH RD. CHARLOTTE 28211 U OF NC	IM AC 80 82 86 704 365-0760
DENNY, KEVIN M. 1900 RANDOLPH RD. CHARLOTTE 28207 CASE WESTERN RES	P AC 80 81 84 704 333-7722	EICHENBRENNER, TIMOTHY JOHN 225 HAWTHORNE LN., STE. 202 CHARLOTTE 28204 EASTERN VA	PD AC 79 82 82 704 379-5860	FINGER, FREDERICK ELI, III 1900 RANDOLPH RD., STE. 502 CHARLOTTE 28207 VANDERBILT U	NS AC 76 77 86 704 372-8860
DHANDE, VIJAY G. 6434 BURLWOOD RD. CHARLOTTE 28211 B J MED COLLEGE	AC 76 79 88 704 371-4944	EISENBERG, CARL JESSE 2001 VAIL AVE. CHARLOTTE 28207 DOWNSTATE ME CTR	R AC 75 75 83 704 373-1503	FINKLEA, ORION TOWNSEND 1333 ROMANY ROAD CHARLOTTE 28204 MED U OF SC	U AC 55 63 63 704 372-5180
DIAZ-BUXO, JOSE ANTONIO 928 BAXTER STREET CHARLOTTE 28204 U OF PUERTO RICO	NEP /IM AC 70 71 75 704 374-1321	ELLIOTT, CHARLES MARTIN 1960 RANDOLPH ROAD CHARLOTTE 28207 MED COLL OF VA	CD /IM AC 70 70 77 704 375-0043	FISHER, EDWARD CARL 1023 EDGEHILL ROAD CHARLOTTE 28207 U OF TENNESSEE	OBG AC 71 71 78 704 373-1541
DICKERSON, LEON A., JR. 2600 E. 7TH ST. CHARLOTTE 28204 WEST VA U	ORS AC 70 74 78 704 372-9820	ELLIOTT, JOS. ALEXANDER, JR. 1900 RANDOLPH RD. SUITE 714 CHARLOTTE 28207 U OF MICHIGAN	D AC 44 44 45 704 372-9884	FISHER, MARSHALL LOUIS 140 E. 83RD ST., APT. 11-C NEW YORK, NY 10028 U OF ILLINOIS	P L/RT 35 35 52 212 535-8747
DICKSON, F. KEELS 485 N. WENDOVER RD. CHARLOTTE 28211 MED U OF SC	OTO /A AC 67 67 74 704 366-7921	ELLIS, CLARENCE ONEIL PO BOX 35294 CHARLOTTE 28235 U OF NC	IM AC 80 81 85 704 372-5180	FLEISHMAN, LAWRENCE MARK 7110 LAWYER'S ROAD CHARLOTTE 28211 U OF NC	IM AC 82 85 86 704 568-6500
DILLARD, SAM BOOKER 1530 QUEENS RD. #1204 CHARLOTTE 28207 MED COLL OF VA	D AC 46 46 50 704 333-8811	ENSOR, ROBERT DALE 1333 ROMANY ROAD CHARLOTTE 28204 OHIO STATE U	U AC 61 61 71 704 334-4663	FLEMING, LAURENCE EDWIN 1116 PROVIDENCE ROAD CHARLOTTE 28207 U OF PENN	ABS L/RT 31 31 34 704 332-6896
DILLINGHAM, WILLIAM STEPHEN 479 N. WENDOVER RD. CHARLOTTE 28211 DUKE	P AC 66 66 80 704 365-3185	ESTWANIK, JOSEPH JOHN 1516 ELIZABETH AVE. CHARLOTTE 28204 BOWMAN GRAY	ORS /SM AC 73 73 78 704 375-9074	FOLLMER, RONALD LESTER PO BOX 32861 CHARLOTTE 28232 TEMPLE U	N AC 66 67 76 704 338-4053
DORENBUSCH, ALFRED ADOLPH 2734 HAMPTON AVENUE CHARLOTTE 28207 U OF LOUISVILLE	OTO L/RT 40 46 46 704 334-0498	EUBANKS, WILLIAM M., JR. 1712 E. FOURTH STREET CHARLOTTE 28204 MED COLL OF GA	OBG AC 54 60 60 704 333-7731	FORD, MARSHA DEAN CHARLOTTE MEM. HOSP. PO BOX 32861 CHARLOTTE 28232 MED U OF SC	EM /IM AC 79 81 85 704 338-3181
DORNBLAZER, GEORGE HENRY 6511 CROSSFIELD LN. CHARLOTTE 28226 WEST VA U	P AC 77 78 85 704 377-4243	EVANGELIST, FELIX ANTHONY 1900 RANDOLPH RD. STE. 408 CHARLOTTE 28207 GEORGETOWN U	CDS /TS AC 58 58 71 704 371-4160	FORT, LYNN, III 3535 RANDOLPH ROAD, 201-W CHARLOTTE 28211 DUKE	GS /TS AC 60 60 68 704 364-8100
DORSETT, JOHN DEWEY, JR. 1851 E. THIRD STREET CHARLOTTE 28204 WASHINGTON U	IM /CD AC 51 51 56 704 333-4175	FADIAL, JOHN MURRAY PO BOX 33549 CHARLOTTE 28233 U OF FLORIDA	EM AC 67 67 70		

60. MECKLENBURG COUNTY SOCIETY (Continued)

FOSTER, REX BENTLEY, III 1200 DILWORTH RD. CHARLOTTE 28203 U OF IOWA	AN AC 80 81 86 704 338-2372	GAVIGAN, THOMAS JOSEPH 125 BALDWIN AVENUE CHARLOTTE 28204 GEORGETOWN U	GE AC 74 75 84 704 338-6300	GREENHOOT, JERRY HARVEY 1010 EDGEHILL ROAD NORTH CHARLOTTE 28207 U OF CALIF-LA	NS AC 62 62 73 704 376-1605
FOUST, JOHN WORTH 3535 RANDOLPH ROAD CHARLOTTE 28211 U OF NC	OT AC 55 55 62 704 365-0711	GAY, CHARLES HOUSTON 2320 QUEENS ROAD, EAST CHARLOTTE 28207 DUKE	PD L/RT 33 36 38 704 333-7479	GREENMAN, MAXWELL 309 S. LAUREL AVENUE CHARLOTTE 28207 NEW YORK U	OPH AC 67 67 74 704 372-4380
FOX, JOE THOMAS, JR. 1900 RANDOLPH ROAD CHARLOTTE 28207 U OF NC	P AC 60 60 66 704 333-7722	GAZAK, JOHN MICHAEL 1900 RANDOLPH RD. STE. 816 CHARLOTTE 28207 U OF PENN	U AC 74 74 82 704 334-3033	GREENWOOD, JAMES BROOKS, JR. PO BOX 18248 4101 CENTRAL AVE. CHARLOTTE 28218 U OF PENN	FP AC 44 44 47 704 537-0020
FRAASA, ROBERT CONRAD 4625 COLONY RD. H CHARLOTTE 28226 U OF CINCINNATI	FP AC 53 56 56 704 535-4011	GESING, BERNARD FRANCIS 4030 BRIDGEWOOD LN. CHARLOTTE 28226 MED COLL OF GA	FP AC 79 80 83 704 542-6577	GREIG, JOHN HAMILTON 4401 COLWICK ROAD #702 CHARLOTTE 28211 U OF GLASGOW	AN AC 56 56 74 704 366-9408
FRASER, DONALD DOYLE 1350 S. KINGS DR. CHARLOTTE 28207 MED SCH-UMDNJ	D AC 80 81 85 704 372-8750	GIBLIN, THOMAS RICHARD 1900 RANDOLPH ROAD, #300 CHARLOTTE 28207 EMORY U	PS AC 55 63 66 704 332-4161	GRIFFIN, EZRA DANIEL, JR. 449 N. WENDOVER ROAD CHARLOTTE 28211 U OF NC	OBG AC 73 73 77 704 364-3760
FRASER, HELEN R. 4116 POMFRET LANE CHARLOTTE 28211 CASE WESTERN RES	AC 76 80 87	GIBSON, JOHN MCNEILL 212 S. TRYON ST., STE. 1500 CHARLOTTE 27202 U OF NC	IM AC 72 72 84 704 333-6544	GRIFFIN, WILLIAM RUSSELL, JR. 3535 RANDOLPH ROAD, STE. 103 CHARLOTTE 28211 BOWMAN GRAY	ORS AC 64 64 71 704 365-2111
FRASER, ROBERT WELLINGTON, III PO BOX 32861 CHARLOTTE 28232 U OF PENN	TR AC 75 77 79 704 338-2272	GILBERT, PAUL PRESSLY 2300-B RANDOLPH ROAD CHARLOTTE 28207 DUKE	ORS AC 77 78 84 704 375-5955	GRIGG, CLAUD MCNEILL 217 TRAVIS AVENUE CHARLOTTE 28204 U OF NC	IM/CD AC 61 61 67 704 372-3350
FRAZIER, ARNOLD RAY CHARLOTTE MEMORIAL HOSP. P. O. BOX 32861 CHARLOTTE 28232 U OF KENTUCKY	PUD /IM AC 69 70 75 704 331-2121	GILL, LOWELL HARLEY 1822 BRUNSWICK AVENUE CHARLOTTE 28207 DUKE	ORS AC 70 70 77 704 373-0544	GRIVAS, NICHOLAS ELLSWORTH 1928 RANDOLPH RD. STE. 100 CHARLOTTE 28207 U OF TEXAS-SW	NS AC 65 65 74 704 377-9312
FRIEDLAND, EDWARD L. 632-A MATTHEWS-MINT HILL RD. MATTHEWS 28105 U OF ROCHESTER	NEP /IM AC 81 86 88 704 847-0157	GILMOUR, MONROE TAYLOR 1300 BAXTER ST., STE. 163 CHARLOTTE 28204 HARVARD	IM L/RT 36 41 41 704 375-0287	GRODE, MICHAEL JAMES 149 PROVIDENCE ROAD CHARLOTTE 28207 EMORY U	PD AC 66 74 74 704 372-6525
FRYE, JOSEPH CRAIG 3535 RANDOLPH ROAD, SUITE 102 CHARLOTTE 28211 U OF NC	R AC 60 60 69 704 365-0343	GLASGOW, DOUGLAS MCKAY 2000 WENDOVER RD. CHARLOTTE 28211 MCGILL U	IM /GER L/RT 43 50 51 704 375-5674	GROMET, MATTHEW 3535 RANDOLPH ROAD CHARLOTTE 28211 U OF NY-ST BROOK	DR AC 79 80 84 704 365-0343
GAGE, LUCIUS GASTON, JR. 1350 S. KINGS DRIVE CHARLOTTE 28207 DUKE	A /RHU AC 48 52 53 704 372-8750	GLOVER, JOHN SNOW 1851 E. THIRD STREET CHARLOTTE 28204 DUKE	OBG AC 59 59 65 704 332-8103	GROOVER, CALTON DOUGLAS P. O. BOX 32861 CHARLOTTE 28232 MED COLL OF GA	PTH AC 62 62 68 704 338-3227
GALENTINE, PAUL GUY, III 3535 RANDOLPH RD., STE. 202 CHARLOTTE 28211 DUKE	OPH AC 76 77 85 704 364-8576	GODWIN, HERMAN ALLEN, JR. 2711 RANDOLPH RD. #100 CHARLOTTE 28207 BOWMAN GRAY	HEM /IM AC 63 63 75 704 373-0700	GRUBB, WALTER LEE, JR. 3535 RANDOLPH RD. STE. 102 CHARLOTTE 28211 MED COLL OF VA	DR AC 61 61 72 704 365-0343
GALLAGHER, JOHN JOSEPH 1960 RANDOLPH ROAD CHARLOTTE 28207 GEORGETOWN U	CD /IM AC 68 74 84 704 373-1503	GODWIN, WINSTON YUVAWN, JR. 2300 RANDOLPH RD. CHARLOTTE 28207 MED U OF SC	GS AC 78 78 86 704 376-0327	GRUHN, WILLIAM BRYANT 1350 S. KINGS DRIVE CHARLOTTE 28207 DARTMOUTH U	IM /RHU AC 74 75 81 704 372-8750
GALLAGHER, KATHLEEN ANN PO BOX 2870 CONCORD 28026 U OF NC	DR 76 76 84 704 786-0214	GOLDBERG, TREVOR IAN 1600 E. THIRD STREET CHARLOTTE 28204 U-WITWATERSRAND	OTO AC 75 78 83 704 372-3300	GUILFORD, WILLIAM BONNER 3535 RANDOLPH RD., STE.102 CHARLOTTE 28211 U OF NC	DR AC 73 73 78 704 365-0343
GARDELLA, JOHN EUGENE 125 BALDWIN AVE. CHARLOTTE 28204 NEW YORK U	PUD AC 74 75 79 704 374-1696	GOLEMBE, BARRY LOUIS 1350 S. KINGS DRIVE CHARLOTTE 28207 MED COLL OF VA	PD /PHO AC 74 75 80 704 372-8750	HAGLER, DAN N. 125 BALDWIN AVE. CHARLOTTE 28204 U OF VIRGINIA	IM /ID AC 82 83 87 704 338-6300
GARMON-BROWN, OPHELIA E. 402 E. SUGARCREEK RD. CHARLOTTE 28213 U OF NC	FP AC 80 81 79 704 535-8245	GOODMAN, DONALD BRUCE, JR. 6708 ALBEMARLE RD. CHARLOTTE 28212 U OF NC	FP AC 73 75 76 704 536-4903	HALL, DONALD GAMMON 1960 RANDOLPH ROAD CHARLOTTE 28207 U OF FLORIDA	CD AC 65 65 72 704 373-1503
GARRISON, ROBERT LEE 225 HAWTHORNE LANE CHARLOTTE 28204 BOWMAN GRAY	GS AC 44 44 53 704 377-1349	GRAHAM, DAVID ERIC P. O. BOX 459 201 SADIE DR. MATTHEWS 28105 U OF MARYLAND	GP /AM AC 52 52 54 704 847-8664	HALL, JAMES BRYAN CHARLOTTE MEMORIAL HOSP. P. O. BOX 32861 CHARLOTTE 28232 MED U OF SC	OBG /ON AC 74 75 82 704 331-3149
GASKIN, ERNEST REED 100 QUEENS RD. CHARLOTTE 28204 EMORY U	OPH AC 51 52 56 704 332-1156	GRAHAM, WALTER RALEIGH 743 HEMPSTEAD PLACE CHARLOTTE 28207 U OF MARYLAND	OPH L/RT 40 40 50 704 334-6014	HALL, MARY NOLAN PO BOX 32861 CHARLOTTE MEM. HOSP. CHARLOTTE 28232 CORNELL U	FP AC 83 84 87 704 338-3172
GASKIN, LEWIS REED 100 QUEENS RD. CHARLOTTE 28204 EMORY U	OPH AC 80 84 85 704 332-1156	GRAY, DAVID M. 732 E. PARK AVENUE CHARLOTTE 28203 WEST VA U	EM AC 80 80 87 704 372-7544	HAMILTON, JAMES PRESSLY 2104 RANDOLPH ROAD CHARLOTTE 28207 U OF PENN	PDS AC 58 58 65 704 377-3900
GAUL, JOHN STUART, JR. 2600 E. 7TH ST. CHARLOTTE 28204 TEMPLE U	ORS /HS AC 46 46 53 704 372-9820	GREENE, RALPH LEON, JR. 3535 RANDOLPH ROAD CHARLOTTE 28211 WEST VA U	IM AC 70 74 76 704 365-0760	HAMMER, DONALD EDWIN 2206 CUMBERLAND AVENUE CHARLOTTE 28203 U OF ROCHESTER	FP L/RT 27 28 65 704 332-7506
GAUNT, GEORGE LOREN, JR. 2034 RANDOLPH RD. CHARLOTTE 28207 YALE	OS AC 82 83 84 704 372-4600	GREENE, ROBERT HADLEY 2001 OAKLAWN AVENUE CHARLOTTE 28216 HOWARD U			

60. MECKLENBURG COUNTY SOCIETY (Continued)

HANNA, RICHARD TINSLEY 6900 FARMINGDALE DRIVE CHARLOTTE 28212 MED U OF SC	FP /HYP AC 76 77 79 704 536-1362	HERRIN, ROBERT ALEXANDER 1628 E. MOREHEAD CHARLOTTE 28207 U OF NC	MFS AC 79 80 81 704 376-0216	HOOD, CHRISTOPHER KENNEDY 1712 E. FOURTH STREET CHARLOTTE 28204 JEFFERSON	OBG AC 54 54 59 704 375-9074
HANSON, JOHN STEPHEN 2711 RANDOLPH RD. CHARLOTTE 28207 WASHINGTON U	GE /IM AC 79 79 84 704 373-0700	HERSHEY, CHARLES DANA, JR. PO BOX 32861 CHARLOTTE 28232 U OF PENN	AN AC 70 73 77 704 554-0239	HOPE, HAROLD PAGAN, JR. 2300 RANDOLPH ROAD CHARLOTTE 28207 MED U OF SC	GS AC 67 73 75 704 376-0327
HARBEN, DOUGLAS JAMES 3535 RANDOLPH RD., STE. 101-W CHARLOTTE 28211 SUNY-SYRACUSE	D /IM AC 70 71 79 704 364-6110	HESS, PHILIP JOSEPH 1960 RANDOLPH ROAD CHARLOTTE 28207 OHIO STATE U	CDS /TS AC 68 68 77 704 373-1500	HORNER, DONALD STANLEY 1350 S. KINGS DRIVE CHARLOTTE 28207 U OF MARYLAND	OBG /PD AC 75 75 83 704 372-8750
HARBOLD, NORRIS BROWN, JR. 1960 RANDOLPH ROAD CHARLOTTE 28207 GEO WASHINGTON U	CD /IM AC 66 66 71 704 373-1503	HICKEY, DOCIA ELIZABETH CHARLOTTE MEM. HOSP. PO BOX 32861 CHARLOTTE 28232 BOWMAN GRAY	NPM /PD AC 75 75 80 704 338-3156	HORTON, JAMES MARVIN 1350 S. KINGS DR. CHARLOTTE 28207 DUKE	AC 77 84 87 704 372-8750
†HARDMAN, EDWARD FRANCIS 1000 HUNTINGTON PARK DRIVE DECEASED--4-15-88 CHARLOTTE 28211 TEMPLE U	GYN /OBS 38 38 47 704 366-1962	HICKS, J. ROBINSON 1350 KINGS DRIVE CHARLOTTE 28207 U OF VIRGINIA	ORS AC 53 60 61 704 372-8750	HOWELL, NELSON NEIL 3535 RANDOLPH ROAD CHARLOTTE 28211 U OF NC	OTO /HNS AC 66 66 73 704 365-0711
HAROUNY, VICTOR ROBERT 150 PROVIDENCE RD. CHARLOTTE 28207 CASE WESTERN RES	OBG AC 83 83 88 704 377-0461	HIESTAND, FITZ GERALD, JR. 1350 S. KINGS DRIVE CHARLOTTE 28207 U OF VIRGINIA	GE /IM AC 56 58 61 704 372-8250	HUEY, THOMAS WALKER, JR. 1012 KINGS DRIVE CHARLOTTE 28283 U OF PENN	GYN L 42 43 50 704 375-4216
HARRELL, LONNIE CLAYTON, III 150 PROVIDENCE ROAD CHARLOTTE 28207 U OF NC	OBG AC 72 72 74 704 377-0461	HIGHLEY, FRANK SHAPLEY 427 S. SHARON AMITY RD. #B CHARLOTTE 28211 U OF VIRGINIA	P AC 79 79 80 704 362-0866	HUGHES, WM. HENRY 1900 RANDOLPH RD. STE. 304 CHARLOTTE 28207 MEHARRY MED COLL	U/EM AC 75 79 88 704 331-0846
HARRIS, CHARLES THEODORE, JR. 401 FESBROOK COURT CHARLOTTE 28226 U OF VIRGINIA	AN L/RT 51 51 53	HILL, DENNIS LEROY 2608 EAST 7TH ST. CHARLOTTE 28204 U OF SOU CALIF	N AC 66 66 73 704 377-9323	HUMPHREY, JOHN EDWARD, JR. 2040 RANDOLPH RD. CHARLOTTE 28207 DUKE	P AC 75 76 86 704 334-0875
HARRIS, CHARLES WALKER 125 BALDWIN AVE. CHARLOTTE 28204 U OF NC	CD /IM AC 60 60 66 704 374-1696	HINSHAW, HOWARD THOMAS 1350 S. KINGS DRIVE CHARLOTTE 28207 U OF NC	END /DIAO AC 66 66 74 704 372-8750	HUMPHRIES, DAVID SCOTT 1350 S. KINGS DRIVE CHARLOTTE 28207 MED COLL OF VA	ORS AC 56 67 68 704 372-8750
HARRISON, FRANK N.H., JR. 449 N. WENDOVER ROAD CHARLOTTE 28211 MED COLL OF GA	OBG AC 73 74 77 704 364-3760	HIPP, EDWARD REGINALD, JR. 1350 S. KINGS DRIVE CHARLOTTE 28207 U OF VIRGINIA	GS /TS AC 47 47 47 704 372-8750	HUNSTAD, JOSEPH P. 101 W. T. HARRIS BLVD. #A422 CHARLOTTE 28213 MICHIGAN ST U	PS /HS AC 81 81 88 704 549-8793
HARSTON, PHILLIP REED 2711 RANDOLPH RD. STE. 512 CHARLOTTE 28207 U OF LOUISVILLE	OBG AC 79 80 84 704 333-4104	HISLEY, JOHN CHARLES PO BOX 32861 CHARLOTTE 28232 U OF MARYLAND	OBG /NPM AC 65 65 75 704 331-3149	HUNTLEY, DANNY EDWARD 6708 ALBEMARLE RD. CHARLOTTE 28212 BOWMAN GRAY	FP AC 77 78 85 704 536-4903
HARTLE, EDGAR OWEN 821 MT. VERNON AVE. CHARLOTTE 28203 PENN STATE U	EM AC 81 82 83 704 334-8419	HOBSON, JACK BROWN 125 BALDWIN AVE. CHARLOTTE 28204 U OF NC	IM /HEM AC 57 57 63 704 374-1696	HUTCHESON, JAMES STERLING 1350 S. KINGS DRIVE CHARLOTTE 28207 JOHNS HOPKINS	AI AC 61 68 68 704 372-8750
HATTEN, HOMER PAUL, JR. PRESBYTERIAN HOSP. DEPT. RAD P. O. BOX 33549 CHARLOTTE 28233 WEST VA U	DR AC 73 73 79 704 371-4057	HODGES, HORACE HAYDEN 17224 DUE WEST DR. CHARLOTTE 28217 U OF PENN	IM /GE L/RT 40 40 47 704 588-0828	HUTCHINS, KENNETH RAYMOND 1350 S. KINGS DRIVE CHARLOTTE 28207 U OF MICHIGAN	U AC 63 63 72 704 372-8750
HAUCH, THOMAS WRAY 1350 S. KINGS DRIVE CHARLOTTE 28207 NORTHWESTERN U	ON /HEM AC 72 77 79	HOLBROOK, WILLIAM DOUGLAS 34 LUVAN WAY DEBORDIEU COLONY GEORGETOWN, SC 29440 BOWMAN GRAY	P L/RT 46 47 50	HUTCHINSON, FORNEY, III 1822 BRUNSWICK AVENUE CHARLOTTE 28207 DUKE	ORS AC 68 68 77 704 373-0544
HAWES, ANNE COLCLOUGH 2608 E. SEVENTH ST. CHARLOTTE 28204 U OF NC	N AC 76 78 83 704 377-9323	HOLLADAY, GLENN CLYDE 2711 RANDOLPH RD., STE. 301 CHARLOTTE 28207 MED U OF SC	PD AC 80 82 84 704 332-6332	IRONS, GEORGE VERNON, JR. 1413 ELIZABETH AVE. CHARLOTTE 28204 U OF ALABAMA	CD /IM AC 56 64 66 704 372-8750
HAWES, SAMUEL PINCKNEY, III 1333 ROMANY ROAD CHARLOTTE 28204 VANDERBILT U	U AC 67 67 75 704 372-5180	HOLLEMAN, JEREMIAH H., JR. 1350 S. KINGS DR. CHARLOTTE 28207 TULANE U	GS /VS AC 71 71 85 704 372-8750	IWAOKA, ROBERT S. 1413 ELIZABETH AVE. CHARLOTTE 28204 U OF ILLINOIS	IM AC 81 81 87 704 338-6300
HAWES, STEPHEN JAMES, JR. 1928 RANDOLPH RD., STE. 314 CHARLOTTE 28207 U OF NC	ID /IM AC 76 77 83 704 331-9413	HOLLENBERG, BENNETT R. 2516-6 CRANBROOK LANE CHARLOTTE 28207 INDIANA U	DR AC 81 85 86 704 342-0334	JABEN, SCOTT LEONARD 309 S. LAUREL AVE. CHARLOTTE 28207 U OF MIAMI	OPH AC 77 78 83 704 372-4380
HAYES, HUGH HARRISON, JR. P. O. BOX 33549 CHARLOTTE 28233 U OF TENNESSEE	R AC 49 50 60 704 371-4000	HOLLINGSWORTH, WALTER C. 1851 E. 3RD ST., STE. 102 CHARLOTTE 28204 BOWMAN GRAY	OBG AC 59 59 64 704 376-1612	JACKSON, CHARLES THOMAS 5950 FAIRVIEW RD., STE. 100 3 FAIRVIEW PLAZA CHARLOTTE 28210 U OF ROCHESTER	OBG AC 65 66 85 704 551-4200
HEING, CHARLES FREDERICK 1822 BRUNSWICK AVENUE CHARLOTTE 28207 SUNY-SYRACUSE	ORS /GS AC 55 61 61 704 373-0544	HOLSCHER, EDWARD CHARLES 1900 RANDOLPH ROAD, STE. 918 CHARLOTTE 28207 U OF MISSOURI	CHP /P AC 65 65 76 704 333-7724	JACOBS, WILLIAM EDWARD 2215 RANDOLPH ROAD CHARLOTTE 28207 U OF PENN	PS /GS AC 69 70 77 704 372-6846
HERNDON, WM. M., JR. 1413 ELIZABETH AVE. CHARLOTTE 28204 U OF NC	CD AC 81 82 83 704 372-8750	HONEYCUTT, DANNY MORRIS 10724 PARK ROAD CHARLOTTE 28210 BOWMAN GRAY	FP AC 79 80 83 704 542-6577	JAMES, CHARLES GREENE 700 E. STONEWALL ST., STE. 130 CHARLOTTE 28202 MEHARRY MED COLL	IM AC 53 54 80 704 377-2188
				JAMES, RICHARD THOMAS, JR. 217 TRAVIS AVENUE CHARLOTTE 28204 U OF PENN	IM L/RT 43 54 54 704 372-3350

60. MECKLENBURG COUNTY SOCIETY (Continued)

JEMSEK, JOSEPH GREGORY 1350 S. KINGS DR. CHARLOTTE 28207 U OF ILLINOIS	ID /IM AC 74 75 80 704 372-8750	KENNEY, RICHARD DREW 1000 BLYTHE BLVD. PO BOX 32861 CHARLOTTE 28234 GEORGETOWN U	PD /ADL AC 67 68 83 704 338-3156	LANE, JERALD PAUL 1900 RANDOLPH RD., STE. 918 CHARLOTTE 28207 U OF MISSOURI	P AC 63 63 75 704 333-7722
JENNER, PAUL WM. 2425 PARK RD. PO BOX 36507 CHARLOTTE 28236 U OF ILLINOIS	BLB AC 79 80 88 704 376-1661	KESSEL, STEVEN R. 1350 S. KINGS DR. CHARLOTTE 28207 WEST VA U	IM AC 76 76 87	LARGE, HIRAM LEE, JR. 8919 PARK RD. DC-4 SOUTHMINSTER CHARLOTTE 28210 VANDERBILT U	PTH L/RT 42 42 50 704 542-9830
JETT, HARRIMAN HARDING 2104 RANDOLPH ROAD CHARLOTTE 28207 MED U OF SC	GS AC 67 67 72 704 377-3900	KINGERY, DAVID REDDING 1350 S. KINGS DR. CHARLOTTE 28207 U OF FLORIDA	ORS AC 80 81 87 704 372-8750	LARKIN, GLENN MICHAEL 4000-E PROVIDENCE RD. CHARLOTTE 28211 U OF LOUVAIN	FOP AC 66 68 78 704 364-4718
JOHNSTON, DAVID SOMERS 1822 BRUNSWICK AVENUE CHARLOTTE 28207 U OF TENNESSEE	ORS AC 61 61 67 704 373-0544	KIRSCH, MARK 3041 VALENCIA TERRACE CHARLOTTE 28211 U-WITWATERSRAND	TR AC 69 76 84 704 371-4189	LASSITER, KENNETH ROBERT LEE 1900 RANDOLPH RD., SUITE 502 CHARLOTTE 28207 DUKE	NS AC 61 61 77 704 372-8860
JOHNSTON, HARVEY WYLIE 101 W. T. HARRIS BLVD. CHARLOTTE 28213 GEO WASHINGTON U	U AC 52 56 56 704 547-1392	KLEIN, DEYSY MARTINEZ 1901 RANDOLPH RD. CHARLOTTE 28207 U OF MADRID	AN AC 62 62 69 704 375-5126	LASTER, ANDREW JAY 125 BALDWIN AVE. CHARLOTTE 28204 JOHNS HOPKINS	RHU /IM AC 79 79 86 704 338-6300
JOHNSTON, JOHN GARDNER 1700 ABBEY PLACE CHARLOTTE 28209 U OF NC	PD AC 69 69 75 704 523-7232	KLIMAS, JOHN THOMAS 2711 RANDOLPH RD. CHARLOTTE 28207 ST U OF NY-BUFF	A /PD AC 73 73 80 704 372-7900	LAWRENCE, PATRICIA ANN 1012 S. KINGS DR. STE. 624 CHARLOTTE 28283 U OF VIRGINIA	GYN AC 50 54 54 704 372-6201
JONES, JAMES BUCKNER 3535 RANDOLPH ROAD CHARLOTTE 28211 VANDERBILT U	IM /PUD AC 79 84 85 704 365-0760	KNISH, EDWARD J., JR. PO BOX 189 MATTHEWS 28105 VANDERBILT U	IM AC 83 86 87 704 365-0760	LAYTON, DENNIS SHELDON 7110 LAWYERS ROAD CHARLOTTE 28212 WEST VA U	IM AC 76 77 80 704 568-6500
JONES, JERRY ANTHONY 2021 E. 7TH ST. CHARLOTTE 28204 MEHARRY MED COLL	IM /GE AC 74 79 86 704 372-9884	KOCAK, THEODORE JOSEPH P. O. BOX 11438 CHARLOTTE 28220 TEMPLE U	FP AC 61 62 62 704 553-9474	LEE, YEN CHICH PO BOX 33549 CHARLOTTE 28233 CHINA MED COLL	AN AC 68 73 76 704 371-4049
JONES, O. HUNTER 232 PERRIN PLACE CHARLOTTE 28207 COLUMBIA U	OBG L/RT 33 33 37 704 333-0455	KOCONIS, CHRIST ALEXATOS 1350 KINGS DRIVE CHARLOTTE 28207 OHIO STATE U	OTO /HNS AC 62 62 70 704 372-8750	LEFKOWITZ, DAVID, III 2711 RANDOLPH RD. STE. 400 CHARLOTTE 28207 TULANE U	PDA /PD AC 65 65 78 704 372-7900
JOYCE, DONALD GEORGE 3535 RANDOLPH ROAD, STE. 103 CHARLOTTE 28211 U OF OTTAWA	ORS AC 63 67 68 704 365-2111	KOSSOVE, ALBERT ANTHONY 1530 ELIZABETH AVENUE CHARLOTTE 28204 MED COLL OF VA	IM /NTR L 38 38 41 704 377-5984	LENNON, DAVID STANCIL 2221 HOGAN CT. MATTHEWS 28105 U OF NC	AN AC 75 75 86 704 371-4049
JUSTIS, HOMER RODEHEAVER 1012 KINGS DRIVE CHARLOTTE 28283 U OF VIRGINIA	U AC 46 51 53 704 334-6449	KOSSOVE, IRENE LEVY 1530 ELIZABETH AVENUE CHARLOTTE 28204 MED COLL OF VA	IM /GYN L 39 40 41 704 377-5984	LESSER, PHILIP STEVEN 2608 E. SEVENTH ST. CHARLOTTE 28204 MED U OF SC	CHN /N AC 67 67 77 704 377-9323
KALINA, KENT MICHAEL 2915 PROVIDENCE RD., STE. 400 CHARLOTTE 28211 U OF NC	P AC 79 80 83 704 366-5436	KOURI, EDWARD WILLIAMS 3535 RANDOLPH RD., STE. 102 CHARLOTTE 28211 U OF NC	R AC 68 68 74 704 365-0343	LEWIS, ANDREW JACKSON, JR. 1900 RANDOLPH RD., STE. 602 CHARLOTTE 28207 U OF ALABAMA	OBG AC 57 58 62 704 377-5675
KAMERER, DONALD B., JR. 1350 S. KINGS DR. CHARLOTTE 28207 HARVARD	OTO /HNS AC 82 84 87 704 372-8750	KOURI, WILLIAM HERBERT 6900 FARMINGDALE DR. CHARLOTTE 28212 U OF NC	FP AC 61 61 64 704 536-1362	LEWIS, DANIEL MICHAEL 3535 RANDOLPH RD. STE. 101-W CHARLOTTE 28211 U OF NC	D AC 80 81 85 704 364-6110
KAMP, MAURICE ARTHUR 1400 DREXEL PLACE CHARLOTTE 28209 MED COLL OF VA	PH /GPM L/RT 32 33 63 704 525-3468	KRAMER, NORMAN JOHN 3535 RANDOLPH ROAD, STE. 300 CHARLOTTE 28211 JEFFERSON	IM /END AC 65 73 75 704 365-0760	LINDERMAN, JAMES ALAN 167-L S. TRADE ST. PO BOX 2564 MATTHEWS 28106 INDIANA U	PD AC 76 76 82 704 847-0572
KAUFMAN, MICHAEL DAVID 126 COTTAGE PLACE CHARLOTTE 28207 DUKE	N /GPM AC 71 72 80 704 334-7311	KREMERS, SCOTT ALEX 1928 RANDOLPH ROAD, STE. 206 CHARLOTTE 28207 INDIANA U	PUD /CD AC 74 75 83 704 375-9932	LINDOW, LARRY GENE 6301 MORRISON BLVD. CHARLOTTE 28211 U OF ILLINOIS	IM /GP AC 68 69 78 704 365-3900
KELEMEN, WILLIAM ARTHUR 1928 RANDOLPH ROAD CHARLOTTE 28207 OHIO STATE U	IM AC 50 59 59 704 334-1086	KRESHON, MARTIN JOHN 1600 E. THIRD STREET CHARLOTTE 28204 M C OF WISCONSIN	OPH AC 54 57 61 704 372-3300	LINK, MELVIN ROBERT 3323 STANWYCK COURT CHARLOTTE 28211 U OF LOUISVILLE	OTO L/RT 42 50 50 704 364-2111
KELLAM, DONALD SWIFT, JR. 120 PROVIDENCE ROAD CHARLOTTE 28207 GEO WASHINGTON U	ORS AC 55 60 61 704 377-0351	LACKEY, ROBERT STEVENSON 2118 PINEWOOD CIRCLE CHARLOTTE 28211 JEFFERSON	R /FP AC 48 48 52 704 365-0343	LITTLE, DONALD FORREST 1350 KINGS DRIVE CHARLOTTE 28207 U OF ALABAMA	OBG AC 59 65 65 704 372-8750
KELLER, GUY OTIS 3535 RANDOLPH RD., STE. 200-A CHARLOTTE 28211 U OF VIRGINIA	GS AC 44 55 55 704 364-2500	LADD, ROBERT JULIUS 3323 WINDBLUFF DR. MATTHEWS 28105 HOWARD U	GS /EM AC 64 64 71 704 542-8271	LOGAN, WILLIAM SUMNER 1350 S. KINGS DRIVE CHARLOTTE 28207 DUKE	D AC 68 68 74 704 372-8750
KELLEY, MICHAEL J. 3535 RANDOLPH RD., STE. 102 CHARLOTTE 28211 WASHINGTON U	DR AC 69 69 88 704 365-0343	LAIRD, WILLIAM KENNETH 1900 RANDOLPH RD. STE. 300 CHARLOTTE 28207 U OF TORONTO	PS AC 68 69 75 704 332-4161	LONG, WILLIAM JOSEPH 402 E. SUGAR CREEK RD. CHARLOTTE 28213 MED COLL OF GA	FP AC 80 82 84 704 596-0822
KELLY, LUTHER W., JR. 1350 S. KINGS DR. CHARLOTTE 28207 HARVARD	END /NM AC 48 54 55 704 372-8750	LAND, MICHAEL ROY 150 PROVIDENCE ROAD CHARLOTTE 28207 INDIANA U	OBG AC 80 80 80 704 377-0461	LOVEJOY, STEVEN ARNET 120 PROVIDENCE RD. CHARLOTTE 28207 WEST VA U	ORS AC 80 81 85 704 372-0743
		LANDIS, EDWARD EVERETT, JR. 1350 KINGS DRIVE CHARLOTTE 28207 U OF LOUISVILLE	PUD /IM AC 62 62 70 704 372-8750		

60. MECKLENBURG COUNTY SOCIETY (Continued)

LOVELL, WILLIAM FIGGATT 2711 RANDOLPH RD. STE. 400 P. O. BOX 221189 CHARLOTTE 28207 DUKE	A RT 45 45 52 704 372-7900	MCADAMS, CHARLES R., JR. 225 HAWTHORNE LN. STE. 401 CHARLOTTE 28204 JEFFERSON	GS /GYN AC 45 45 48 704 372-7741	MCLOUGHLIN, JILL HICKEY 217 TRAVIS AVE. CHARLOTTE 28207 U OF NC	IM AC 83 84 86 704 372-3350
LUCAS, JACK A. 449 N. WENDOVER RD. CHARLOTTE 28211 U OF NC	OBG AC 82 83 87 704 364-3760	MCALISTER, JAMES ALLEN, JR 1901 RANDOLPH RD. CHARLOTTE 28207 BOWMAN GRAY	PTH /CLP AC 69 69 76 704 375-1758	MCMILLAN, MARSHALL P. 6900 FARMINGDALE DR. CHARLOTTE 28207 MED U OF SC	FP AC 84 85 87 704 536-3286
LUCAS, ROBERT THEODORE, JR. 1350 KINGS DRIVE CHARLOTTE 28207 TULANE U	PD AC 54 59 60 704 372-8750	MCALLISTER, DAVID WHITNEY 2711 RANDOLPH RD., STE. 512 CHARLOTTE 28213 BOWMAN GRAY	OBG AC 70 70 76 704 333-4104	MCNAMARA, JOHN FRANCIS, II 2711 RANDOLPH ROAD, STE 512 CHARLOTTE 28207 OHIO STATE U	OBG AC 76 77 80 704 333-4104
LYDAY, WILLIAM DAVIE 225 HAWTHORNE LN., STE. 301 CHARLOTTE 28204 DUKE	TS /GS AC 53 54 61 704 377-5978	MCBRIDE, ROBERT BENNIS, JR. 101 W. T. HARRIS BLVD. #220A CHARLOTTE 28213 WEST VA U	ORS AC 80 81 85 704 547-1552	MELARAGNO, HELEN P. 2001 E. FIFTH STREET CHARLOTTE 28204 MED U OF SC	FP AC 74 75 77 704 373-1663
LYMBERIS, MARVIN NICHOLAS 2514 RED FOX TRAIL CHARLOTTE 28211 TULANE U	OPH L/RT 41 47 48 704 366-6227	MCBRYDE, ANGUS MURDOCH, JR. 120 PROVIDENCE RD. CHARLOTTE 28207 DUKE	ORS AC 63 63 71 704 372-0743	MELTON, KATHERINE ROSE 1900 RANDOLPH RD. #718 CHARLOTTE 28207 MED COLL OF PENN	GS /NTR 54 55 60 704 332-6756
MACAULAY, HUGH HOLLEMAN, III 3738 ABINGDON ROAD CHARLOTTE 28211 MED U OF SC	EM /FP AC 74 75 84 704 371-4160	MCCALL, MARVIN MATHER, III P. O. BOX 32861 CHARLOTTE 28232 U OF NC	CD /IM AC 56 56 62 704 338-3165	MENSCER, DARLYNE DEPT. OF FAMILY PRACTICE CHARLOTTE MEM. HOSP, BOX 32861 CHARLOTTE 28232 U OF NC	FP AC 79 79 75 704 338-3172
MACDONALD, WILLIAM WEBSTER 1023 EDGEHILL DRIVE CHARLOTTE 28207 SUNY-SYRACUSE	OBG AC 68 68 78 704 373-1541	MCCARTY, RALPH LEEVES 843 HEMPSTEAD PL. CHARLOTTE 28207 TULANE U	CRS L/RT 42 46 47 704 333-1259	MERTESDORF, JAMES MICHAEL 1350 S. KINGS DR. CHARLOTTE 28207 LOYOLA U	GE AC 78 78 85 704 372-8750
MALLONEE, MICHAEL STEVEN 101 W.T. HARRIS BLVD.EAST SUITE C-206 CHARLOTTE 28213 U OF MIAMI	OTO /HNS AC 73 74 81 704 547-1609	MCCOY, JOSEPH BENNETT, JR. 150 PROVIDENCE ROAD CHARLOTTE 28207 U OF PENN	GYN AC 50 50 54 704 377-0461	MERWIN, WILLIAM H., JR. 1350 S. KINGS DR. CHARLOTTE 28207 U OF NC	OTO AC 81 82 79 704 372-8750
MALTON, MARK L. 1900 RANDOLPH RD. STE. 1016 CHARLOTTE 28207 U OF MICHIGAN	OPH AC 82 85 88 704 334-2020	MCCOY, THOMAS HATTON 2600 E. 7TH ST. PO BOX 35228 CHARLOTTE 28235 U OF NC	ORS AC 81 82 86 704 372-9820	METZEROTT, KIRK OLIVER 1600 E. THIRD ST. CHARLOTTE 28204 GEO WASHINGTON U	AN AC 52 53 74 704 843-3109
MANGE, STEPHEN KENNEDY PO BOX 1570 DAVIDSON 28036 U OF SOU ALA	PD AC 80 83 86 704 892-7905	MCCURDY, DONALD PITTARD 2200 E. 7TH ST. CHARLOTTE 28204 U OF NC	OPH AC 77 77 81 704 365-0470	MILLER, EDITH HAMILTON 1350 S. KINGS DRIVE CHARLOTTE 28207 MED U OF SC	IM /END AC 75 76 82 704 372-3300
MARROUM, MARIE-CLAIRE PO BOX 32861 CHARLOTTE MEM. HOSP. CHARLOTTE 28232 U OF ST JOSEPH	PTH AC 68 76 78 704 338-2251	MCELWEE, THOMAS BRENTON 3535 RANDOLPH RD. 201-W CHARLOTTE 28211 TULANE U	GS AC 80 81 86 919 757-4629	MILLER, ROBERT EVANS 1822 BRUNSWICK AVENUE CHARLOTTE 28207 U OF PENN	ORS AC 48 48 55 704 373-0544
MARSHALL, CHARLES FOSTER, JR. 1012 S. KINGS DRIVE CHARLOTTE 28283 MED U OF SC	OPH AC 69 69 79 704 376-6511	MC GEE, JOHN ASBURY, JR. 3535 RANDOLPH ROAD, STE. 105 CHARLOTTE 28211 U OF NC	GYN AC 58 58 66 704 373-0700	MILTICH, MICHAEL FIEGEL 1600 E. THIRD STREET CHARLOTTE 28204 WAYNE STATE U	OTO /HNS AC 78 79 84 704 376-1523
MARTIN, EDWARD STEPHENS 2711 RANDOLPH ROAD, SUITE 501 CHARLOTTE 28207 U OF PENN	PD AC 69 69 72 704 374-1736	MCGINNIS, LEE ANN M. PO BOX 32861 CHARLOTTE 28232 U OF MICHIGAN	AN AC 79 79 86 704 338-2372	MILTON, CECIL JEROME 225 HAWTHORNE LANE CHARLOTTE 28204 BOWMAN GRAY	ORS AC 56 56 63 704 334-0809
MASSEY, CHARLES CASWELL, JR. 2028 RANDOLPH ROAD CHARLOTTE 28207 DUKE	CRS AC 61 61 67 704 333-1259	MCKAY, CLINTON HULL 5135 HARDISON RD. CHARLOTTE 28226 U OF TENNESSEE	IM L/RT 39 47 47 704 373-0700	MITCHENER, CALVIN CHAMBERS 1600 E. FIFTH STREET CHARLOTTE 28204 JEFFERSON	D AC 49 54 54 704 376-1523
MASSEY, THOMAS NEELY, JR. 217 TRAVIS AVENUE CHARLOTTE 28204 BOWMAN GRAY	CD /IM AC 55 55 61 704 372-3350	MCKAY, HAMILTON W., JR. 2711 RANDOLPH RD. STE. 400 P. O. BOX 221189 CHARLOTTE 28207 JOHNS HOPKINS	A /IG AC 55 56 61 704 372-7900	MOKRIS, JEFFREY GEORGE 1822 BRUNSWICK AVE. CHARLOTTE 28207 U OF CINCINNATI	ORS AC 79 79 80 704 373-0544
MATTHEWS, DAVID CARY 2215 RANDOLPH ROAD CHARLOTTE 28207 U OF CINCINNATI	PS AC 74 75 83 704 372-6846	MCLANAHAN, CHARLES SCOTT 1010 EDGEHILL ROAD, N. CHARLOTTE 28207 COLUMBIA U	NS AC 73 74 80 704 376-1605	MONSON, ROBERT CHARLES, II 3535 RANDOLPH RD., STE. 201-W CHARLOTTE 28211 U OF MICHIGAN	GS /VS AC 73 74 78 704 364-8100
MATTHEWS, WILLIAM CAMP RT. 4, BOX 470, THE FARM CHESTER, SC 29706 U OF VIRGINIA	IM /OM L/RT 37 37 39 803 385-6975	MCLEAN, JONATHAN OWENS 2330 RANDOLPH RD-LAUREL AVE. CHARLOTTE 28207 U OF NC	CD /IM AC 71 71 81 704 377-0575	MOORE, ARL VAN, JR. 5201 MORROWICK RD. CHARLOTTE 28226 U OF ARKANSAS	DR AC 74 74 85 704 365-0343
MAUERHAN, DAVID ROBERT 1822 BRUNSWICK AVENUE CHARLOTTE 28207 U OF CINCINNATI	ORS AC 78 79 84 704 373-0544	MCLEAN, MALCOLM 2711 RANDOLPH RD. STE. 307 CHARLOTTE 28207 U OF NC	PD AC 56 56 62 704 332-6625	MOORE, DAVID HUDDLER 7110 LAWYERS ROAD CHARLOTTE 28212 INDIANA U	PD /ID AC 76 76 81 704 568-6500
MAY, HARVEY CRAIG 2711 RANDOLPH ROAD, SUITE 305 CHARLOTTE 28207 TULANE U	GYN AC 42 50 50 704 372-8020	MCLEOD, JONNIE HORN 1504 BILTMORE DR. CHARLOTTE 28207 TULANE U	PD AC 49 52 72 704 547-2171	MOORE, JOHN HERBERT, III 2115 EAST 7TH ST., STE. 104 CHARLOTTE 28204 EMORY U	GE /IM AC 77 80 83 704 377-4009
MAYER, WALTER BREM 2420--407 ROSWELL AVENUE CHARLOTTE 28209 U OF PENN	IM L/RT 30 32 33 704 333-4322	MCLEOD, WILLIAM LESLIE 2711 RANDOLPH ROAD, STE. 305 CHARLOTTE 28207 LA STATE U	GYN AC 45 52 52 704 372-8020	MOORE, THOMAS JOSEPH 1822 BRUNSWICK AVE. CHARLOTTE 28207 LOYOLA U	ORS AC 75 75 86 704 377-0351

60. MECKLENBURG COUNTY SOCIETY (Continued)

MORRIS, DAVID PERRY 6958 FOLGER DR. CHARLOTTE 28226 U OF PENN	AM AC 48 49 81 704 364-4798	NOWLIN, GEORGE PRESTON 1868 MARYLAND AVENUE CHARLOTTE 28209 U OF VIRGINIA	U L/RT 24 29 30 704 334-0302	PETTY, JERRY MILLER 1010 EDGEHILL ROAD, N. CHARLOTTE 28207 U OF NC	NS AC 60 60 69 704 376-1606
MORTON, DUNCAN, JR. 2104 RANDOLPH ROAD CHARLOTTE 28207 U OF NC	PDS /GS AC 66 66 76 704 377-3900	O'BAR, PAUL RUPERT 1350 S. KINGS DRIVE CHARLOTTE 28207 U OF OKLAHOMA	IM /ID AC 57 57 71 704 372-8750	PFEIFFER, FREDERICK EARLY 126 COTTAGE PLACE CHARLOTTE 28207 VANDERBILT U	N /IM AC 76 79 86 704 334-7311
MOTUZ, DANIEL JOHN 4441-302 HEDLEY WAY CHARLOTTE 28210 U CIUDAD JUAREZ	AN AC 81 83 88 704 379-5943	O'NEILL, MICHAEL RAYMOND 1900 RANDOLPH RD., STE. 816 CHARLOTTE 28207 BOWMAN GRAY	U AC 76 78 82 704 334-3033	PHILLIPS, DEWITT DEWEY, JR. 1012 S. KINGS DR. STE. 822 CHARLOTTE 28283 BOWMAN GRAY	GP AC 46 47 48 704 375-6350
MULLIS, WILLIAM FRANK 2215 RANDOLPH ROAD CHARLOTTE 28207 U OF PENN	PS /GS AC 68 69 76 704 372-6846	O'ROARK, HENRY CLYDE 2711 RANDOLPH RD. STE. 309 CHARLOTTE 28207 OHIO STATE U	OBG AC 57 57 82 704 377-3396	PITTS, WILLIAM REID 429 EASTOVER ROAD CHARLOTTE 28207 HARVARD	NS /GS L/RT 33 33 40 704 333-0407
MUNDORF, GEORGE 6001 HEMBY ROAD MATTHEWS 28105 BOWMAN GRAY	P L/RT 46 47 53 704 846-1276	O'ROURKE, MARK ALLEN 125 BALDWIN AVE. CHARLOTTE 28204 U OF CALIF-LA	IM /ON AC 82 83 83 704 338-6300	PIXLEY, ROLAND THEO 1023 EDGEHILL ROAD, SOUTH CHARLOTTE 28207 ST U OF NY-BUFF	OBG AC 46 46 53 704 373-1541
NADERI, MOHAMAD SIRUS 2001 VAIL AVE. MERCY HOSPITAL CHARLOTTE 28207 U OF TEHRAN	AN AC 51 76 79 704 375-4001	OLIVER, KENNETH LEON 1900 RANDOLPH ROAD CHARLOTTE 28207 BOWMAN GRAY	OBG AC 65 66 73 704 377-5675	PLUNKETT, STEVEN ROCKWELL PO BOX 33549 CHARLOTTE 28233 MED COLL OF GA	TR AC 78 78 84 704 371-4189
NAGY, BRIAN R. 501 BILLINGSLEY RD. CHARLOTTE 28211 CORNELL U	P AC 63 64 86 704 375-3575	OLSON, DAVID GEORGE 7108 PINEVILLE-MATTHEWS RD. NALLE CLINIC CHARLOTTE 28226 TULANE U	IM AC 74 74 82 704 542-1952	POLLARD, JOHN ALAN 1620 SCOTT AVE. CHARLOTTE 28211 U OF MANCHESTER	AN AC 62 67 86 704 331-2372
NASH, HOKE SMITH, JR. 1600 E. THIRD STREET CHARLOTTE 28204 VANDERBILT U	OTO AC 54 61 61 704 372-3300	ORR, SAMUEL LAWRENCE CHARLOTTE MEMORIAL HOSP. P. O. BOX 32861 CHARLOTTE 28232 MED U OF SC	PTH AC 68 68 73 704 338-2251	PORTER, CHARLES ALEXANDER 1712 E. FOURTH STREET CHARLOTTE 28204 JEFFERSON	OBG AC 66 66 73 704 375-9074
NAUMOFF, PHILIP 1012 KINGS DRIVE CHARLOTTE 28283 DUKE	FP L 37 39 39 704 334-4665	OWEIDA, SAMI JOSEPH 1900 RANDOLPH RD. STE. 410 CHARLOTTE 28207 U OF PITTSBURGH	AC 79 85 86 704 339-0081	POTTER, PATRICIA LYNN 6439 BENTRIDGE DR., CHARLOTTE 28207 BOWMAN GRAY	AN AC 76 76 84 704 377-1647
NEAL, RUTHERFORD D. 2214 THETFORD CT. CHARLOTTE 28211 MED COLL OF VA	GS /GYN L/RT 42 42 48 704 365-6541	OWENSBY, CLYDE NORMAN 1339 WENDOVER ROAD CHARLOTTE 28211 TULANE U	P AC 58 63 64 704 364-5026	POWE, CHARLES EDWIN, JR. 3535 RANDOLPH ROAD, STE. 105 CHARLOTTE 28211 MED U OF SC	OBG AC 58 63 64 704 365-0470
NEALE, WIRT THOMAS 149 PROVIDENCE ROAD CHARLOTTE 28207 U OF TENNESSEE	PD AC 69 70 75 704 377-5571	PAGE, GEORGE DANTZLER 2128 QUEENS ROAD EAST CHARLOTTE 28207 EMORY U	GS L/RT 42 49 50 704 377-9788	POWELL, JAMES MEYERS, JR. 2315 RANDOLPH ROAD CHARLOTTE 28207 U OF NC	P /CHP AC 68 68 78 704 377-4243
NESBIT, FREDERICK 1900 RANDOLPH ROAD, STE. 900 CHARLOTTE 28207 U OF GENEVA	P AC 53 57 77 704 333-7722	PARKE, JAMES CLIFTON, JR. P. O. BOX 32861 CHARLOTTE 28232 U OF NC	PD /NPM AC 54 54 63 704 338-3156	PRESSLY, CLAUDE LOWRY 1863 CASSAMIA PL. CHARLOTTE 28211 U OF PENN	GS /TS L/RT 43 43 50 704 376-0327
NESBIT, WILLIAM MICHAEL DOCTORS BLDG. SUITE 223 1012 S. KINGS DR. CHARLOTTE 28283 U OF VIRGINIA	N AC 62 62 70 704 333-2853	PARKERSON, WALTER TUCK 225 HAWTHORNE LANE CHARLOTTE 28204 DUKE	OPH AC 60 60 68 704 377-3689	PRESSLY, JAMES ALLEN 2300-B RANDOLPH ROAD CHARLOTTE 28207 U OF NC	ORS AC 66 66 74 704 375-5955
NEWELL, ERNEST T. DUKE POWER MCGUIRE STA. PO BOX 448 CORNELIUS 28031 DUKE	OM /FP AC 50 53 54 704 588-1265	PARSONS, MARSHALL RAY 2104 RANDOLPH RD. CHARLOTTE 28207 U OF NEW MEXICO	GS AC 77 78 87 704 377-3900	PRESSLY, JAMES PATTERSON 3535 RANDOLPH ROAD CHARLOTTE 28211 MED U OF SC	OPH AC 68 68 77 704 364-8576
NEWMAN, EDWIN 3535 RANDOLPH RD. CHARLOTTE 28211 U OF IOWA	R AC 61 67 68 704 364-0568	PARSONS, ROBERT GREGORY 3535 RANDOLPH RD. CHARLOTTE 28211 U OF FLORIDA	DR AC 69 71 76 704 365-0343	PRICE, GRADY EDWIN 2001 RANDOLPH ROAD CHARLOTTE 28207 DUKE	ORS AC 60 60 69 704 377-4907
NEWTON, GRAHAM DOUGALD 1600 E. FIFTH STREET CHARLOTTE 28204 CORNELL U	D AC 54 54 61 704 376-1523	PASQUINI, JOHN ALDO 1413 ELIZABETH AVE. CHARLOTTE 28204 U OF CONNECTICUT	CD /IM AC 80 82 86 704 338-6300	PRIDE, HAROLD SYLVESTER 700 E. STONEWALL ST., STE. 200 CHARLOTTE 28202 MEHARRY MED COLL	FP /PD AC 59 60 66 704 377-3015
NIESS, GARY STEWART 1413 ELIZABETH AVE. CHARLOTTE 28204 U OF NC	CD AC 73 73 85 704 372-8750	PAYNE, ROBERT BENJAMIN 3535 RANDOLPH ROAD CHARLOTTE 28211 U OF NC	IM /CD AC 60 60 64 704 365-0760	PUGH, JAMES EDWIN, JR. 126 COTTAGE PLACE CHARLOTTE 28207 U OF PENN	N AC 67 69 84 704 334-7311
NORRIS, CHARLES BRADLEY 1039 AROSA AVE. CHARLOTTE 28203 GEORGETOWN U	IM L/RT 41 41 47 704 334-1506	PENDER, JOHN ROBERT, III 1851 E. THIRD STREET, STE. 105 CHARLOTTE 28204 JEFFERSON	GS AC 47 47 55 704 332-4169	PUTMAN, STEVEN FREDERICK 2608 E. SEVENTH ST. CHARLOTTE 28204 NORTHWESTERN U	N AC 78 80 85 704 377-9323
NORTON, EVE GWENDOLYN 4000 KINGSCOTE CR. CHARLOTTE 28226 U OF CINCINNATI	EM AC 81 81 84 704 364-1038	PERRIN, THOMAS SAMUEL, JR. 3535 RANDOLPH ROAD CHARLOTTE 28211 JOHNS HOPKINS	IM AC 43 52 53 704 365-0760	QUERY, RICHARD ZIMRI, JR. 1903 QUEENS RD. WEST CHARLOTTE 28207 DUKE	RHU /IM L/RT 34 37 38 704 333-8055
NOVICK, THOMAS L. 3535 RANDOLPH RD. STE. 201-W CHARLOTTE 28211 DUKE	GS /VS AC 78 81 87 704 364-8100	PERRY, GLENN BRADFORD 1822 BRUNSWICK AVE. CHARLOTTE 28207 TEMPLE U	ORS /TRS AC 78 79 84 704 373-0544	RANKIN, RUFUS PINKNEY, JR. 1851 E. THIRD STREET CHARLOTTE 28204 U OF PENN	GYN AC 52 52 56 704 332-8103
				RANN, EMERY LOUELLE 1001 BEATTIES FORD ROAD CHARLOTTE 28216 MEHARRY MED COLL	FP L/RT 48 49 66 704 333-0721

60. MECKLENBURG COUNTY SOCIETY (Continued)

RANSON, JOHN LESTER, JR. 335 N. CASWELL ROAD CHARLOTTE 28204 JEFFERSON	IM L 42 42 43 704 376-4852	ROBINSON, CHARLES WILSON 8919 PARK RD., COTTAGE #3 CHARLOTTE 28210 U OF PENN	GP L/RT 30 30 32 704 551-7053	SCHUPBACH, CURTIS WAYNE 1350 S. KINGS DRIVE CHARLOTTE 28207 WASHINGTON U	D AC 69 70 76 704 372-8750
RANSON, WILLIAM ALEXANDER 1012 S. KINGS DR. CHARLOTTE 28283 JEFFERSON	IM AC 48 48 53 704 374-0773	RODDEY, OLIVER FENNELL, JR. 2711--501 RANDOLPH ROAD CHARLOTTE 28207 U OF NC	PD AC 55 55 70 704 374-1736	SCHWARTZ, JARED NAPHTALI P. O. BOX 33549 CHARLOTTE 28233 DUKE	PTH AC 73 74 78 704 371-4814
RAO, INNAJJE RAVINDRANATH 2330 RANDOLPH RD CHARLOTTE 28207 STANLEY MED COLL	CD /IM AC 65 66 76 704 377-0575	ROEMER, CLIFFORD ERIC PO BOX 33549 CHARLOTTE 28233 CASE WESTERN RES	DR AC 76 76 81 704 371-4056	SCHWARTZ, ROBERT PAUL CHARLOTTE MEM. HOSP. P. O. BOX 32861 CHARLOTTE 28232 U OF FLORIDA	PD /PDE AC 68 68 74 704 338-3156
RATHBUN, MARY ANNE CHARLOTTE MEM. HOSPITAL P. O. BOX 32861 CHARLOTTE 28232 ALBANY MED COLL	NPM /PD AC 70 73 78 704 338-3156	ROGERS, LARRY ARCH 1010 EDGEHILL ROAD, NORTH CHARLOTTE 28207 DUKE	NS AC 65 65 74 704 376-1605	SCHWILM, ARLEN LEE 3535 RANDOLPH ROAD, SUITE 101 CHARLOTTE 28211 MED COLL OF VA	D AC 67 67 74 704 364-6110
RAYMER, JAMES BARKER 1928 RANDOLPH ROAD CHARLOTTE 28207 CASE WESTERN RES	GS AC 53 53 61 704 333-6524	ROPER, JOHN TRACY 2001 RANDOLPH ROAD CHARLOTTE 28207 MED U OF SC	ORS AC 55 55 65 704 377-4907	SCHYMIK, LINDA GLAUBITZ 2001 VAIL AVE. CHARLOTTE 28207 DUKE	PTH AC 82 85 86 704 362-0448
REAMES, PATRICK MARTIN PO BOX 33549 CHARLOTTE 28233 U OF TEXAS-SW	R AC 58 66 66 704 371-4056	ROSS, OTHO B., JR. 3022 FERNCLIFF RD. CHARLOTTE 28211 DUKE	IM L/RT 43 43 50 704 366-7820	SCOTT, JACKSON VANCE 101 W. CATAWBA AVE. MOUNT HOLLY 28120 JEFFERSON	FP 59 62 66 704 827-3014
REEVES, CHARLES EDWIN 1012 S. KINGS DR. STE. 705 CHARLOTTE 28283 U OF MISSISSIPPI	D /DMP AC 67 67 88 704 333-2147	RUNGE, JEFFREY WILLIAM PO BOX 32861 CHARLOTTE 28232 MED U OF SC	EM AC 81 82 85 704 331-3181	SEAY, HILLIS LEDBETTER PO BOX 528 HUNTERSVILLE 28078 VANDERBILT U	GP L 30 30 34 704 875-6946
REINDOLLER, ROBERT WILLIAM 1900 RANDOLPH RD., STE. 310 CHARLOTTE 28207 U OF MARYLAND	GE /IM AC 75 76 81 704 372-7974	RUPPENTHAL, C. ROBERT, JR. 1350 S. KINGS DRIVE CHARLOTTE 28207 U OF PENN	IM /HEM AC 60 68 68 704 372-8750	SELLE, JAY GREGORY 1960 RANDOLPH ROAD CHARLOTTE 28207 WAYNE STATE U	TS /CDS AC 68 69 76 704 373-1500
RENALDO, DONALD PHILIP 1416 E. MOREHEAD ST., STE. 300 CHARLOTTE 28204 TEMPLE U	OPH AC 74 75 80 704 376-5424	RUSS, DONALD JAMES 3535 RANDOLPH ROAD CHARLOTTE 28211 U OF MARYLAND	IM AC 73 73 77 704 365-0760	SHAFFNER, SUSAN CASPER 1700 ABBEY PL. CHARLOTTE 28209 BOWMAN GRAY	PD AC 84 87 85 704 332-7539
RHODES, MARSHA JERNIGAN 249 BILLINGSLEY ROAD CHARLOTTE 28211 U OF ALABAMA	PD AC 81 83 86 704 375-1885	RUTLEDGE, MARY LOUISE 2157 NORTON ROAD CHARLOTTE 28207 TEMPLE U	PD L/RT 48 49 51 704 334-9218	SHAVER, EDWARD FRANKLIN, JR. 1851 E. THIRD STREET CHARLOTTE 28204 TULANE U	OT AC 59 64 64 704 376-8436
RICE, WILLIAM CHARLES 1012 S. KINGS DR., STE. 806 CHARLOTTE 28283 U OF FLORIDA	U AC 69 69 74 704 334-6449	SALLEY, BRUNSON MARTIN 2322 SEDLEY RD. CHARLOTTE 28211 MED COLL OF GA	FP AC 64 65 67 704 537-0020	SHEARER, JAMES NEIL 2711 RANDOLPH RD. STE. 502 CHARLOTTE 28207 NEW YORK MED COL	PS /GS AC 75 75 85 704 372-8800
RICH, CHARLES BOYCE, JR. 212 S. TRYON ST., STE. 1500 CHARLOTTE 28281 BOWMAN GRAY	IM AC 82 85 88 704 333-6544	SALMON, ROBERT BRUCE 3535 RANDOLPH RD. CHARLOTTE 28211 WASHINGTON U	R AC 61 67 68 704 338-2270	SHIRLEY, ROBERT E.L., JR. 1955 RANDOLPH ROAD CHARLOTTE 28207 MED COLL OF GA	OBG AC 69 75 78 704 376-3536
RIDLEY, MIRIAM E. 1416 E. MOREHEAD ST., #300 CHARLOTTE 28204 U OF W ONTARIO	OPH AC 75 80 88 704 376-5424	SALTON, RUSSELL ARTHUR, III 1618 E. MOREHEAD ST. CHARLOTTE 28207 WEST VA U	FP AC 73 75 76 704 523-1157	SHOAF, EDWIN HUSS, JR. 491 N. WENDOVER RD. CHARLOTTE 28211 BOWMAN GRAY	IM AC 75 75 79 704 366-7291
RILEY, JAMES CHARLES 125 BALDWIN AVE. CHARLOTTE 28204 TEMPLE U	IM /GE AC 67 68 74 704 374-1696	SAMUELS, WALTER RAY 150 PROVIDENCE ROAD CHARLOTTE 28207 U OF NC	OBG AC 61 61 68 704 377-0461	SHORT, EARL DEGREY, JR., 501 BILLINGSLEY RD. CHARLOTTE 28211 MED U OF SC	P AC 59 59 81 704 375-3575
RIMER, BOBBY ALAN 121 LESTER DAVID RD. WAXHAW 28173 U OF NC	OBG AC 57 57 73 704 331-3149	SAUNDERS, TIMOTHY GRAY 1600 E. THIRD ST. CHARLOTTE 28204 U OF NC	OPH AC 81 81 81 704 372-3300	SHULL, WILLIAM HENRY 1900 RANDOLPH ROAD CHARLOTTE 28207 JEFFERSON	IM AC 44 44 46 704 376-4836
RIOPEL, DONALD AIME 1960 RANDOLPH ROAD CHARLOTTE 28207 U OF FLORIDA	PDC AC 63 66 84 704 373-1503	SAXE, JESSICA SCHORR 2216 DILWORTH ROAD, WEST CHARLOTTE 28203 TUFTS U	FP AC 77 78 81 704 338-3084	SHULTZ, KIRKWOOD TANNER 125 BALDWIN AVE. CHARLOTTE 28204 DUKE	IM /END AC 66 66 71 704 374-1696
RITCH, DOUGLAS LAMAR 335 N. CASWELL ROAD CHARLOTTE 28204 U OF NC	IM AC 63 63 67 704 376-4852	SCARLATA, SALVATORE 4121-A IVYSTONE CT. CHARLOTTE 28226 DOWNSTATE ME CTR	AN AC 43 46 77 704 377-1647	SHULTZBERGER, L. Z. 1001 W. T. HARRIS BLVD. DEPT. OF MED., IBM CHARLOTTE 28257 HAHNEMANN	51 00 00 704 594-5997
ROBERSON, GEORGE DON 3535 RANDOLPH ROAD CHARLOTTE 28211 MED COLL OF VA	OTO /A AC 58 64 64 704 365-0711	SCHAFERMEYER, ROBERT WM. CHARLOTTE MEM. HOSPITAL P. O. BOX 32861 CHARLOTTE 28232 U OF MISSOURI	EM /PD AC 73 74 82 704 338-3181	SIGMON, JAMES LEWIS, JR. P. O. BOX 32861 CHARLOTTE 28232 U OF NC	FP AC 66 66 71 704 338-3172
ROBERTS, THOMAS ADAMS, JR. 1350 S. KINGS DR. CHARLOTTE 28207 U OF NC	GE /IM AC 70 70 79 704 372-8750	SCHOLL, GEORGE KENNETH, JR. 1012 KINGS DR., STE. 806 CHARLOTTE 28283 U OF TENNESSEE	U AC 67 67 74 704 334-6449	SIGMON, RICHARD LEE, JR. 1900 RANDOLPH RD., STE. 310 CHARLOTTE 28207 U OF NC	GE /PD AC 79 80 76 704 372-7974
ROBERTS, WILLIAM STANLEY 1413 ELIZABETH AVE. CHARLOTTE 28204 U OF VIRGINIA	CD /IM AC 75 76 81 704 365-1633	SCHUG, JOHN BUTLER 3535 RANDOLPH ROAD, SUITE 105 CHARLOTTE 28211 MED COLL OF VA	GYN AC 57 61 65 704 364-1041	SILBIGER, STEPHEN ALAN III FAIRVIEW PLAZA, STE. 100 5950 FAIRVIEW RD. CHARLOTTE 28210 SUNY-SYRACUSE	IM AC 72 73 86 704 551-4200
ROBICSEK, FRANCIS 1960 RANDOLPH ROAD CHARLOTTE 28207 U OF BUDAPEST	TS /CDS AC 50 58 59 704 373-1500	SCHUMACHER, DONALD 335 N. CASWELL ROAD CHARLOTTE 28204 U OF BOLOGNA	IM AC 70 70 75 704 376-4852		

60. MECKLENBURG COUNTY SOCIETY (Continued)

SINGLEVICH, THOMAS E. 8910 ST. PIERRE LANE MATTHEWS 28105 M C OF WISCONSIN	AN /PA AC 75 77 88 704 379-5956	STORY, WILLIAM ROBERT 1012 KINGS DRIVE CHARLOTTE 28283 U OF NC	U AC 58 58 68 704 334-6449	TOLER, WILLIAM RICHARD 4335 COLWICK RD. CHARLOTTE 28211 LOMA LINDA U	OBG /FP AC 65 67 68 704 364-2151
SIPPE, JOSEPH LAWRENCE 1350 S. KINGS DRIVE CHARLOTTE 28207 MED COLL OF VA	OPH AC 68 68 73 704 372-8750	STOWE, CLEVELAND 1600 E. THIRD ST. CHARLOTTE 28204 BOWMAN GRAY	OPH AC 76 77 84 704 372-3300	TOMSYCK, REBECCA R. 1900-918 RANDOLPH RD. CHARLOTTE 28207 BOWMAN GRAY	P AC 78 81 88 704 333-7722
SLOTKIN, ROBERT IRVING 2317 RANDOLPH ROAD CHARLOTTE 28207 U OF VIRGINIA	PD AC 61 64 73 704 376-5572	STRATTON, JAMES DAVID 5150 SHARON ROAD CHARLOTTE 28210 RUSH MED COLL	OPH L/RT 37 38 47 704 554-7176	TRACY, JOHN WILLIAM 1618 E. MOREHEAD ST. CHARLOTTE 28207 U OF NC	FP AC 82 83 86 704 377-3610
SMITH, HENRY LOUIS, II 1700 ABBEY PLACE CHARLOTTE 28209 U OF PENN	PD AC 66 66 72 704 523-7232	STUCKEY, CHARLES LEGRAND 1515 ELIZABETH AVENUE CHARLOTTE 28204 U OF VIRGINIA	IM L 40 46 47 704 333-1116	TSAI, GEORGE SHOU-CHYUAN P. O. BOX 430 INDIAN TRAIL 28079 CHINA MED COLL	GP AC 70 77 80 704 821-7056
SMITH, KEVIN LINDSAY 2215 RANDOLPH RD. CHARLOTTE 28207 EASTERN VA	PS AC 79 80 88 704 372-6846	SUGG, WILLIAM CASWELL, JR. 2711 RANDOLPH ROAD, STE. 100 CHARLOTTE 28207 EMORY U	IM /PUD AC 61 62 67 704 373-0700	TUCKER, PAUL CHAMBLISS, JR. NALLE CLINIC 1350 S. KINGS DR. CHARLOTTE 28207 MED COLL OF GA	GE /IM AC 65 65 73 704 372-8750
SMITH, ROGER ENOS 125 BALDWIN AVE. CHARLOTTE 28204 U OF ILLINOIS	CD /IM AC 64 65 73 704 374-1696	SUNDBERG, THOMAS CLARKE 1335 ROMANY ROAD CHARLOTTE 28204 WUERZBURG U.GERM	RHU AC 76 79 83 704 375-1719	TUCKER, WALTER ROBERT 1618 E. MOREHEAD ST. CHARLOTTE 28207 U OF NC	FP AC 74 74 75 704 377-3610
SMOLEN, PAUL MATHIEU 1851 E. THIRD ST., STE. 103 CHARLOTTE 28204 RUTGERS MED SCH	PD AC 78 79 83 704 333-6659	SVENSON, ROBERT HAROLD 1960 RANDOLPH ROAD CHARLOTTE 28207 U OF CHICAGO	CD /IM AC 69 70 75 704 373-1503	TUCKER, WILLIAM STUART, JR. 1350 S. KINGS DR. CHARLOTTE 28207 U OF VIRGINIA	IM /END AC 78 81 85 704 372-8750
SNITZ, ARNOLD IRA 2620 E. SEVENTH ST. CHARLOTTE 28204 U OF VIRGINIA	PD AC 75 75 79 704 332-7141	SWETENBURG, RAYMOND LEE, JR. 2711 RANDOLPH ROAD CHARLOTTE 28207 DUKE	PD AC 76 78 79 704 374-1736	TUGGLE, ALLAN DAVIS 2335 FOREST DRIVE CHARLOTTE 28211 U OF LOUISVILLE	R L/RT 26 40 41 704 366-4089
SNYDER, JOHN MICHAEL 935 EAGLE ROAD WEDDINGTON 28173 U OF ALBERTA	AN AC 68 70 76 704 371-4049	TART, JAMES MILTON, JR. 10724 PARK RD. CHARLOTTE 28210 TEMPLE U	OBG AC 53 57 58 704 376-3536	TURNER, MURRAY WELLS 125 BALDWIN AVE. NORTH HILLS CHARLOTTE 28204 BOWMAN GRAY	IM /NEP AC 80 81 77 704 338-6300
SODEN, KEVIN JOSEPH 7019 WHITEMARSH COURT CHARLOTTE 28210 U OF FLORIDA	OM /EM AC 74 75 84 704 554-2656	TAYLOR, ANDREW DUVAL 2610 SELWYN AVENUE CHARLOTTE 28209 U OF MARYLAND	A L/RT 34 34 37 704 334-2397	UGLAND, DAVID NELS 100 QUEENS RD. CHARLOTTE 28204 BAYLOR	OPH AC 80 80 86 704 332-1156
SOMERSTEIN, DAVID EUGENE 3535 RANDOLPH ROAD CHARLOTTE 28211 MED U OF SC	U AC 66 66 73 704 365-0371	TAYLOR, FREDERICK HARVEY 1900 RANDOLPH RD. #206 CHARLOTTE 28207 DUKE	TS /CDS AC 45 45 54 704 372-1306	ULLRICH, CHRISTOPHER GEORGE 2631 ROTHWOOD DR. CHARLOTTE 28211 SUNY-SYRACUSE	DR AC 76 76 86 704 365-0343
SPANGENTHAL, SELWYN 1350 S. KINGS DR. CHARLOTTE 28207 U OF CAPE TOWN	PUD AC 74 74 84 704 372-8750	TAYLOR, JOHN BRUCE 449 N. WENDOVER DR. CHARLOTTE 28211 MED COLL OF VA	OBG AC 78 80 83 704 376-0360	VADNAIS, PAUL ALFRED PO BOX 33549 CHARLOTTE 28233 U OF NC	AN AC 79 84 76 704 371-4049
SPAUGH, EARLE 411 N. WENDOVER RD. CHARLOTTE 28211 U OF PENN	PD /ADL AC 50 50 55 704 375-9795	TEIGLAND, CHRIS M. 1900 RANDOLPH RD. STE. 816 CHARLOTTE 28207 DUKE	U AC 80 81 87 704 334-3033	VALERI, FRANK SCOTT 2330 RANDOLPH RD. CHARLOTTE 28207 PENN STATE U	CD /IM AC 80 81 85 704 377-0575
SPIVEY, JAMES RICHARD 1928 RANDOLPH RD. STE. 211 CHARLOTTE 28207 TULANE U	IM AC 80 81 84 704 377-3439	THALINGER, ALAN ROBERT 3535 RANDOLPH ROAD CHARLOTTE 28211 U OF VIRGINIA	ON /IM AC 72 72 79 704 365-0760	VAN-HOY, JOE MILTON 3735 ABINGDON ROAD CHARLOTTE 28211 DUKE	GS L/RT 38 38 49 704 364-5069
SQUIRES, JERRY EWING PO BOX 36507 2425 PARK RD. CHARLOTTE 28236 WEST VA U	PTH AC 78 82 88 704 376-1661	THOMAS, ACHAMMA 11005 HUNTOVER DR. ROCKVILLE, MD 20852 R G KAR MED COLL	IM RT 57 57 73 301 881-0229	VANDER VEER, CRAIG ANDREW 1010 EDGEHILL CHARLOTTE 28207 CHICAGO MED SCH	NS AC 79 80 86 704 376-1605
STALLWORTH, WILLIAM KING 2711 RANDOLPH RD. #305-A CHARLOTTE 28207 TULANE U	OBG AC 59 63 63 704 372-8020	THOMLEY, ALAN MILES 1960 RANDOLPH ROAD CHARLOTTE 28207 U OF MIAMI	CD /IM AC 77 78 85 704 373-1503	VANDERBERRY, ROBERT C., JR. PO BOX 240197 CHARLOTTE 28224 U OF NC	PD AC 68 68 88 704 554-8373
STEAGALL, ROBERT WORTH, JR. 6434 SARDIS ROAD CHARLOTTE 28226 DUKE	D RT 55 55 65 704 364-1050	THOMPSON, JOHN ALBERT, JR. 2310 RANDOLPH ROAD CHARLOTTE 28207 BOWMAN GRAY	D AC 67 67 74 704 376-9849	VANDIVER, THOMAS JACKSON 150 PROVIDENCE ROAD CHARLOTTE 28207 EMORY U	OBG AC 76 78 81 704 377-0461
STEIGER, HOWARD PAUL BOX 2144 PAWLEYS ISLAND, SC 29585 DUKE	D L/RT 39 42 47	TIDWELL, JOHN WILLIAM, II 1900 RANDOLPH ROAD CHARLOTTE 28207 U OF MICHIGAN	OBG AC 65 66 73 704 377-5675	VERHOEFF, DIRK SEASIDE SPARROW 12 HILTON HEAD ISLAND, SC 29928 U OF UTRECHT	PUD L/RT 33 33 54 803 671-2665
STEPHENS, KATHRYN JOHNSON 2330-B RANDOLPH RD. CHARLOTTE 28207 U OF NC	OBG AC 78 78 75 704 338-9752	TILLETT, CHARLES WALTER, JR. 2130 SHARON LANE CHARLOTTE 28211 JOHNS HOPKINS	OPH L/RT 46 46 55 704 366-6895	VERMEULEN, FRED DONALD 2028 RANDOLPH ROAD CHARLOTTE 28207 CASE WESTERN RES	CRS /GS AC 76 77 83 704 333-1259
STERNBERGH, W.C.A. 3011 RIVERMONT RD. CHATTANOOGA, TN 37415 U OF VERMONT	R L/RT 33 48 48 615 886-0195	TILLETT, GRACE MONTANA 2130 SHARON LANE CHARLOTTE 28211 SUNY-SYRACUSE	OPH /R AC 49 54 55 704 366-6895	VERNER, HUGH DAVID 212 S. TRYON ST., STE. 1500 CHARLOTTE 28281 JOHNS HOPKINS	IM L/RT 43 47 49 704 365-0760
STIEGEL, ROBERT MARK 1960 RANDOLPH RD. CHARLOTTE 28207 U OF NC	AC 79 81 87 704 373-1500	TOLENTINO, ANITA CHUA 6842 N. BALUSTROL LANE CHARLOTTE 28210 U OF SANTO TOMAS	AN AC 71 74 78 704 552-8511		

60. MECKLENBURG COUNTY SOCIETY (Continued)

VERROSS, WILLIAM EDWARD 1023 EDGEHILL ROAD, S. CHARLOTTE 28207 MED COLL OF GA	OBG AC 74 75 81 704 373-1541	WASHINGTON, EDWARD M. 6523 PENSFORD LANE CHARLOTTE 28226 NEW YORK MED COL	AN/AN AC 76 76 82 704 663-1113	WING, RICHARD LEE PO BOX 32861 CHARLOTTE MEM. HOSPITAL CHARLOTTE 28232 U OF NC	OBG AC 76 76 85 704 338-3149
VESANO, JACK LEE 225 HAWTHORNE LN. #205 CHARLOTTE 28204 WEST VA U	ORS AC 68 68 73 704 334-0809	WATKINS, CARLTON GUNTER 8713 GAINSFORD CT. CHARLOTTE 28210 WASHINGTON U	PD AC 43 43 46 704 372-7790	WINGERT, JOHN GEORGE 1955 RANDOLPH ROAD CHARLOTTE 28207 U OF IOWA	OBG AC 55 65 65 704 376-3536
VISSER, PHILIP ALBERT 2115 E. 7TH ST., STE. 104 CHARLOTTE 28204 U OF IOWA	GS/CRS AC 76 77 84 704 333-1574	WATSON, DAVID WILLIAM 1900 RANDOLPH RD., STE. 506 CHARLOTTE 28207 SUNY-SYRACUSE	U AC 64 64 73 704 375-2544	WISE, DANIEL EDWIN 1413 ELIZABETH AVE. CHARLOTTE 28204 OHIO STATE U	CD AC 69 69 77 704 372-8750
VISSER, VALYA ELIZABETH DEPT. OF PEDIATRICS CHARLOTTE MEM. HOSP. BOX 32861 CHARLOTTE 28232 U OF IOWA	NPM/PD AC 73 74 85 704 338-3156	WEBSTER, JOEL STOOPS 2330 RANDOLPH AT LAUREL CHARLOTTE 28207 U OF MARYLAND	CD/IM AC 53 53 74 704 377-0575	WISE, FRED EUGENE, JR. 1350 S. KINGS DRIVE CHARLOTTE 28207 MED COLL OF VA	DR AC 45 54 55 704 372-8750
VOCI, VINCENT 902 COX RD., STE. B GASTONIA 28054 U OF LOUISVILLE	74 00 00 704 333-8300	WEEKS, KENNETH DURHAM, JR. 1413 ELIZABETH AVE. CHARLOTTE 28204 DUKE	IM/CD AC 74 78 84 704 338-6300	WISSING, JOEL ALLEN 1611 E. THIRD ST. CHARLOTTE 28204 U OF ALABAMA	R AC 73 74 85 704 333-0224
WACHTER, FRANCIS WILFRED PO BOX 33549 CHARLOTTE 28233 JEFFERSON	PTH AC 60 61 75 704 371-4814	WELTON, DAVID GOE 3535 RANDOLPH RD. STE. W101 CHARLOTTE 28211 U OF WISCONSIN	D L 35 39 39 704 364-6110	WOLTZ, JOHN HENRY EARLY 150 PROVIDENCE ROAD CHARLOTTE 28207 U OF PENN	GYN L 42 42 46 704 377-0461
WAGONER, DAVID KIRK 332 LILLINGTON AVENUE CHARLOTTE 28204 U OF NC	PD AC 71 71 78 704 376-4493	WHEELER, ANTHONY H. 2608 EAST 7TH ST. CHARLOTTE 28204 U OF NC	N AC 77 77 87 704 377-9323	WOOD, KENNETH ERVIN 1350 S. KINGS DRIVE CHARLOTTE 28207 U OF FLORIDA	ORS AC 70 71 78 704 372-8750
WALKER, ANDREW WILLIAM 2215 RANDOLPH ROAD CHARLOTTE 28207 VANDERBILT U	PS/HS AC 60 60 69 704 372-6846	WHITE, MACK WILLIS, III 7108 MATTHEWS-PINEVILLE RD. CHARLOTTE 28226 U OF NC	IM AC 79 80 75 704 542-1952	WOODARD, WARDEN LEWIS, III 2220 HAMILTON MILL RD. CHARLOTTE 28226 U OF NC	IM/ON AC 81 81 82 704 372-3350
WALKER, ANNE ENGLISH 226 BALDWIN AVENUE CHARLOTTE 28207 U OF NC	PD AC 80 83 84 704 332-8139	WHITE, THOMAS HUGH 1851 E. THIRD STREET CHARLOTTE 28204 DUKE	OBG AC 59 59 65 704 332-8103	WOODY, JOE HARRIS 4335 COLWICK RD. CHARLOTTE 28211 BOWMAN GRAY	OPH AC 58 58 65 704 364-7400
WALKER, PHILLIP JACKSON 928 BAXTER ST. CHARLOTTE 28204 U OF VIRGINIA	NEP/IM AC 64 64 78 704 374-1321	WHITE, THOMAS RHYNE P.O. BOX 280 CHERRYVILLE 28021 DUKE	FP AC 80 80 77	WORTMAN, WILLIAM J., JR. 2711 RANDOLPH RD. #309 CHARLOTTE 28207 BOWMAN GRAY	GYN/OBS AC 64 64 76 704 376-1580
WALKER, THOMAS ENGLISH 226 BALDWIN AVENUE CHARLOTTE 28204 HARVARD	PD AC 50 50 53 704 332-8139	WHITE, WILLIAM ELLIOTT 2711 RANDOLPH RD., STE. 301 CHARLOTTE 28207 BOWMAN GRAY	PD AC 46 47 53 704 332-6332	WRENN, RICHARD NICKLES PO BOX 32861 CHARLOTTE MEM. HOSP. CHARLOTTE 28232 DUKE	ORS AC 47 55 56 704 338-4257
WALKER, WILLIAM ALFRED 2028 RANDOLPH RD. CHARLOTTE 28207 U OF NC	CRS/GS AC 78 79 75 704 333-1259	WHITESIDE, JOHN HARVEY 150 PROVIDENCE ROAD CHARLOTTE 28207 U OF TORONTO	OBG AC 57 57 74 704 377-0461	WYNN, ROY SPURGEON 1721 OAKLAWN AVENUE CHARLOTTE 28216 HOWARD U	OPH L/RT 33 34 67 704 332-2035
WALLACE, J. W. SCOTT 2040 RANDOLPH RD. CHARLOTTE 28207 WEST VA U	P AC 83 84 87 704 334-0875	WHITLOCK, GARY THOMAS, III 114 S. TRYON ST. CHARLOTTE 28202 U OF NC	EM AC 78 80 81 704 332-3664	YOUNG, JOHN ADAM, II 1600 E. THIRD STREET CHARLOTTE 28204 U OF NC	OPH AC 60 60 67 704 372-3300
WANNAMAKER, EDWARD JONES 8919 PARK RD. #277 CHARLOTTE 28210 U OF PENN	IM L/RT 21 24 25 704 588-0130	WIDENER, HERBERT LLOYD 1350 S. KINGS DRIVE CHARLOTTE 28207 MED COLL OF VA	RHU/IM AC 68 77 78 704 372-8750	YOUNT, JAMES ALVIN 3535 RANDOLPH ROAD CHARLOTTE 28211 U OF NC	CD/CD AC 66 66 74 704 365-0760
WARD, SIMON V., III 2711 RANDOLPH RD. STE. 305 CHARLOTTE 28207 LA STATE U	OBG AC 81 81 87 704 372-8020	WILKERSON, E. RANDOLPH, JR. 3535 RANDOLPH ROAD CHARLOTTE 28211 EMORY U	OPH AC 64 64 71 704 364-8576	YUDELL, ROBERT BENJAMIN 309 S. LAUREL AVENUE CHARLOTTE 28207 DUKE	OPH AC 54 57 61 704 372-4380
WARD, WILLIAM ALAN 1822 BRUNSWICK AVE. CHARLOTTE 28207 U OF PITTSBURGH	ORS AC 79 79 86 704 373-0544	WILLIAMS, CHARLES D. 734 LANSLOWNE RD. CHARLOTTE 28226 DUKE	PUD/IM AC 50 54 57 704 366-6687	ZASTROW, JOSEPH R. 6606 POINT COMFORT LN. PINEVILLE 28134 MC OF WISC.	R 87 88 88 704 541-0970
WARNER, CHARLES ERNEST 1700 ABBEY PLACE CHARLOTTE 28209 DUKE	PD AC 58 58 63 704 523-7232	WILLIAMS, MCCORD 3954 CHURCHILL ROAD CHARLOTTE 28211 HARVARD	GS L/RT 37 37 42 704 364-5363	ZIMMERMAN, GERALD DAVID MERCY HOSPITAL 2001 VAIL AVE. CHARLOTTE 28207 M C OF WISCONSIN	R/NM AC 62 62 70 704 379-5860
WARREN, CASPER CARL, JR. 8349 BAR HARBOR LANE CHARLOTTE 28210 U OF NC	AN AC 59 59 60 704 664-1640	WILLIAMS, WILLIAM THOMAS, JR. MAIN ST., BOX 1570 DAVIDSON 28036 BAYLOR	IM/PD AC 73 73 79 704 892-7905	ZIMMERN, SAMUEL HYAMS 1960 RANDOLPH ROAD CHARLOTTE 28207 JOHNS HOPKINS	CD/IM AC 74 74 83 704 373-1503
WARREN, THOMAS LINSON 4401 COLWICK RD., STE. 702 CHARLOTTE 28211 WEST VA U	AN AC 78 79 85 704 379-5943	WILSON, B. HADLEY 1960 RANDOLPH RD. CHARLOTTE 28207 DUKE	CD AC 80 81 76 704 373-1503	ZOLLINGER, RICHARD W., II 301 HAWTHORNE LANE CHARLOTTE 28204 CHICAGO MED SCH	TS/CDS AC 78 79 86 704 375-8413
WASE, RAYMOND EDWARD, JR. PRESBYTERIAN HOSPITAL PO BOX 33549 CHARLOTTE 28233 U OF FLORIDA	EM AC 74 75 78 704 371-4160	WILSON, HENRY VANPETERS, III 3535 RANDOLPH RD., 201-W CHARLOTTE 28211 JOHNS HOPKINS	GS/TS AC 61 64 67 704 364-8100	ZUGER, JAMES HERMAN 6011 BENTWAY DR. CHARLOTTE 28226 BOSTON U	R AC 73 74 77 704 541-6011

61. MITCHELL-YANCEY COMPONENT SOCIETY

OFFICERS—President: Frank Craig, M.D., P.O. Box 489, Burnsville 28714
Secretary: Carolyn Cort, M.D., P.O. Box 188, Burnsville 28714 (704 682-6912)

BUCHANAN, HARRY GLENN	FP AC	HORNER, JACK CHENOWETH	GS L/RT	SARGENT, WINSTON ARTHUR Y.	GP L/RT
203 BROAD STREET	64 67 68	37 PACES WEST PLACE	37 51 51	37 SUMMIT ST.	30 31 54
SPRUCE PINE 28777		ATLANTA, GA 30327		BURNSVILLE 28714	
WEST VA U	704 765-7361	GEO WASHINGTON U	404 237-4651	U OF VERMONT	
CORT, CAROLYN RAY	PD AC	JOHNSON, JAMES NOLEN	FP AC		
P. O. BOX 188	70 70 79	213 DEER PARK LAKE DR.	57 58 59		
BURNSVILLE 28714		SPRUCE PINE 28777			
BOWMAN GRAY	704 682-6912	U OF TENNESSEE			

62. MONTGOMERY COMPONENT SOCIETY

OFFICERS—President: Fred Wier, M.D., 506 Wood St., Troy 27371 (919 572-3737)
Secretary: Jack Gibson, M.D., 423 Wood St., Troy 27371 (919 572-3779)

CULLEY, JAMES PAUL	GS AC	HIGHSMITH, CHARLES	GS /ORS L/RT	SCARBOROUGH, CHARLES F., JR.	GP AC
506 WOOD ST.	66 67 74	P. O. BOX D	42 42 52	PO BOX 159	46 47 50
TROY 27371		TROY 27371		STAR 27356	
U OF KENTUCKY	919 572-3737	GEO WASHINGTON U	919 576-5511	JEFFERSON	919 428-2144
DALEY, MICHAEL BERNARD	IM AC	JANTZ, ROBERT JOSEPH	FP AC	WIER, FRED EUGENE	GS /CDS AC
PO BOX 887	78 79 82	P. O. BOX 128	81 83 84	506 WOOD ST.	74 74 82
TROY 27371		MOUNT GILEAD 27306		TROY 27371	
MED U OF SC	919 572-3779	TEMPLE U	919 439-5511	LOMA LINDA U	919 572-3737
GIBSON, JACKSON V.	IM AC	JOHNSON, PETER GRAHAM	FP AC	WORF, RICHARD CHARLES	FP AC
PO BOX 887	80 80 84	P. O. BOX 577	76 77 78	508 WOOD STREET	78 79 82
TROY 27371		MOUNT GILEAD 27306		TROY 27371	
U OF NC	919 572-3779	DALHOUSIE U	919 439-6831	U OF NC	919 572-3656
GLENN, JOHN CAPERS, JR.	R /NM AC				
514 WOOD STREET	43 47 47				
TROY 27371					
DUKE	919 572-3475				

63. MOORE COMPONENT SOCIETY

OFFICERS—President: Clifford J. Long, M.D., 1 Memorial Dr., Pinehurst 28374 (919 295-0286)
Secretary: William Stewart, M.D., 195 W. Illinois Ave., Southern Pines 28387 (919 692-2444)

ALLEN, DAVID GEOFFREY	ON /IM AC	CHIULLI, RICHARD ALLEN	GS AC	FELTON, ROBERT LEE, JR.	GP L
PINEHURST MEDICAL CLINIC	67 67 76	137 JAMES CREEK ROAD	77 81 82	PO BOX 57	27 27 30
PO BOX 551		SOUTHERN PINES 28387		WATERFORD, VA 22190	
PINEHURST 28374		BOSTON U	919 295-1141	U OF PENN	703 882-3743
DUKE	919 295-5511	CLARK, THEODORE RUST	P /ALD AC	FLEURY, ROBERT ANDRE	P /ALD AC
ALLINSON, PETER G.	AN AC	PO BOX 56	51 52 75	PO BOX 56	77 78 83
PO BOX 266	76 77 87	SOUTHERN PINES 28387		SOUTHERN PINES 28387	
SOUTHERN PINES 28387		HARVARD	919 692-6471	BOWMAN GRAY	919 692-6471
U OF MIAMI	919 692-7671	COLLINS, FRANCIS F., JR.	IM /PUD AC	FRANCIS, EDWIN HOWARD	EM RT
ANDREWS, ELLEN	N /P AC	205 PAGE RD.	72 73 77	9 VILLAGE GREEN	40 41 74
PO BOX 1749	75 75 87	PINEHURST 28374		SOUTHERN PINES 28387	
PINEHURST 28374		U OF VERMONT	919 295-5511	DOWNSTATE ME CTR	919 295-7777
U OF VERMONT	919 295-6868	COWHERD, DAVID MCLELLAN	CD AC	GADD, DUWAYNE DOUGLAS	U AC
AUSTIN, HENRY VANN	RHU AC	PO BOX 3000	81 81 80	PINEHURST SURGICAL CLINIC	46 56 56
PINEHURST MEDICAL CLINIC	67 67 74	MOORE REGIONAL HOSP.		PINEHURST 28374	
PO BOX 551		PINEHURST 28374		U OF MICHIGAN	919 295-0252
PINEHURST 28374		U OF NC	919 295-7882	GRIER, JOHN CALVIN, JR.	P L
DUKE	919 295-5511	COX, STANLEY CULLEN, III	OTO AC	P. O. BOX 819	40 40 47
BIRD, STEVEN M.	FP AC	205 CREST ROAD	68 68 76	PINEHURST 28374	
1990 HIGHWAY 15-501 SOUTH	84 86 88	SOUTHERN PINES N C 28387		JEFFERSON	919 295-6166
SOUTHERN PINES 28387		U OF COLORADO	919 295-6831	HARTSELL, CHARLES JACOB, JR.	AN AC
U OF NEW MEXICO	919 692-5555	DANIEL, LOUIS BROADDUS, JR.	ORS AC	MOORE MEMORIAL HOSPITAL	58 58 63
BRUTON, HENRY DAVID	PD AC	PINEHURST SURGICAL CLINIC	56 56 63	PINEHURST 28374	
195 W. ILLINOIS AVE.	61 61 67	PINEHURST 28374		DUKE	919 295-6861
SOUTHERN PINES 28387		BOWMAN GRAY	919 295-1042	HENDERSON, GEORGE P., JR.	HNS /OTO AC
U OF NC	919 692-2444	DAUGHTRIDGE, CLAY C., JR.	IM /CD AC	PINEHURST SURGICAL CLINIC	64 64 72
BULLEN, DORIS C.M.	P AC	P. O. BOX 519	59 59 67	PINEHURST 28374	
PO BOX 56	54 54 87	205 PAGE ROAD		U OF NC	919 295-0242
DARTMOUTH CLINIC, PA		PINEHURST 28374		HENNESSEN, JOHN A.	ORS /ADM AC
SOUTHERN PINES 28387		BOWMAN GRAY	919 295-5511	PO BOX 1650	48 49 87
U OF CAPE TOWN	919 692-6471	ELLIOTT, HARDIE BISHOP	EM AC	PINEHURST 28374	
CADDELL, TILLIE HORKEY	GP L	47 VILLAGE GREEN	37 37 74	NEW YORK MED COL	919 295-4130
P. O. BOX 519	51 52 62	SOUTHERN PINES 28387		HOSTETLER, HERBERT JAMES	AN AC
PINEHURST 28374		U OF TEXAS	919 692-7451	PO BOX 730	59 60 84
MED COLL OF GA	919 295-5511	ELLIS, JOHN NELSON	ORS AC	WEST END 27376	
CARTER, STEVEN RAYMOND	AN AC	PINEHURST SURGICAL CLINIC	66 67 74	U OF ILLINOIS	919 295-4606
PO BOX 2060	78 80 82	PINEHURST 28374		HUCKS-FOLLISS, ANTHONY G.	NS AC
SOUTHERN PINES 28387		U OF KANSAS	919 295-6831	P. O. BOX 2000	69 69 75
BOWMAN GRAY	919 295-5551			PINEHURST 28374	
				U OF VIRGINIA	919 295-1843

63. MOORE COMPONENT SOCIETY (Continued)

JACOBSON, PETER LARS P. O. BOX 1749 PINEHURST 28374 WASHINGTON U	N /IM AC 77 78 80 919 295-6868	MCMILLAN, ROBERT MONROE PO BOX 786, CCNC PINEHURST 28374 JOHNS HOPKINS	IM L/RT 38 38 46 919 692-6885	SHERRINGTON, BRIAN THOMAS 195 W. ILLINOIS AVE. SOUTHERN PINES 28387 U OF FLORIDA	PD AC 73 74 77 919 692-2444
JACOBSON, SEVERT HAROLD P. O. BOX 2000 PINEHURST 28374 U OF MINN	NS AC 65 65 78 919 295-1291	MESSNER, DANIEL K. 2170 MIDLAND RD. SOUTHERN PINES 28387 INDIANA U	OPH AC 81 81 88 919 295-2100	SIEGE, ALFRED GEOFFREY PO BOX 786 PINEHURST 28374 NEW YORK MED COL	PH /GPM L/RT 43 65 66 919 692-8899
JACQUES, ROBERT SAMUEL P. O. BOX 695 PITTSBORO 27312 LOMA LINDA U	EM /FP AC 53 54 55 919 295-7777	MINCEY, GREGORY JULIAN 2170 MIDLAND ROAD SOUTHERN PINES 28387 EMORY U	OPH AC 77 79 83 919 295-2100	SMITH, JERRY EDWARD PO BOX 2000 PINEHURST SURGICAL CLINIC PINEHURST 28374 U OF NC	OBG AC 61 61 71 919 295-0282
KICHERER, HARRY JAY 885 ST. ANDREWS DR. PINEHURST 28374 GEO WASHINGTON U	R /NM AC 48 52 87 919 295-1706	MONROE, CLEMENT ROSENBERG 1475 MIDLAND RD. #18 MIDDLETON PL. SOUTHERN PINES 28387 U OF MARYLAND	GS L/RT 24 25 30 919 692-4888	SNYDER, RALPH EUGENE MEDICAL REVIEW OF NC, INC. PO BOX 37309 RALEIGH 27627 NEW YORK MED COL	IM AC 50 52 79 919 851-2955
KILPATRICK, WILBUR KIRBY, JR. P. O. BOX 2000 PINEHURST 28374 U OF NC	OBG AC 64 64 76 919 295-1391	MONROE, JOHN LAUCHLIN PINEHURST SURGICAL CLINIC PINEHURST 28374 U OF NC	OTO /HNS AC 62 62 69 919 295-2161	STAUB, ERNEST WILSON PINEHURST SURGICAL CLINIC PINEHURST 28374 NORTHWESTERN U	TS /VS AC 57 65 66 919 295-0266
KRUSE, RICHARD STEVEN PO BOX 1795 SOUTHERN PINES 28387 GEORGETOWN U	DR /NM AC 71 72 79 919 692-9667	MORRISON, HUGH MAXWELL, JR. P. O. BOX 460 PINEHURST 28374 U OF NC	OPH AC 57 57 63 919 295-6809	STEWART, WILLIAM LEE 195 W. ILLINOIS AVE. SOUTHERN PINES 28387 U OF NC	PD AC 79 79 75 919 692-2444
LAM, DOUGLAS EDWARD 105 PERRY DRIVE SOUTHERN PINES 28387 WAYNE STATE U	FP AC 76 77 84 919 692-4802	NAKAMOTO, RONA KEIKO 722 HIGHLAND DR. SANFORD 27330 TEXAS TECH U	AN AC 83 83 87 919 774-2100	STORCH, SAMUEL JAY 2 MEMORIAL DR. PINEHURST 28374 GEORGETOWN U	U AC 80 82 86 919 295-6782
LANINGHAM, JAMES E. T. P. O. BOX 3000 MOORE MEMORIAL HOSPITAL PINEHURST 28374 MED COLL OF VA	PTH /BLB AC 66 69 75 919 295-7978	NEVILLE, CECIL HOWELL, JR. PINEHURST ORS CLINIC P. O. BOX 1650 PINEHURST 28374 U OF NC	ORS AC 60 60 62 919 295-1392	STRASSER, STEPHAN F. PO BOX 638 SOUTHERN PINES 28387 CHICAGO MED SCH	DR AC 82 84 88 919 295-4400
LARSEN, ERIC P. O. BOX 2000 PINEHURST 28374 CASE WESTERN RES	GS /CDS AC 65 65 72 919 295-1762	OAKLEY, WARD SAYRE, JR. P. O. BOX 1650 PINEHURST 28374 U OF TENNESSEE	ORS AC 75 76 84 919 295-4200	STREET, MURDO EUGENE, JR. P. O. BOX 38 GLENDDON 27251 DUKE	FP L/RT 37 37 42 919 464-5315
LEE, KYU YONG MCCAIN HOSPITAL MCCAIN 28361 CATHOLIC U	GP AC 68 77 86 919 944-2351	OWENS, FRANCIS LEROY 510 N. W. BROAD STREET SOUTHERN PINES 28387 DUKE	GP /ABS L 34 35 38 919 692-6022	STUBER, ROBERT LEO MOORE MEMORIAL HOSPITAL PINEHURST 28374 ST LOUIS U	PTH /DMP AC 56 56 65 919 295-7135
LENAHAN, C. RODNEY PO BOX 2000 PINEHURST 28374 U OF LOUISVILLE	U AC 82 83 88 919 295-0250	PATTERSON, F. M. SIMMONS, JR. PO BOX 519 205 PAGE ROAD PINEHURST 28374 U OF PENN	CD /IM AC 71 71 78 919 295-5511	SUTHER, THOMAS C., JR. MCCAIN HOSPITAL MCCAIN 28361 U OF NC	P /GP AC 56 56 70 919 944-2351
LINA, JOHN RAYMOND 203 RIDGEVIEW ROAD SOUTHERN PINES 28387 MED SCH-UMDNJ	DR /R AC 73 74 81 919 295-7040	PATTERSON, RONALD HALFORD 1902-J N. SANDHILLS BLVD. ABERDEEN 28315 MED COLL OF VA	ORS AC 71 71 77 919 295-1471	SWANTKOWSKI, THOMAS M. 205 PAGE RD. PO BOX 519 PINEHURST 28374 TEMPLE U	IM /GE AC 78 79 86 919 295-5511
LINEBERGER, THOMAS H. 1901-C N. SANDHILL BLVD. ABERDEEN 28315 U OF NC	IM AC 80 81 84 919 692-4011	PHILLIPS, CHARLES A. SPEAS 165 PAGE ROAD, #2 PINEHURST 28374 NORTHWESTERN U	L/RT 47 49 54 919 295-5311	TARLETON, HAROLD LEWIS PO BOX 649 WEST END 27376 U OF CALIF-LA	FP /EM AC 66 69 85 919 673-2403
LONG, CLIFFORD JAMES P. O. BOX 2000 PINEHURST 28374 WAYNE STATE U	OBG AC 77 78 81 919 295-0286	PISHKO, MICHAEL THEODORE P. O. BOX 339 PINEHURST 28374 DUKE	OBG L/RT 36 37 45 919 295-6634	TART, JAMES ALVIN PINEHURST MED. CLINIC 205 PAGE ROAD PINEHURST 28374 BOWMAN GRAY	CD /IM AC 66 66 73 919 295-5511
LOOMIS, FRANK JOSEPH 527-B EAGLE ROAD WHISPERING PINES 28327 U OF MICHIGAN	EM /GP RT/AC 49 50 74 919 295-7777	PULEO, ELLEN ANNE CCNC, P. O. BOX 786 PINEHURST 28374 DUKE	OBG AC 79 82 83 919 295-2100	TATE, GEORGE WHALEY, JR. 2170 MIDLAND ROAD SOUTHERN PINES 28387 U OF TEXAS-SW	OPH AC 68 68 78 919 295-2100
MARCHETTI, LOUIS JOSEPH MIDSOUTH UROLOGY CTR., PA BOX 3, TWO MEMORIAL DR. PINEHURST 28374 MED SCH-UMDNJ	U AC 64 64 72 919 295-6782	ROSTAN, STEPHEN EDWIN P. O. BOX 669 PINEHURST 28374 VANDERBILT U	D /DMP AC 70 71 77 919 295-5567	WALKER, DAVID ANTHONY TOWN/COUNTRY SHOPPING CTR ABERDEEN 28315 LA STATE U	OPH AC 68 68 73 919 944-7196
MARTIN, ROBERT GALE 2170 MIDLAND ROAD SOUTHERN PINES 28387 U OF NC	OPH AC 68 68 78 919 295-2100	ROWLAND, MICHAEL CLARK P. O. BOX 2000 PINEHURST 28374 ST U OF NY-BUFF	GS AC 75 76 80 919 295-2232	WALLACE, DONALD KAI 205 PAGE ROAD PINEHURST 28374 DUKE	IM /GE AC 59 59 65 919 295-5511
MCDEVITT, NOEL BRUCE 1 MEMORIAL DR. PINEHURST 28374 U OF NC	PS /PSF AC 64 64 72 919 295-5131	SAFIR, ARAN 3 ELLSWORTH AVE. CAMBRIDGE, MA 02139 NEW YORK U	OPH AC 54 56 86 919 295-2100	WEIDAW, HAROLD RICHARD P. O. BOX 1835 PINEHURST 28374 JEFFERSON	AI /IM AC 54 71 83 919 295-6661
MCFADDEN, JAMES STUART 210 LINVILLE GARDENS PO BOX 2256 PINEHURST 28374 U OF NC	AN AC 71 71 78 919 295-7184	SAWYER, THOMAS R. PO BOX 2445 PINEHURST 28374 U OF MICHIGAN	OPH AC 55 55 87 919 295-2100	WILLIAMS, DAVID LEON 540 N. W. BROAD STREET SOUTHERN PINES 28387 INDIANA U	IM /HEM AC 68 68 78 919 692-2061
MCLEOD, VIDA CANADAY WEYMOUTH APTS., BOX 2001 SOUTHERN PINES 28387 BAYLOR	GP L/RT 19 31 31 919 692-0333				

64. NASH COMPONENT SOCIETY

OFFICERS—President: Daniel Crocker, M.D., 100 Nash Medical Arts Mall, Rocky Mount 27804 (919 443-9084)
Secretary: E. Allison Ramsey, M.D., 124 Foy Drive, Rocky Mount 27804 (919 443-4031)

ADKINS, NEAL ASHLEY 132 FOY DRIVE ROCKY MOUNT 27801 U OF NC	OBG AC 72 72 78 919 443-6622	CLINE, JAMES ALEXANDER WELLONGATE 2-D 3430 SUNSET AVE. ROCKY MOUNT 27804 U OF MARYLAND	GS /EM RT 49 54 79 919 443-6444	HORNE, STEPHEN FRANCIS 1500 LAFAYETTE AVE. ROCKY MOUNT 27803 DUKE	D L 42 43 49 919 446-6638
ANDRACCHIO, VINCENT CHARLES 3709 WESTRIDGE CIRCLE DR. ROCKY MOUNT 27804 JEFFERSON	AN AC 56 64 64 919 443-8038	COOPER, WILLIAM C., JR. 124 FOY DRIVE ROCKY MOUNT 27801 DUKE	PD AC 60 60 67 919 443-4031	JONES, WILLIAM ROBERT 600 SUNSET AVENUE ROCKY MOUNT 27804 BOWMAN GRAY	GP AC 47 48 54 919 446-4921
BAGGETT, HENRY CLIFFORD 2420 PROFESSIONAL DR. P. O. BOX 7099 ROCKY MOUNT 27804 U OF NC	OTO AC 70 70 77 919 937-4100	CRAWFORD, MICHAEL D. PO BOX 7099 ROCKY MOUNT 27801 WEST VA U	OTO AC 81 83 88 919 937-4100	KINNAIRD, PAUL MCKEE, JR. 101 NASH MEDICAL ARTS MALL ROCKY MOUNT 27804 U OF LOUISVILLE	PD AC 76 77 86 919 443-8820
BAILEY, GEORGE TILLMAN 212 OLD COLONY WAY ROCKY MOUNT 27801 U OF NC	DR AC 81 82 80 919 443-8083	CROCKER, DANIEL LIND 100 NASH MEDICAL ARTS MALL ROCKY MOUNT 27801 U OF NC	ON /HEM AC 70 70 76 919 443-9084	KORNEGAY, LEMUEL W., JR. 1041 NOELL LANE ROCKY MOUNT 27801 DUKE	GS /GP AC 43 43 43 919 443-0168
BAILEY, LLOYD W. 109 FOY DRIVE ROCKY MOUNT 27804 JEFFERSON	OPH AC 53 53 57 919 443-5164	CROW, JIMMIE RAY 1041 NOELL LN., STE. 102 ROCKY MOUNT 27804 U OF KANSAS	GS /VS AC 78 79 88 919 443-0026	KORNEGAY, ROBERT DUMAIS 1041 NOELL LANE ROCKY MOUNT 27801 DUKE	GS L 39 41 43 919 443-0168
BALES, DONALD WEESNER, JR. PO BOX 7828 ROCKY MOUNT 27804 U OF TENNESSEE	IM AC 82 82 85 919 977-6746	CRUMPLER, JAMES FULTON 414 PEACHTREE STREET ROCKY MOUNT 27804 NEW YORK U	PD L 30 30 35 919 442-1523	KRONCKE, FREDERICK GEORGE, JR. 200 NASH MEDICAL ARTS MALL ROCKY MOUNT 27801 U OF NC	OBG AC 70 70 75 919 443-5941
BASS, SPENCER PIPPEN, JR. P. O. BOX 605 TARBORO 27886 U OF VIRGINIA	PTH AC 49 53 57 919 823-3114	DEANS, WILLIAM RONALD, JR. 2412 PROFESSIONAL DR. ROCKY MOUNT 27804 U OF TEXAS	N AC 77 77 82 919 443-0041	KUMAR, KAMLESH 108 N. ENGLEWOOD DR. ROCKY MOUNT 27801 GSV MED COLLEGE	PUD /IM AC 63 72 80 919 443-1126
BATTLE, MARGARET E. WHITE 521 PEACHTREE STREET ROCKY MOUNT 27801 U OF MICHIGAN	GYN L 33 34 37 919 442-2414	DERBYSHIRE, JOHN STUART 1400 BROOKWOOD DR. PO BOX 7828 ROCKY MOUNT 27804 OHIO STATE U	IM AC 71 71 76 919 977-6746	KUMAR, SATISH KUMAR 108 N. ENGLEWOOD DR. ROCKY MOUNT 27801 INST OF MED SCI	DR /NM AC 72 78 81 919 443-1126
BATTLE, NEWSOM PITTMAN 100 NASH MEDICAL ARTS MALL ROCKY MOUNT 27801 U OF PENN	GS L 26 30 31 919 442-2414	DORION, ROBERT P. NASH GENERAL HOSPITAL ROCKY MOUNT 27804 U OF SAN CARLOS	PTH /HEM AC 81 83 87 919 443-8166	LADWIG, STEPHEN HAROLD NASH GENERAL HOSPITAL ROCKY MOUNT 27801 NORTHWESTERN U	P AC 63 72 76 919 443-8083
BOBZIEN, WILLIAM FREDRICK, III 100 NASH MEDICAL ARTS MALL ROCKY MOUNT 27801 GEORGETOWN U	HEM /IM AC 69 69 74 919 443-9084	DOYLE, RAYMOND THOMAS 1400 BROOKWOOD DR. PO BOX 7828 ROCKY MOUNT 27804 JOHNS HOPKINS	IM /HEM AC 54 56 61 919 977-6746	LEE, SOONG HYUN 106 NASH MEDICAL ARTS MALL ROCKY MOUNT 27804 SEOUL NATL U	FP AC 53 54 57 919 443-8002
BOYETTE, DOUGLAS DEWITT 200 NASH MEDICAL ARTS MALL ROCKY MOUNT 27804 EAST CAROLINA U	OBG AC 83 84 81 919 443-5941	ENGSTROM, LINCOLN L. 217 KIMBERLY JO DR. ROCKY MOUNT 27804 BOWMAN GRAY	R AC 61 61 88 919 443-8083	LIVERMAN, JOSEPH THOMAS 111 W. CHURCH STREET NASHVILLE 27856 BOWMAN GRAY	FP AC 56 56 57 919 478-5344
BRANTLEY, JULIAN CHISOLM, JR. 1507 LAFAYETTE AVE. ROCKY MOUNT 27801 JEFFERSON	GYN L/RT 44 44 48 919 446-8434	FISH, HARRY GUSTAV, JR. 100 NASH MEDICAL ARTS MALL ROCKY MOUNT 27801 DUKE	GS RT 48 55 56 919 443-9084	LOWRY, OTIS MEGEL SPRING HOPE CLINIC PO BOX 1090 SPRING HOPE 27882 U OF NC	U AC 56 60 63 919 443-3136
BROCK, JULIAN STANLEY 200 ENGLEWOOD DRIVE ROCKY MOUNT 27804 DUKE	R L/RT 51 52 53 919 443-1353	FRITZ, RICHARD THOMAS PO BOX 88 RED OAK 27868 U OF NC	R AC 76 77 85 919 443-8083	MACAULAY, ROBERT JOSEPH, JR. 3136 SUNSET AVENUE ROCKY MOUNT 27804 GEO WASHINGTON U	FP AC 55 70 81 919 443-8810
BYNUM, ROBERT WILLIAM, IV 100 NASH MEDICAL ARTS MALL ROCKY MOUNT 27804 U OF NC	NEP /IM AC 79 80 84 919 443-9084	FROBOSE, WILLIAM JOSEPH 212 PIEDMONT AVENUE ROCKY MOUNT 27801 MED COLL OF VA	U L/RT 43 53 53 919 443-3136	MARQUEZ, PATERNO RIEGO 107 NASH MEDICAL ARTS MALL ROCKY MOUNT 27804 U OF SANTO TOMAS	ORS /HS AC 68 72 74 919 443-8830
CARR, KENT EMERSON 3404 MERRIFIELD RD. ROCKY MOUNT 27801 EAST CAROLINA U	IM AC 84 85 81 919 937-4084	GOLD, BENJAMIN MILLER 1730 LAFAYETTE CIRCLE ROCKY MOUNT 27801 U OF MARYLAND	OBG RT 47 47 53 919 442-4756	MARSIGLI, ADOLFO HECTOR 110 NASH MEDICAL ARTS MALL ROCKY MOUNT 27801 BUENOS AIRES U	ORS AC 68 67 76 919 443-8830
CARTER, NEEDHAM BATTLE 3811 WOODLAWN RD. ROCKY MOUNT 27804 DUKE	IM /CD RT 53 54 56 919 977-6746	HAWES, MARY LINDA 100 NASH MEDICAL ARTS MALL ROCKY MOUNT 27801 U OF NC	IM /NEP AC 80 83 84 919 443-9084	MARSIGLI, EDUARDO OSCAR 110 NASH MEDICAL ARTS MALL ROCKY MOUNT 27801 BUENOS AIRES U	D /IM AC 74 74 82 919 443-8937
CHAMBERS, ARTHUR L., III 3619 WESTRIDGE CIRCLE DR. ROCKY MOUNT 27801 MED U OF SC	EM AC 79 79 84 919 443-8172	HIGH, LARRY ALLISON 213 N. COLLINS ST. NASHVILLE 27856 MED COLL OF VA	FP L/RT 45 45 49 919 459-2432	MARTIN, WILLIS ELWOOD 112 NASH MEDICAL ARTS MALL ROCKY MOUNT 27804 U OF NC	NS AC 68 68 82 919 443-4563
CHAMBLEE, JOHN SIGMA 509 E. CHURCH STREET NASHVILLE 27856 EMORY U	PH /GPM L/RT 38 38 42 919 459-2223	HIGH, LARRY ALLISON, JR. 132 FOY DRIVE ROCKY MOUNT 27801 U OF NC	OBG AC 72 72 78 919 443-6622	MARTINEZ, LUCAS J. P. O. BOX 7514 ROCKY MOUNT 27801 U OF MADRID	U AC 76 77 84 919 443-3136
CHAMBLISS, JOHN RANDOLPH 100 NASH MEDICAL ARTS MALL ROCKY MOUNT 27801 HARVARD	IM AC 44 44 50 919 443-9084	HOLLAND, MICHAEL DAY 1116 GREEN TEE LANE ROCKY MOUNT 27801 U OF NC	IM /NEP AC 78 79 85 919 443-9084	MATHES, GORDON LAWRENCE, JR. 3136 SUNSET AVE. ROCKY MOUNT 27801 U OF TENNESSEE	AN AC 79 80 86 919 443-2125
CLEAVER, H. DEHAVEN 100 MEDICAL ARTS MALL ROCKY MOUNT 27801 TEMPLE U	GS /TS AC 44 53 53 919 443-9084				

64. NASH COMPONENT SOCIETY (Continued)

MICHAL, RICHARD GLENN 1041 NOELL LANE, STE. 101 ROCKY MOUNT 27804 DUKE	FP AC 80 83 78 919 443-3133	SHERIDAN, ROBERT JOHN 101 NASH MEDICAL ARTS MALL ROCKY MOUNT 27804 DUKE	PD AC 48 53 53 919 443-8820	THORP, LEWIS SUMNER 100 MEDICAL ARTS MALL ROCKY MOUNT 27801 U OF PENN	FP /FP AC 52 52 53 919 443-9084
MITCHELL, JOHN SCOTT 1041 NOELL LANE, STE. 101 ROCKY MOUNT 27801 U OF VIRGINIA	FP AC 72 72 85 919 443-3133	SIRISENA, OMATTA MUDALIGE 117 FOY DRIVE ROCKY MOUNT 27801 U OF CEYLON	IM /P AC 64 75 76 919 443-7678	TODD, STUART KITTREDGE 100 NASH MEDICAL ARTS MALL ROCKY MOUNT 27801 U OF TENNESSEE	GS AC 73 74 80 919 443-9084
MORGAN, BENJAMIN EDWARD 200 NASH MEDICAL ARTS MALL ROCKY MOUNT 27801 BOWMAN GRAY	OBG AC 47 48 54 919 443-5941	SMALL, FAIRLEIGH DAVID 3605 SHEFFIELD DR. ROCKY MOUNT 27803 U TX-SAN ANTONIO	EM AC 78 80 83 919 443-8171	WALL, WILLIAM STANLEY 330 S. W. MAIN STREET ROCKY MOUNT 27801 U OF PENN	GP L 33 33 36 919 446-4952
NUNN, CHALMERS MORTON, JR. 1413 JEREMY LANE ROCKY MOUNT 27801 DUKE	GE AC 80 82 79 919 443-9084	SMITH, CLAIBORNE THWEATT 100 MEDICAL ARTS MALL ROCKY MOUNT 27801 U OF PENN	IM L/RT 18 18 20 919 442-2916	WARREN, JULIAN MARION P. O. BOX 1120 SPRING HOPE 27882 U OF VIRGINIA	FP AC 56 57 58 919 478-4600
OVERTON, DOLPHIN HENRY, JR. 132 FOY DRIVE ROCKY MOUNT 27801 DUKE	OBG AC 53 61 61 919 443-6622	SMITH, TIMOTHY CARL 1051 COUNTRY CLUB DR. PO BOX 7828 ROCKY MOUNT 27804 OHIO STATE U	IM AC 71 71 74 919 937-4084	WEEKS, KENNETH DURHAM 1400 BROOKWOOD DR. PO BOX 7828 ROCKY MOUNT 27804 DUKE	IM /CD L 39 40 46 919 977-6746
PAYNE, FRED WILLIAM, JR. 100 NASH MEDICAL ARTS MALL ROCKY MOUNT 27801 VANDERBILT U	GS AC 53 61 61 919 443-9084	STEINER, MICHAEL LEE 3044 SUNSET AVE., STE. 100 ROCKY MOUNT 27804 WEST VA U	OPH AC 67 68 75 919 443-6129	WHISNANT, JOSEPH DURWOOD, JR. 3136 SUNSET AVE. ROCKY MOUNT 27801 BOWMAN GRAY	U AC 71 71 81 919 443-3136
PITTMAN, WILLIAM BRYAN 100 NASH MEDICAL ARTS MALL ROCKY MOUNT 27804 U OF NC	GE /IM AC 71 76 79 919 443-9084	STEKLOFF, SHELDON HARVEY 3741 SUNSET AVE. APT. A-1 ROCKY MOUNT 27804 U OF COLORADO	AN AC 69 74 75 919 937-4284	WHITAKER, JAMES ALLEN 624 FALLS ROAD ROCKY MOUNT 27804 TEMPLE U	U L 33 34 35 919 442-3516
RAMSEY, EDWARD ALLISON 124 FOYE DRIVE ROCKY MOUNT 27804 BOWMAN GRAY	PD AC 75 75 78 919 443-4031	STOVER, JOHN OLIVER, JR. P. O. BOX 42 RED OAK 27868 MED COLL OF VA	DR /NM AC 68 68 76 919 443-8083	WILSON, MOSES ELLUED 140 N. ENGLEWOOD DR. ROCKY MOUNT 27801 U OF NC	OBG AC 76 76 85 919 937-6611
RATCHFORD, GEORGE RUFUS, JR. 100 NASH MEDICAL ARTS MALL ROCKY MOUNT 27801 DUKE	IM AC 56 56 62 919 443-9084	SUITER, THOMAS B., JR. 100 NASH MEDICAL ARTS MALL ROCKY MOUNT 27801 DUKE	IM AC 46 49 49 919 443-9084	YENNEY, MATTHEW F.J., JR. 1031 NOELL LANE PO BOX 111 ROCKY MOUNT 27802 JEFFERSON	R /NM AC 54 61 61 919 443-9101
ROBERTSON, LEON WHITFIELD 107 MEDICAL ARTS MALL ROCKY MOUNT 27801 BOWMAN GRAY	FP /OM AC 45 45 47 919 443-8810	SUTTON, JULIAN T. DRAWER 100 SCOTLAND NECK 27874 U OF MARYLAND	FP AC 51 51 53 919 826-3143	ZIPF, ROBERT EUGENE, JR. NASH GENERAL HOSPITAL ROCKY MOUNT 27801 OHIO STATE U	PTH /FOP AC 66 66 79 919 443-8043
SEIGMAN, EDWIN LINCOLN 105 BUNN DRIVE ROCKY MOUNT 27804 U OF MARYLAND	DR L/RT 41 52 53 919 443-2044	THORP, JAMES HORACE MERRIAM 200 NASH MEDICAL ARTS MALL ROCKY MOUNT 27804 U OF NC	OBG AC 57 57 66 919 443-5941		

65. NEW HANOVER-PENDER COMPONENT SOCIETY

OFFICERS—**President:** Neil H. Musselwhite, III, M.D., 1602 Doctors Circle, Wilmington 28405 (919 251-9977)**Secretary:** Mark F. Warner, M.D., 1202 Medical Center Dr., Wilmington 28401 (919 763-8251)**Executive Director:** Bonnie J. Brown, 103 Green Meadows Dr., Wilmington 28405 (919 791-6952)

ALLEN, MOLLY VIRGINIA 1120 MEDICAL CENTER DR. WILMINGTON 28401 U TX-SAN ANTONIO	OPH AC 80 80 85 919 763-7316	ANDREWS, ROBERT JACKSON 5305 WRIGHTSVILLE AVENUE WILMINGTON 28403 U OF TENNESSEE	IM AC 46 48 51 919 791-2626	BOBITT, JOHN R. 2131 S. 17TH ST. WILMINGTON 28401 U OF ILLINOIS	OBG AC 64 70 87 919 343-0161
ALMKUIST, RALPH DURWOOD, II 1302 MEDICAL CENTER DRIVE WILMINGTON 28401 BOWMAN GRAY	NEP /IM AC 71 71 78 919 763-3651	ARMISTEAD, HOWARD LACY, JR. 2108 S. SEVENTEENTH STREET WILMINGTON 28401 U OF VIRGINIA	FP /OM AC 66 67 68 919 762-7776	BOTROS, SHERIF BOTROS 1625 DOCTOR'S CIRCLE WILMINGTON 28401 U OF NC	OTO AC 75 79 81 919 762-0234
ALMOND, CHARLES MALCOLM 1602 DOCTOR'S CIRCLE WILMINGTON 28401 U OF NC	FP AC 70 70 75 919 251-9955	ASSEVERO, MICHAEL L. 1502 PRINCESS ST. WILMINGTON 28401 MEHARRY MED COLL	OBG /GYN AC 81 81 85 919 762-8662	BROWN, ALBERT BELMONT 1615 DOCTOR'S CIR. WILMINGTON 28401 QUEENS U	GYN AC 43 67 67 919 343-1122
ANAGNOST, JOHN WILLIAM 1515 DOCTORS CIRCLE WILMINGTON 28401 JEFFERSON	IM /HEM AC 78 86 86 919 763-5182	BEAN, VIRGIL EDWARD 605 ROSE AVE. WILMINGTON 28403 BOWMAN GRAY	AN AC 83 84 87 919 343-7000	BUNN, DAVID GLENN, JR. 2215 CANTERWOOD DR. WILMINGTON 28401 U OF NC	OBG AC 75 76 80 919 763-1031
ANDERSON, ELBERT CARL 5224 CLEAR RUN DR. WILMINGTON 28403 NORTHWESTERN U	OPH L/RT 37 37 39 919 763-6265	BEAR, SIGMOND AARON 3712-B RESTON COURT WILMINGTON 28403 JOHNS HOPKINS	GYN AC 48 52 52 919 799-3103	BURDETTE, FRED MCPHERSON, JR. 1221 D COLUMBUS CIRCLE WILMINGTON 28403 MED U OF SC	GP L/RT 42 47 48 919 457-6865
ANDERSON, LANDON BUTLER 1222 MEDICAL CENTER DRIVE WILMINGTON 28401 VANDERBILT U	ORS AC 72 78 79 919 763-2977	BLACK, JOHN ALEXANDER 2106 LYNNWOOD DR. WILMINGTON 28403 BOWMAN GRAY	R AC 81 84 80 919 343-7000	BUTLER, FREDERICK C., JR 1915 GLEN MEADE ROAD WILMINGTON 28403 DUKE	OPH AC 61 61 67 919 763-3601
ANDREWS, LEON POLK 1902 DRUID LANE WILMINGTON 28403 HARVARD	IM RT 45 53 53 919 343-0167	BLACK, PAUL ADRIAN L. 5553 OLEANDER DRIVE WILMINGTON NC 28403 LOMA LINDA U	OALR/OPH L 33 33 38 919 799-2226	CALLAWAY, SAMUEL C., JR. 2311 DELANEY ROAD WILMINGTON 28403 EMORY U	OTO AC 63 63 72 919 762-8754

65. NEW HANOVER-PENDER COMPONENT SOCIETY (Continued)

CASHMAN, JOHN 1905 GLEN MEADE ROAD WILMINGTON 28403 JEFFERSON	U AC 65 66 73 919 763-6251	DINEEN, JAMES ROBERT 1616 MEDICAL CENTER DRIVE WILMINGTON 28401 U OF ROCHESTER	ORS AC 45 58 65 919 762-2655	HALL, GREGORY GRAYSON 2144 ECHO LANE WILMINGTON 28403 DUKE	AN AC 83 85 86
CAUGHEY, DALE WELLS, JR. 5305-A WRIGHTSVILLE AVENUE WILMINGTON 28403 DUKE	IM AC 70 70 73 919 799-4220	DONAHUE, MICHAEL JOSEPH 1505 MEDICAL CENTER DRIVE WILMINGTON 28401 CREIGHTON U	D AC 67 67 73 919 763-1555	HARE, RANSOM BRYANT, JR. 839 HANOVER DR. GRIFFIN, GA 30223 MED U OF SC	U L/RT 30 30 34
CHEN, CHIH-CHENG FRANK 1608 WELLINGTON AVENUE WILMINGTON 28401 TAIPEI MED COLL	N AC 69 77 82 919 395-5521	DORMAN, BRUCE HUGH 2001 S. 17TH STREET WILMINGTON 28401 DUKE	ORS AC 48 55 55 919 763-7344	HARSHBARGER, JOHN LYNN 1202 MEDICAL CENTER DR. WILMINGTON 28401 TEMPLE U	RHU /A AC 80 82 86 919 341-3350
CHESSON, ARTHUR SAUNDERS, JR. 1501 DOCK ST. WILMINGTON 28401 BOWMAN GRAY	PD AC 54 54 56 919 762-1744	DUNN, THADDEUS L. 1515 DOCTORS CIRCLE WILMINGTON 28401 DUKE	PUD /IM AC 77 87 87 919 763-5182	HAWTHORNE, HENRY C., JR 1920 S. 16TH STREET WILMINGTON 28401 U OF VIRGINIA	PD AC 67 67 74 919 763-2072
CLANCY, THOMAS V. 2131 S. 17TH ST. WILMINGTON 28402 U OF EAST	AC 79 00 88	DUROCHER, KEVIN HOWARD 2311 CANTERWOOD DR. WILMINGTON 28401 U OF WISCONSIN	P AC 81 85 85 919 762-9606	HELAK, JOSEPH WALTER 410 R. L. HONEYCUTT WILMINGTON 28403 SUNY-SYRACUSE	CD /IM AC 75 77 84 919 341-3400
CODINGTON, JOHN BONNELL 1501 MEDICAL CENTER DRIVE WILMINGTON 28401 U OF MARYLAND	GS AC 53 53 58 919 763-6289	EAKINS, JOEY WILLIAM ROUTE #3, BOX 303-K WILMINGTON 28403 BOWMAN GRAY	ID AC 70 70 72 919 763-3651	HICKS, CHARLES MONTGOMERY 1914 GLEN MEADE ROAD WILMINGTON 28403 U OF NC	PD AC 62 62 73 919 762-2651
COLEMAN, ELIZABETH ANNE CAROLINA COUNSELING CENTER 2450 DELANEY AVE. WILMINGTON 28403 U OF NC	P AC 83 85 87 919 763-9517	EATON, HUBERT ARTHUR, JR. P. O. BOX 982 WILMINGTON 28401 MEHARRY MED COLL	IM AC 69 69 74 919 763-5453	HOEPPNER, DAVID LAWRENCE 3710 SHIPYARD WILMINGTON 28403 U OF MANITOBA	EM AC 65 75 85 919 791-0075
COLEMAN, GORDON DONALD 1920 S. 16TH ST. WILMINGTON 28401 MED U OF SC	PD AC 75 76 79 919 762-3942	EVERHART, ROBERT G. 1202 MEDICAL CENTER DR. WILMINGTON 28401 HAHNEMANN	CD AC 81 81 88 919 341-3300	HOLT, WILLIAM REUBEN, JR. 1515 DOCTOR'S CIRCLE WILMINGTON 28401 MED COLL OF VA	CD /IM AC 77 80 83 919 763-5182
COMBS, JOHN GILBERT, JR. 2318 BLYTHE ROAD WILMINGTON 28403 U OF TENNESSEE	R AC 66 66 73 919 392-2610	EWING, JOHN ALEXANDER 2311 CANTERWOOD DR. WILMINGTON 28401 U OF EDINBURGH	P AC 46 46 55 919 251-9888	HOOPER, JOSEPH WARD, JR. 2216 GILLETTE DR. WILMINGTON 28403 HARVARD	U L/RT 46 46 53 919 763-6251
CONLEY, MARTIN JAMES, JR. 1515 DOCTOR'S CIRCLE WILMINGTON 28401 DUKE	CD /IM AC 73 73 83 919 763-5182	FALES, ROBERT MARTIN 407 W. RENOVAH CIRCLE WILMINGTON 28403 JEFFERSON	GS L/RT 32 32 36 919 762-1285	HUNDLEY, JAMES DAVENPORT 2001 S. 17TH STREET WILMINGTON 28401 U OF NC	ORS AC 67 67 76 919 763-7344
COURREGÉ, MARY LOU 3208 OLEANDER DR. WILMINGTON 28403 LA STATE U	D AC 82 82 88 919 763-7333	FICKLEN, CONWAY HAMILTON PO BOX 10338 WILMINGTON 28405 U OF VIRGINIA	OBG RT 54 59 59 919 256-3554	HUNT, OLIVER RAYMOND, JR. 1607 DOCTOR'S CIRCLE WILMINGTON 28401 U OF LOUISVILLE	CDS /TS AC 51 51 72 919 763-6571
CRACKER, ANDREW ROBERT 1809 GLEN MEADE ROAD WILMINGTON 28401 MED U OF SC	OBG AC 62 67 67 919 763-9833	FISHMAN, JOHN JAY 5301 WRIGHTSVILLE AVE. WILMINGTON 28401 TULANE U	AN AC 67 67 88 919 395-8100	HUNTER, CHARLES E., JR. 1414 MEDICAL CENTER DR. WILMINGTON 28401 U OF ALABAMA	CDS /TS AC 75 76 87 919 763-7363
CRAVEN, THOMAS, JR. 2001 S. 17TH STREET WILMINGTON 28401 U OF NC	ORS AC 58 58 64 919 763-7344	FULK, ROBERT VERNON, JR. 2311 DELANEY AVENUE WILMINGTON 28403 U OF NC	OTO AC 65 65 74 919 762-8754	HUNTER, JOHN DANE 1202 MEDICAL CENTER DRIVE WILMINGTON 28403 DUKE	ON /HEM AC 76 78 82 919 762-2990
CREDLE, WILLIAM FRONTIS, JR. 1202 MEDICAL CENTER DRIVE WILMINGTON 28401 MED COLL OF VA	PUD /IM AC 67 67 75 919 763-8251	GARG, SHYAM LAL HAMPSTEAD MEDICAL CTR. HAMPSTEAD 28443 GOVERNMENT MC	IM AC 76 81 87 919 270-2722	HUTCHINS, ROBERT HAROLD 2015 S. LIVE OAK PARKWAY WILMINGTON 28403 U OF NC	IM AC 76 76 79 919 343-8191
CREIGHTON, ROBERT KILGO 6442 SHINNWOOD RD. WILMINGTON 28403 U OF NC	OBG AC 61 61 70 919 256-6356	GETZ, DONALD DAVID 1616 MEDICAL CENTER DRIVE WILMINGTON 28401 JEFFERSON	ORS AC 66 66 75 919 762-2655	JAMES, JOSEPH MCCRAW 2622 MIMOSA PLACE WILMINGTON 28403 DUKE	R AC 55 55 63 919 343-7069
CROUCH, WALTER LEE 1902 BREWTON COURT WILMINGTON 28403 U OF MARYLAND	PD RT 46 46 52 919 762-3619	GILLEN, HOWARD WILLIAM 1301 CYPRESS GROVE DR. WILMINGTON 28401 U OF ILLINOIS	N AC 49 50 73 919 762-8501	JOHNSON, DONALD GENE 2212 DELANEY AVENUE WILMINGTON 28403 WEST VA U	R /NR AC 74 75 84 919 383-7070
DALEY, JOHN GILBERT 2143 ECHO LANE WILMINGTON 28403 YALE	OBG /END AC 55 56 77 919 343-0161	GONZALEZ, JORGE JOSE 2131 S. 17TH STREET WILMINGTON 28401 U OF CHILE	IM /END AC 71 76 79 919 343-0161	JOHNSON, HEBER WELLINGTON 417 BRADLEY CREEK POINT WILMINGTON 28403 HARVARD	OBG /GS L 39 47 48 919 256-2040
DEBECK, THOMAS WADE 29 SANDY POINT FIGURE EIGHT ISLAND WILMINGTON 28405 U OF MARYLAND	N AC 64 64 87 919 272-8488	GOTTTOVI, DANIEL 1202 MEDICAL CENTER DRIVE WILMINGTON 28401 U OF ROCHESTER	PUD /IM AC 65 65 71 919 341-3300	JONES, ROBERT BOYD 2311 DELANEY ROAD WILMINGTON 28403 U OF VIRGINIA	OTO AC 64 64 72 919 762-8754
DEES, JOHN TYLER COURTHOUSE AVE., PO BOX 815 BURGAW 28425 DUKE	FP /PH AC 52 52 54 919 259-2161	GOTTSCHALK, BERNARD J. 1202 MEDICAL CENTER DR. WILMINGTON 28401 U OF PITTSBURGH	HEM /ON AC 81 82 86 919 762-2990	JORDAN, HENRY DAVIDSON P. O. BOX 9000 WILMINGTON 28402 EMORY U	PTH AC 66 67 75 919 343-7074
DICKIE, JAMES WILLIAM 448 WAYNE DRIVE WILMINGTON 28403 U OF VIRGINIA	GS L/RT 42 47 47 919 762-8429	GRAHAM, CHARLES PATTISON 201 FOREST HILLS DRIVE WILMINGTON 28403 HARVARD	GS L/RT 32 32 37 919 762-0385	JUST, PETER WITHAM 3610 SUTTON DR. WILMINGTON 28403 U OF CONNECTICUT	AN AC 84 85 85 919 929-9630
		HAINES, RICHARD LITTLETON HIGHWAY 17, P. O. BOX 565 HAMPSTEAD 28443 U OF VIRGINIA	IM /GP AC 47 47 82 919 270-3561	KASH, STEPHEN LEE 1120 MEDICAL CENTER DRIVE WILMINGTON 28401 WASHINGTON U	OPH AC 68 68 76 919 763-7316

65. NEW HANOVER-PENDER COMPONENT SOCIETY (Continued)

KESLER, JAMES L. 1120 MEDICAL CENTER DRIVE WILMINGTON 28401 WASHINGTON U	OPH AC 75 76 80 919 763-7316	MAXWELL, JOHN GARY 2131 S. 17TH ST. WILMINGTON 28402 U OF UTAH	GS AC 58 62 86 919 343-0161	ORMAND, JOHN WILLIAM, JR. 1809 GLEN MEADE ROAD WILMINGTON 28401 U OF NC	OBG AC 56 56 60 919 763-1505
KITTINGER, JOSEPH WILLIAM, III 1202 MEDICAL CENTER DR. WILMINGTON 28401 U OF ARKANSAS	GE /IM AC 80 80 85 919 341-3345	MCCOY, MARSHALL C. CAPE FEAR MEM. HOSP. EMERGENCY DEPT. WILMINGTON 28403 EAST CAROLINA U	EM AC 84 85 86 919 395-8115	PACE, JOHN SANDERSON 825 INLET VIEW DRIVE WILMINGTON 28403 U OF MIAMI	AN AC 71 73 77 919 256-4008
KNOX, ANGELINA VINLUAN E. 2304 DELANEY AVENUE WILMINGTON 28401 U OF SANTO TOMAS	PD AC 59 59 72 919 763-3349	MCCOY, RALPH CARLISLE 1952 HILLSBORO ROAD WILMINGTON 28401 EMORY U	PTH AC 67 68 76 919 343-7074	PAPPAS, PETER GEORGE 1302 MEDICAL CENTER DR. WILMINGTON 28401 U OF ALABAMA	ID /IM AC 78 79 84 919 763-3651
KORNBLATT, BRIAN JAY 1800 EASTWOOD RD. #267 WILMINGTON 28403 MED COLL OF PENN	EM AC 79 80 87 919 256-5814	MC MILLAN, JAMES FULFORD 1301 LIVE OAK PARKWAY WILMINGTON 28403 BOWMAN GRAY	P RT 47 48 52 919 762-8178	PARKER, WILLIAM PAXTON, JR. 1303 CYPRESS GROVE DR. WILMINGTON 28401 VANDERBILT U	NS AC 56 57 74 919 762-1804
KOSERUBA, GEORGE MICHAEL 1628 DOCTOR'S CIRCLE WILMINGTON 28401 LOMA LINDA U	PD L 40 42 44 919 763-2476	MC MURRY, JOHN EUGENE, JR. 2311 DELANEY AVE. WILMINGTON 28401 U OF NC	OTO AC 80 82 86 919 762-3866	PARR, ROBERT ALEXANDER NEW HANOVER HOSPITAL DEPT. OF EMERGENCY MED. WILMINGTON 28401 DES MOINES OST	EM AC 78 84 84 919 343-7000
KROHN, JOHN RAMON 2305 CANTERWOOD DR. WILMINGTON 28401 U OF MINN	PS AC 66 67 75 919 343-0119	MC MURRY, WARREN W. 1414 MEDICAL CENTER DR. WILMINGTON 28401 U OF NC	GS /VS AC 81 87 86 919 763-7363	PEEDIN, JAMES HAROLD, JR. P. O. BOX 1177 BURGAW 28425 DUKE	FP AC 52 52 54 919 259-5721
LEACH, WILLIAM B. 306 WIDGEON DR. HAMPSTEAD 28443 U OF MANITOBA	PTH RT 44 44 70 919 270-4772	MEYER, CLINTON LOUIS 1202 MEDICAL CENTER DR. WILMINGTON 28401 U NEWFOUNDLAND	GE /IM AC 78 78 84 919 341-3345	PENCE, JAMES JEROME, JR. 2110 SOUTH 17TH ST. WILMINGTON 28401 DUKE	FP AC 59 59 62 919 763-3481
LEWIS, CLIFFORD T. 637 S. KERR AVENUE WILMINGTON 28403 U OF NC	IM AC 67 67 74	MEYERSON, MARTIN BENJAMIN NEW HANOVER MEM. HOSP. WILMINGTON 28403 U OF ILLINOIS	TR AC 68 69 77 919 343-7017	PICKARD, HENRY MACK P. O. BOX 3351 WILMINGTON 28401 MCGILL U	IM L/RT 38 38 46 919 791-1417
LIPOVAN, MIRCEA BREITZ 3707-C RESTON CT. WILMINGTON 28401 TIMISOAVA-ROMANIA	R /DR AC 62 77 86 919 395-8180	MOBLEY, THOMAS BARNETT, III 1905 GLEN MEADE ROAD WILMINGTON 28403 MED COLL OF GA	U AC 72 73 78 919 763-6251	PIGFORD, ROBERT TOMS 301 COLONIAL DRIVE WILMINGTON 28403 U OF MARYLAND	IM /CD L/RT 40 40 47 919 762-5020
LOVETT, JOHN WILSON 1905 GLEN MEADE RD. WILMINGTON 28403 U OF KENTUCKY	U AC 82 83 87 919 763-6251	MOORE, HORACE GREELEY, JR. 1414 MEDICAL CENTER DRIVE WILMINGTON 28401 JOHNS HOPKINS	GS /TS AC 45 53 53 919 763-7363	POINTS, GERALD LEE, II 5305 WRIGHTSVILLE AVE. BLDG.B WILMINGTON 28403 U OF KENTUCKY	IM /FP AC 65 66 66 919 791-3506
MACKAY, JAMES CALVIN 302 W. RENOVAN CR. WILMINGTON 28403 BOWMAN GRAY	IM /PUD RT 47 54 54 919 762-1529	MOORE, RALPH BRYAN, JR. CHILDREN'S CLINIC 1920 16TH STREET WILMINGTON 28403 CORNELL U	PD AC 52 56 56 919 763-2072	POLE, DONALD TALIAFERRO 5305-J WRIGHTSVILLE AVE. WILMINGTON 28403 AUTONOMA UNIV	OBG AC 73 78 82 919 343-1113
MACQUEEN, DONALD MILES 2321 DELANEY AVENUE WILMINGTON 28403 U OF NC	A /PD AC 69 69 73 919 763-1661	MOORE, ROBERT ALEX, JR. 1404 MEDICAL CENTER DRIVE WILMINGTON 28401 BOWMAN GRAY	NS AC 51 52 60 919 763-6578	POLLOCK, HOKE DICKINSON 1625 DOCTOR'S CIRCLE WILMINGTON 28401 U OF NC	OTO AC 75 75 81 919 762-0234
MALLOY, THOMAS HOWARD 2310 DELANEY AVENUE WILMINGTON 28401 U OF ALABAMA	OPH AC 71 71 80 919 763-3664	MOORE, ROBERT MORGAN 2001 S. 17TH STREET WILMINGTON 28401 VANDERBILT U	ORS AC 75 81 82 919 763-7344	POOLE, ERNEST TILGHMAN 2310 DELANEY AVENUE WILMINGTON 28403 DUKE	OPH /P AC 61 61 72 919 763-3664
MANCUSI-UNGARO, PETER C. 2131 S. SEVENTEENTH STREET WILMINGTON 28401 U OF MIAMI	HEM /ON AC 68 69 75 919 343-0161	MORGAN, HERMAN GRADY, JR. 1920 S. 16TH ST. WILMINGTON 28401 U OF NC	PD AC 77 78 84 919 762-3942	PRICE, JAMES LOUIS, III 1612 DOCTOR'S CIRCLE WILMINGTON 28401 U OF NC	OBG AC 75 75 80 919 763-9015
MARBURG, KENNETH CHARLES 343 BRADLEY DR. WILMINGTON 28403 U OF MARYLAND	EM /FP AC 70 73 85 919 791-0075	MORRIS, KENNY JORDAN 216 OYSTER BAY LN. WILMINGTON 28403 U OF NC	R AC 62 62 68 919 343-7069	RAGOZZINO, MARK WM. 2212 DELANEY AVE. WILMINGTON 28403 MAYO MED SCHOOL	R AC 82 82 87 919 762-3882
MARKS, HOWARD F. JR. 1501 MEDICAL CTR DR. WILMINGTON 28401 U OF VA	GS AC 81 81 88 919 763-6289	MUSSELWHITE, NEILL HECTOR, III 1602 DOCTOR'S CIRCLE WILMINGTON 28405 BOWMAN GRAY	FP AC 75 75 75 919 251-9977	RALLIS, MICHAEL GEORGE 301 S. MCNEIL ST. PO BOX 1179 BURGAW 28425 GEO WASHINGTON U	IM AC 77 79 81 919 259-5011
MARKWORTH, JAMES WARREN 1222 MEDICAL CENTER DRIVE WILMINGTON 28401 HARVARD	ORS AC 69 70 79 919 763-2977	NANCE, CHARLES LEE, JR. 2001 S. 17TH STREET WILMINGTON 28401 DUKE	ORS AC 59 59 67 919 763-7344	REMINGTON, JOHN LAUREN 2101 S. LIVE OAK PARKWAY WILMINGTON 28403 U OF SOU FLORIDA	DR AC 79 81 85 919 762-3882
MARSHBURN, E. THOMAS, JR. 1906 MEETING COURT WILMINGTON 28401 BOWMAN GRAY	IM AC 47 48 54 919 762-9621	NICKS, DENNIS BART 2305 CANTERWOOD WILMINGTON 28401 U OF MISSOURI	PS /HS AC 77 77 83 919 343-0119	REYNOLDS, FRANK RUSSELL 1613 DOCK STREET WILMINGTON 28401 U OF PENN	PD AC 44 44 50 919 763-4272
MASON, DAVID PENDLETON 1809 GLEN MEADE ROAD WILMINGTON 28403 U OF NC	OBG AC 75 76 79 919 762-9807	NIXON, WILLIAM PRESTON, JR. 1302 MEDICAL CENTER DRIVE WILMINGTON 28401 MED COLL OF VA	NEP /IM AC 68 68 74 919 763-3651	RIEMAN, GILBERT FLETCHER 2148 ECHO LANE WILMINGTON 28403 U OF VIRGINIA	OBG RT 52 52 73 919 763-2827
MASON, LOCKERT BEMISS 1224 COUNTRY CLUB RD. WILMINGTON 28403 MED COLL OF VA	GS L/RT 45 45 52 919 762-1520	O'QUINN, EDWARD NELSON 115 S. CHANNEL DR. WRIGHTSVILLE BEACH 28480 EMORY U	OBG L/RT 51 51 56 919 763-9015	ROBERSON, WM. EARL 5305-L WRIGHTSVILLE AVE. WILMINGTON 28403 UNIV OF NC	OBG AC 66 66 73 919 343-1031
MASTRANGELO, MICHAEL ROCCO 1515 DOCTOR'S CIRCLE WILMINGTON 28401 U OF KENTUCKY	GE AC 78 79 85 919 763-5182				

65. NEW HANOVER-PENDER COMPONENT SOCIETY (Continued)

ROBERTS, LLOYD EUGENE 1612 DOCTOR'S CIRCLE WILMINGTON 28401 U OF COLORADO	OBG AC 69 72 79 919 763-9015	SLOAN, DAVID BRYAN, JR. 1915 GLEN MEADE ROAD WILMINGTON 28403 U OF PENN	OPH AC 63 63 70 919 763-3601	THOMAS, MICHAEL BEMAN 1908 MEETING COURT WILMINGTON 28401 U OF MICHIGAN	FP AC 79 81 86 919 762-1515
ROBINSON, NORMAN JEFFREY 2131 S. 17TH ST. PO BOX 9000 WILMINGTON 28402 DUKE	CD /IM AC 63 63 71 919 343-0161	SLOAN, JAMES BOYKIN 1915 GLEN MEADE ROAD WILMINGTON 27403 U OF NC	OPH AC 70 70 74 919 763-3601	THOMPSON, GEORGE R. C. 129 OLDE POINT RD. HAMPSTEAD 28443 MED U OF SC	FP L/RT 39 42 43 919 270-2196
ROBISON, WILLIAM PETERSON 2023 SOUTH 17TH STREET WILMINGTON 28401 MED COLL OF GA	P AC 51 51 78 919 343-0151	SMALLEY, ROBERT ROWAN 5305-F WRIGHTSVILLE AVENUE WILMINGTON 28403 MCGILL U	GS AC 54 54 73 919 799-5400	TIDLER, JAMES 1919 S. SIXTEENTH STREET WILMINGTON 28401 MED COLL OF VA	IM AC 44 49 50 919 763-8184
ROSENBERG, ERIC RONALD 1924 S. LIVE OAK PARKWAY WILMINGTON 28403 NEW YORK MED COL	DR AC 75 75 84 919 762-3882	†SMITH, CHARLES GORDON 118 BEAGLE TRAIL DECEASED-5-26-88 WILMINGTON 28403 U OF PENN	FP /EM L/RT 40 43 43 919 799-1873	TINSLEY, ELLIS ALLAN, SR. 1414 MEDICAL CENTER DRIVE WILMINGTON 28401 VANDERBILT U	GS /TS AC 59 67 67 919 763-7363
RUST, CARL KING, II 1202 MEDICAL CENTER DR. WILMINGTON 28401 BOWMAN GRAY	GE /IM AC 68 68 77 919 341-3300	SMITH, PHILIP PALMER P. O. BOX 2042 WILMINGTON 28402 U OF ILLINOIS	OM /IM AC 62 62 71 919 371-4080	TORRISI, PETER F. 1202 MEDICAL CENTER DR. WILMINGTON 28401 NEW YORK MED COL	PUD AC 80 82 88 919 341-3300
SAMPSON, JOSEPH LUTHER, JR. 346 SHANDY LANE WILMINGTON 28401 MED COLL OF VA	PS /GS AC 61 61 78 919 343-9774	SNYDER, JAMES WILLIAM 1515 DOCTOR'S CIRCLE WILMINGTON 28401 U OF NC	CD /IM AC 69 69 74 919 763-5182	UNSICKER, CARL LESTER 5305-F WRIGHTSVILLE AVE. WILMINGTON 28403 U OF IOWA	ORS AC 67 68 76 919 395-0684
SATTLER, RAYMOND LOUIS 1310 MEDICAL CENTER DR. WILMINGTON 28403 CASE WESTERN RES	NS AC 77 77 83 919 762-3111	SOLOMON, DONALD JEFFREY 1202 MEDICAL CENTER DR. WILMINGTON 28401 STANFORD U	N AC 81 81 81 919 341-3300	VAN NYNATTEN, FRED H. 1990 S. 16TH WILMINGTON 28401 U OF BRUXELLES	IM /EM AC 74 75 82 919 256-4555
SCHIMIZZI, GREGORY F. 1202 MEDICAL CENTER DR. WILMINGTON 28401 WAYNE STATE U	RHU AC 76 76 87 919 341-3300	SOLOMON, ROBERT DOUGLAS 113 S. BELVEDERE DR. HAMPSTEAD 28443 JOHNS HOPKINS	PTH /GER AC 42 42 86 919 270-2019	VAN-VELSOR, HARRY 1924 S. SIXTEENTH STREET WILMINGTON 28401 ALBANY MED COLL	D AC 47 54 54 919 762-5207
SCHMIDT, CARL JACOB GENERAL ELECTRIC CO. P.O.BOX 780, M/C B06 WILMINGTON 28401 U OF LOUISVILLE	OM AC 64 65 83 919 675-5320	SPIVEY, DAVID LEE 905 RABBIT RUN RD. WILMINGTON 28403 U OF NC	AN AC 81 83 85 919 762-4901	VARNER, D. WAYNE 346 HONEYCUTT DR. WILMINGTON 28403 MED U OF SC	PTH AC 76 78 84 919 395-8177
SCHUMACK, EDWARD JAMES PO BOX 535 WILMINGTON 28402 LOYOLA U	P /FP AC 66 72 85 919 839-8570	STANLEY, JOHN H., JR. 2212 DELANEY AVE. WILMINGTON 28403 U OF NC	R AC 77 77 87 919 762-3882	VERNON, CHARLES ROBERTSON 7230 WRIGHTSVILLE AVENUE WILMINGTON 28403 CASE WESTERN RES	P AC 52 52 56 919 256-4106
SCOTT, CHARLES MATTHEW 543 MASONBORO SOUND RD. WILMINGTON 28403 U OF CINCINNATI	GS /VS AC 75 80 83 919 763-6289	STEWART, GEORGE TERRY 2215 CANTERWOOD DRIVE WILMINGTON 28401 U OF NC	OBG AC 71 71 75 919 343-1031	WALKER, ELMER PIXLEY 20 FOREST HILLS DR. WILMINGTON 28403 EMORY U	GYN L/RT 36 36 41 919 763-8307
SCULLY, KEVIN SLEAN 1616 MEDICAL CENTER DR. WILMINGTON 28401 U OF VIRGINIA	ORS AC 78 80 84 919 762-2655	SUVILLAGA, VICTOR IVAN 5097 EDINBORO LN. WILMINGTON 28403 U EL SALVADOR	FP /EM AC 77 82 83 919 395-6273	WARD, MICHAEL MUNDY 520 SHANDY LANE WILMINGTON 28403 U OF NC	EM AC 77 79 82 919 256-4108
SEIDEL, MURRAY KAYE 1222 MEDICAL CENTER DRIVE WILMINGTON 28401 U OF PENN	ORS AC 65 66 73 919 763-2977	SWAN, ROBERT WM. 2131 S. 17TH ST. WILMINGTON 28402 NORTHWESTERN U	OBG /ON AC 65 65 87 919 343-0161	WARNER, JEANETTE PRESTON 206 W. BLACKBEARD ROAD WILMINGTON 28403 U OF NY-ST BROOK	AC 81 81 84 919 343-7000
SHAH, JYOTSNA RAMESH 116 ROBERT E. LEE DRIVE WILMINGTON 28403 U OF BOMBAY	AN AC 64 64 81 919 763-4901	TACKETT, AMOS DARRELL 1414 MEDICAL CENTER DRIVE WILMINGTON 28401 VANDERBILT U	GS AC 69 74 79 919 763-7363	WARNER, MARK FRANCIS 1202 MEDICAL CENTER DR. WILMINGTON 28401 U OF VIRGINIA	CD /IM AC 77 78 84 919 341-3360
SHAH, RAMESH MANHARLAL 116 ROBERT E. LEE DRIVE WILMINGTON 28401 BARODA U	OBG AC 64 67 73 919 791-2301	TAMISIEA, J. RICHARD 1202 MEDICAL CENTER DRIVE WILMINGTON 28401 CREIGHTON U	CD /IM AC 64 64 73 919 341-3301	WARSHAUER, SAMUEL EDWARD 2917 HYDRANGEA PL. WILMINGTON 28403 MED COLL OF VA	IM /CD L 36 36 46 919 762-8388
SHAPIRO, DANIEL ALLEN 1320 JOHNS CREEK RD. WILMINGTON 28403 U OF NC	AN AC 78 79 85 919 343-7000	TAN, RICARDO MIJARES 1402 ROBINHOOD RD. WILMINGTON 28401 U OF SANTO TOMAS	GS /ABS RT 58 67 67 919 763-0159	WATSON, MELVIN E. 5305-K WRIGHTSVILLE AVE. WILMINGTON 28403 HAHNEMANN	PD AC 73 74 88 919 392-5634
SHEARIN, WILBURN T., JR. 1905 GLEN MEADE ROAD WILMINGTON 28403 BOWMAN GRAY	U AC 54 54 56 919 763-6251	TAYLOR, BRITTON EDGAR 2215 CANTERWOOD DRIVE WILMINGTON 28401 MED COLL OF VA	OBG AC 63 63 74 919 343-1031	WEINEL, WILLIAM HARVEY 1809 GLEN MEADE ROAD WILMINGTON 28403 U OF NC	GYN AC 54 54 58 919 763-9833
SHUFORD, WILLIAM FERRELL, JR. 1515 DOCTOR'S CIRCLE WILMINGTON 28401 U OF NC	GE AC 61 61 67 919 763-5182	TAYLOR, WILLIAM IVEY, JR. ROUTE #3, BOX 3680 BURGAW 28425 JEFFERSON	GP RT 41 41 46 919 259-2301	WEINSTEIN, ROBERT HARVEY 2595 S. 17TH ST. WILMINGTON 28401 U OF MISSOURI	P AC 67 67 75 919 799-2283
SINCLAIR, ROBEY THOMAS, JR. 5301 WRIGHTSVILLE AVENUE WILMINGTON 28401 GEORGETOWN U	DR L/RT 38 38 40 919 395-8100	TEMPLE, RUFUS HENRY, JR. 2215 CANTERWOOD DR. WILMINGTON 28401 U OF NC	OBG AC 76 76 81 919 763-8471	WEIS, WALTER FRANCIS, JR. 5305 WRIGHTSVILLE AVE. BLDG. C WILMINGTON 28403 JEFFERSON	ORS AC 66 67 73 919 799-9417
SINGLETARY, HENRY PATE 2131 S. 17TH ST. WILMINGTON 28401 NORTHWESTERN U	PTH AC 53 56 60 919 343-7074	THOMAS, ALAN EFIRD SOUTHEASTERN MEDICAL GROUP 637 S. KERR AVENUE WILMINGTON 28401 MED COLL OF GA	IM AC 74 74 77 919 799-1810	WELLS, EDWIN JULIUS 2209 DELANEY AVENUE WILMINGTON 28403 U OF PENN	PS AC 46 46 53 919 763-7617
				WERK, EMILE EUGENE, JR. 2131 S. SEVENTEENTH STREET WILMINGTON 28401 U OF CINCINNATI	IM /END AC 46 46 73 919 343-0161

65. NEW HANOVER-PENDER COMPONENT SOCIETY (Continued)

WILKINS, LUCIEN SANDERS 1202 MEDICAL CENTER DRIVE WILMINGTON 28401 MED COLL OF VA	GE AC 67 67 73 919 341-3346	WILSON, JACK KENNEDY, JR. 637 S. KERR AVENUE WILMINGTON 28403 U OF MISSISSIPPI	IM AC 66 66 71 919 799-1810	WORTMAN, JAMES EDWARD 715 FOREST HILLS DRIVE WILMINGTON 28403 NORTHWESTERN U	ON /HEM AC 74 74 79 919 763-5182
WILKINSON, CHARLES ALBERT 1501 MEDICAL CENTER DRIVE WILMINGTON 28401 DUKE	GS /TS AC 56 56 64 919 763-6289	WILSON, JACK KENNEDY, SR. 1908 HAWTHORNE ROAD WILMINGTON 28403 U OF TENNESSEE	GP RT 37 37 66 919 763-5536	WRIGHT, BRENT DEAN 2131 S. 17TH ST. WILMINGTON 28401 U OF MISSOURI	OBG AC 83 84 88 919 343-0161
WILLIAMS, R. BERTRAM, JR. 1414 MEDICAL CENTER DRIVE WILMINGTON 28401 VANDERBILT U	GS /TS AC 43 49 51 919 763-7363	WITHERS, SYDNOR TERRY, JR. 5305 WRIGHTSVILLE AVE.BLDG.E WILMINGTON 28403 MED COLL OF VA	IM /FP AC 73 75 76 919 791-5426	YUE, BYONG HAK 1810 GLEN MEADE ROAD WILMINGTON 28403 CHUN NAM U	GS AC 59 71 73 919 762-1730
WILLIAMS, WILLIAM M., III 2131 S 17TH STREET WILMINGTON 28402 MED U OF SC	PTH /CLP AC 78 79 83 919 343-7074	WITTSTEIN, PETER BRIAN 1904 TRADD COURT WILMINGTON 28401 U OF CONNECTICUT	OPH AC 78 79 85 919 762-0057	ZACK, PETER GEORGE 3827 SYLVAN DR. WILMINGTON 28403 U OF ARKANSAS	PD AC 60 60 73 919 791-7031
WILSON, CLARENCE L., II 1809 GLEN MEADE ROAD WILMINGTON 28403 U OF LOUISVILLE	OBG AC 74 75 82 919 763-9833	WOODWORTH, ALFRED HERMAN 224 SEAGULL LANE WILMINGTON 28403 ALBANY MED COLL	FP /EM AC 68 71 78 919 392-3216		

66. NORTHAMPTON COMPONENT SOCIETY

OFFICERS—President: Jeff Burton, M.D., P.O. Box 710, Rich Square 27869
Secretary:

BURTON, ASHBY J., III PO BOX 710 RICH SQUARE 27869 EASTERN VA	FP AC 82 85 87 919 539-2082	OUTLAND, ROBERT BOONE P. O. BOX 410 RICH SQUARE 27869 U OF PENN	GP L/RT 32 33 36 919 539-2755	STEPHENSON, BENNETTE EDWARD P. O. BOX 348 RICH SQUARE 27869 MED COLL OF VA	GP L/RT 35 35 37 919 539-2343
---	--	---	--	--	--

67. ONSLOW COMPONENT SOCIETY

OFFICERS—President: Charles L. Garrett, Jr., M.D., Onslow Memorial Hospital, Jacksonville 28540 (919 353-3498)
Secretary: Noel B. Rogers, M.D., 128 Memorial Dr., Jacksonville 28540 (919 353-4500)

ALVARADO, TERESA LOIS 200 MEMORIAL DR. JACKSONVILLE 28540 U OF MONTERREY	OBG AC 81 83 86 919 353-2115	DE-VARONA, JOSE MIGUEL 215 MEMORIAL DRIVE JACKSONVILLE 28540 U OF HABANA	FP /P AC 51 51 75 919 353-5118	GROSS, JEFFREY LOUIS 128 MEMORIAL DRIVE JACKSONVILLE 28540 OHIO STATE U	ORS AC 72 72 80 919 353-4500
BALLENGER, CLARENCE EUGENE, III 227 MEMORIAL DRIVE. JACKSONVILLE 28540 MED U OF SC	N AC 78 79 82 919 353-3625	DEYTON, JOHN WESLEY, JR. 124 MEMORIAL DRIVE JACKSONVILLE 28540 U OF NC	OBG AC 56 56 78 919 353-7741	HAMBRIGHT, WESLEY F. 245 MEMORIAL DR. JACKSONVILLE 28540 DUKE	OBG AC 82 83 87 919 353-4333
BARNES, MAJOR RUSSELL, JR. 200 MEMORIAL DR. JACKSONVILLE 28540 BOWMAN GRAY	OBG /GP AC 48 49 55 919 353-0759	DIFIORE, RALPH J. 200 DOCTORS DR. STE. J JACKSONVILLE 28540 MED COLL OF GA	ORS AC 68 69 87 919 353-1412	HAMMOCK, RONALD MACK 200 DOCTOR'S DR. SUITE C JACKSONVILLE 28540 U OF MICHIGAN	U AC 77 79 83 919 353-9994
BATCHELLER, EDGAR H., JR. P. O. BOX 1000 JACKSONVILLE 28540 U OF VIRGINIA	GS /TS AC 64 64 71 919 353-2194	DILL, FRANKLIN GEORGE 124 MEMORIAL DRIVE JACKSONVILLE 28540 CORNELL U	OBG AC 63 67 68 919 353-7741	HARRIS, MICHAEL ALAN PO BOX 3120, CRS JOHNSON CITY, TN 37602 U OF TENNESSEE	P AC 62 62 84
BIANCHI, EDGARDO HUGO 1703 COUNTRY CLUB RD. STE. 202 JACKSONVILLE 28540 U OF ROSARIO	CD /IM AC 202 69 68 80 919 455-9600	EDWARDS, TIMOTHY FREEMAN 245 MEMORIAL DR. JACKSONVILLE 28540 BOWMAN GRAY	OBG AC 78 78 83 919 353-4333	HAYE, HENRY SOLOMON PO BOX 1229 JACKSONVILLE 28541 U OF WEST INDIES	OBG AC 79 80 86 919 346-2182
BUFFONG, ERIC ARNOLD 1703 COUNTRY CLUB RD., STE. 203 JACKSONVILLE 28540 HOWARD U	OBG /END AC 77 79 85 919 346-2182	FOX, RAYMOND MORRIS, JR. P. O. BOX 910 JACKSONVILLE 28541 VANDERBILT U	GYN /GP AC 64 65 74 919 347-2133	HEATH, HUNTER 109 ARBUTUS PLACE CHAPEL HILL 27514 MCGILL U	IM /AI L/RT 43 47 48 919 933-3716
BURNS, ROBERT H., III PO BOX 7184 JACKSONVILLE 28540 U OF PENN	AN AC 68 70 76 919 353-2115	GABLE, WALTER DELAY ONSLow MEMORIAL HOSP. JACKSONVILLE 28540 U OF MARYLAND	PTH /FOP AC 54 54 74 919 353-7803	HOWARD, GEORGE ALBERT, III 100 PRESTON DR. JACKSONVILLE 28540 EAST CAROLINA U	DR AC 82 86 79 919 577-1171
CHUNG, HONG-YILL 407 CARMEN AVENUE JACKSONVILLE 28540 KOREA U	GP AC 69 69 79 919 353-2800	GALLAGHER, EDGAR GIVENS, JR. 1013 SCHALL PLACE JACKSONVILLE 28540 U OF NC	GS /TS AC 65 65 76 919 353-7848	ISSA, MAHMOUD A. 224 MEMORIAL DR. STE. A JACKSONVILLE 28540 DAMASCUS U	GE /IM AC 71 71 80 919 577-1444
COBB, GREGORY WAYNE 264 MEMORIAL DRIVE JACKSONVILLE 28540 VANDERBILT U	OPH AC 73 77 81 919 353-1030	GARRETT, CHARLES L., JR. ONSLow MEMORIAL HOSPITAL JACKSONVILLE 28540 MED U OF SC	PTH /FOP AC 66 66 76 919 353-3498	KAPLAN, JEFFREY MARK ONSLow MEMORIAL HOSPITAL P. O. BOX 1358 JACKSONVILLE 28541 NEW YORK MED COL	R AC 70 71 84 919 577-2345
COLLIGAN, JOSEPH FRANCIS 192 VILLAGE DRIVE JACKSONVILLE 28540 LOYOLA U	P /CHP AC 58 59 84 919 353-4165	GEROCK, HENRY 200 DOCTOR'S DRIVE, SUITE M JACKSONVILLE 28540 U OF NC	FP AC 63 63 69 919 353-7600	KEITH, JULIAN FAISON, JR. 192 VILLAGE DR. JACKSONVILLE 28540 BOWMAN GRAY	ALD /FP AC 53 53 57
CRIST, TAKEY 200 MEMORIAL DRIVE JACKSONVILLE 28540 U OF NC	OBG AC 65 65 71 919 353-2115	GREGORY, HUGH STANLEY 411 WESTERN BLVD., STE. A JACKSONVILLE 28540 U OF NC	OTO AC 64 64 73 919 455-4847	KITCHEN, THOMAS WARD, JR. 410 NEW BRIDGE ST. APT. 10-A JACKSONVILLE 28540 BOWMAN GRAY	FP AC 59 59 60 919 347-1788

67. ONSLOW COMPONENT SOCIETY (Continued)

KREDEL, ERNST KARL WILHELM U.S. NAVAL HOSPITAL BOX 8, MCB CAMP LEJEUNE 28542 LANDES U.MUNSTER	OM /PH AC 49 62 85 919 451-2181	O'NEIL, H. WILLIAM 200 MEMORIAL DR. JACKSONVILLE 28540 DALHOUSIE U	OBG AC 58 85 86 919 353-2115	TSE, ALEX YU CHOW 120 MEMORIAL DRIVE JACKSONVILLE 28540 U OF HONG KONG	PD /A AC 71 74 75 919 353-0581
LARSON, JOHN DAVID, JR. ONSLow MEM. HOSPITAL DEPT.OF EMERGENCY MED. JACKSONVILLE 28540 GEO WASHINGTON U	EM /OBG AC 43 47 59 919 755-8500	OLSEN, KENNETH GEORGE 137 COKE PLACE JACKSONVILLE 28540 U OF COLORADO	AN AC 67 67 74 919 455-0188	TSE, ANDRE KON SANG 158 MEMORIAL COURT JACKSONVILLE 28540 U OF HONG KONG	CD /IM AC 71 74 77 919 353-5111
LOWERY, RUSSELL C., III 224 MEMORIAL DR. STE. B JACKSONVILLE 28540 TULANE U	GS /VS AC 63 63 87 919 577-1228	PATLAK, ERWIN M. 807 SHADOWRIDGE RD. JACKSONVILLE 28540 U OF ILLINOIS	P /EM AC 52 53 85 919 577-1400	TURLINGTON, WADE ROBERT 200 DOCTOR'S DRIVE, SUITE M JACKSONVILLE 28540 U OF NC	FP AC 69 69 73 919 353-8100
MARTIN, CHARLES R. 120 MEMORIAL DRIVE JACKSONVILLE 28540 DUKE	PD AC 63 63 69 919 353-0581	PIVER, JAMES DECAMP 1002 SCHALL PLACE JACKSONVILLE 28540 U OF PENN	GS /ABS L/RT 43 44 51 919 353-7848	VENTERS, WAYNE BURNETTE 200 DOCTOR'S DRIVE, SUITE J JACKSONVILLE 28540 U OF NC	ORS AC 64 64 73 919 353-1412
MAYER, CAREY CHARLES 1703 COUNTRY CLUB RD., #104 JACKSONVILLE 28540 TEMPLE U	P AC 77 79 85 919 347-1920	REICHLING, GEORGE HENRY 300 WESTERN BLVD. JACKSONVILLE 28540 JEFFERSON	D AC 57 58 85 919 577-7288	VERELL, KAREN LEA 12 OFFICE PARK DR. JACKSONVILLE 28540 U OF MISSISSIPPI	PD /ADL AC 78 78 84 919 353-6262
MEASE, WILLIS EUGENE 209 S. CHURCH ST. RICHLANDS 28574 U OF NEBRASKA	FP AC 45 45 48 919 324-3105	REICHLING, PIRKKO ESTERI 300 WESTERN BLVD. JACKSONVILLE 28540 U OF OULU	GP AC 70 80 85 919 353-0176	WHITEHURST, WALTER C., JR. 201 DEBORAH DRIVE JACKSONVILLE 28540 U OF NC	R AC 68 68 75 919 577-2274
MOORE, THOMAS PHILLIP ONSLow MEMORIAL HOSPITAL JACKSONVILLE 28540 U OF NC	R AC 55 55 64 919 577-2274	ROGERS, NOEL BRUCE 128 MEMORIAL DRIVE JACKSONVILLE 28540 GEORGETOWN U	ORS AC 67 69 74 919 353-4500	WILLIAMS, PAUL FRANKLIN 200 MEMORIAL DRIVE JACKSONVILLE 28540 U OF LOUISVILLE	OBG AC 65 66 74 919 353-2115
MYERS, CARY JOHN PO BOX 5025 JACKSONVILLE 28540 U OF NEBRASKA	FP AC 73 73 77 919 353-2300	STREETER, GREGORY DEAN 200 DOCTOR'S DR. SUITE H JACKSONVILLE 28540 U OF NC	FP /DIA AC 80 80 80 919 353-0565	WILSHIRE, LARRY BRENT 825 GUM BRANCH RD., STE. 133 JACKSONVILLE 28540 WEST VA U	OPH AC 74 79 84 919 346-2444
		TAJ-ELDIN, ADNAN 200 DOCTOR'S DR. STE. I JACKSONVILLE 28540 DAMASCUS U	IM /A AC 72 75 78 919 353-6327	WOLANSKI, TERRENCE PHILIP 118 MEMORIAL DRIVE JACKSONVILLE 28540 U OF VIRGINIA	PUD /IM AC 76 76 83 919 353-1811

70. PASQUOTANK-CAMDEN-CURRITUCK-DARE COMPONENT SOCIETY

OFFICERS—**President:** John Stella, M.D., Albemarle Hospital, N. Road St., Elizabeth City 27909**Secretary:** Robert Kastner, M.D., Outer Banks Medical Ctr., Rt. 1, Box 229, Nags Head 27959 (919 441-7111)

BAILEY, CLAUDE FLETCHER 403 E. FEARING ST. ELIZABETH CITY 27909 U OF MARYLAND	OBG L/RT 45 45 48 919 261-3848	DELIGIO, JAMES J. KITTY HAWK MED. CTR. KITTY HAWK 27949 NEW YORK MED COL	FP /HYP AC 74 86 87 919 261-3848	HOLTON, WALTER LEGGETT NORTH MAIN HIGHWAY PO BOX 1045 MANTEO 27954 DUKE	FP AC 73 74 75 919 473-3478
BARBER, ALFRED JOSEPH 1134 N. ROAD STREET ELIZABETH CITY 27909 GEORGETOWN U	IM /HEM AC 76 77 77 919 338-5183	DENUNZIO, NEIL L. PO BOX 9 WINFALL 27985 JEFFERSON	IM AC 82 82 86 919 426-9172	HUDSON, SARAH TILTON WILLCOX 1142 N. ROAD ST. ELIZABETH CITY 27909 U OF NC	PD AC 82 85 85 919 353-6262
BEALS, MARTIN FEARING, JR. 78 MEADS STREET ELIZABETH CITY 27909 U OF NC	PD AC 76 76 82 919 338-2155	EADIE, EDWARD B., JR. 1134 N. ROAD STREET ELIZABETH CITY 27909 U OF VIRGINIA	U AC 67 67 74 919 338-4141	HUNSBERGER, KURT LEE 1142 N. ROAD STREET ELIZABETH CITY 27909 NORTHWESTERN U	IM AC 69 69 78 919 338-4117
BOUNOUS, JUDITH FRANCES 2082 RIVERSHORE ROAD ELIZABETH CITY 27909 BOWMAN GRAY	EM /PD AC 70 70 84 919 335-1003	FOX, EARL RUSSELL 1830 DELAWARE AVE. CAPE MAY, NJ 08204 MED COLL OF VA	RHU /IM AC 53 54 80 609 884-6391	JENKINS, SAMUEL GATLIN, JR. 1142 N. ROAD STREET ELIZABETH CITY 27909 U OF NC	GS AC 55 55 63 919 335-4890
BRANDSPIGEL, KARL 104 W. COLONIAL AVE. ELIZABETH CITY 27909 U OF CALIFORNIA	NEP /IM AC 75 78 82 919 335-1083	GILBERT, MICHAEL T. 1134 N. ROAD STREET ELIZABETH CITY 27909 NEW YORK MED COL	OPH AC 67 68 73 919 338-0148	KASTNER, ROBERT JEFFREY RT. #1, BOX 229 NAGS HEAD 27959 EASTERN VA	FP /EM AC 81 82 86 919 441-7111
BURROUGHS, FRANKLIN DANFORD P. O. BOX 248 HATTERAS 27943 U OF NC	FP AC 63 63 67 919 986-2388	GRAHAM, JOHN CALHOUN, JR. 106 S. WATER ST. PO BOX 250 ELIZABETH CITY 27909 U OF NC	DR /NM AC 61 61 70 919 335-2652	KIZEN, PAUL ANDREW 1142 N. ROAD STREET ELIZABETH CITY 27909 U OF WISCONSIN	OBG AC 77 78 84 919 335-2061
CARMACK, KEITH K.K. KITTY HAWK MEDICAL CTR. 4716 N. CORATAN HIGHWAY KITTY HAWK 27949 U OF HAWAII	FP AC 83 84 87 919 261-3848	HAND, LEROY CORBETT, JR. ROUTE #1, BOX 490 CAMDEN 27921 BOWMAN GRAY	FP /EM L/RT 50 50 51 919 335-0531	MARQUARDT, JOHN D. 1134 N. ROAD ST. ELIZABETH CITY 27909 DUKE	ORS AC 75 77 87 919 338-3993
COOK, JOHN EDMUND PO BOX 96 CAMDEN 27921 M C OF WISCONSIN	AN AC 78 78 83 919 338-1542	HARRELL, WILLIAM FLETCHER, JR. 1142 N. ROAD ST. ELIZABETH CITY 27909 U OF VIRGINIA	PD L/RT 43 47 47 919 338-6359	MCDANIEL, EUGENE MARVIN, JR. 1142 N. ROAD STREET ELIZABETH CITY 27909 MED COLL OF VA	OBG AC 62 62 82 919 338-0101
CRUTCHFIELD, WILLIAM M. 1134 N. ROAD STREET ELIZABETH CITY 27909 U OF NC	OTO /PS AC 66 66 73 919 335-2923	HOGGARD, WILLIAM ALDEN, JR. PO BOX 726 110 S. POOL ST. ELIZABETH CITY 27909 BOWMAN GRAY	FP AC 44 44 47 919 335-0867	MONCLA, ALFRED MARIE 1134 N. ROAD STREET ELIZABETH CITY 27909 LA STATE U	OBG AC 64 64 72 919 338-2151
CRUTCHLEY, WILLIAM F., JR. 1134 N. ROAD STREET ELIZABETH CITY 27909 MED COLL OF VA	GS AC 59 66 67 919 338-3909			MOSSBURG, WM. LEE 2131 RIVERSHORE RD. ELIZABETH CITY 27909 WEST VA U	GS /VS AC 69 70 88 919 338-1110

70. PASQUOTANK-CAMDEN-CURRITUCK-DARE COMPONENT SOCIETY (Continued)

OWENS, ZACK DOXEY P. O. BOX 422 ELIZABETH CITY 27909 U OF MARYLAND	GS /GYN L/RT 30 30 40 919 335-4492	ROBERTSON, JOSEPH L., JR. NORTH ROAD ST. ELIZABETH CITY 27909 BAYLOR	PTH AC 75 75 80 919 335-2258	SPAETH, WALTER 1904 RIVERSHORE ROAD ELIZABETH CITY 27909 DUKE	IM L/RT 43 47 50 919 335-7389
PETERS, WILLIAM ANTHONY, JR. P. O. BOX 392 ELIZABETH CITY 27909 DUKE	GYN RT 43 44 44 919 335-2355	ROGERS, RICHARD O., JR. BOX 724 FRANKLIN, VA 23851 MED COLL OF VA	IM AC 52 52 86 919 491-2446	THOMAS, WILLIAM RALPH RT. #3, BOX 476 ELIZABETH CITY 27909 CASE WESTERN RES	GP AC 49 53 53 919 338-2480
PICKREL, JERRY CLINE P. O. DRAWER 403 ELIZABETH CITY 27909 TULANE U	PTH AC 58 59 63 919 335-2258	ROMM, WILLIAM HENRY PO BOX 232 CURRITUCK 27929 U OF VIRGINIA	FP L/RT 50 51 52 919 232-3387	TOLSON, ROGER JOHN 1134 N. ROAD STREET ELIZABETH CITY 27909 U OF LONDON	IM AC 57 74 75 919 335-2963
POSTON, ROBERT LEWIS 1142 N. ROAD STREET ELIZABETH CITY 27909 DUKE	FP AC 57 57 62 919 338-4117	RUSSELL, WILLIAM MICHAEL P. O. BOX 250 ELIZABETH CITY 27909 NAT U OF IRELAND	R /NM AC 69 70 80 919 335-0531	WATSON, JAMES MORRIS 1134 N. ROAD STREET ELIZABETH CITY 27909 U OF MICHIGAN	ORS AC 67 68 74 919 338-3993
POWELL, ROBERT NARROWAY 1142 N. ROAD STREET ELIZABETH CITY 27909 BOWMAN GRAY	IM AC 70 70 75 919 338-4117	SLEDGE, JOHN BURTON, JR. P. O. BOX 610 KILL DEVIL HILLS 27948 DUKE	PH AC 55 55 59 919 441-6182	WITWER, TIMOTHY SLAYTON 1207 N. ROAD ST. ELIZABETH CITY 27909 BOSTON U	IM /FP AC 71 71 82 919 335-4351
REDDING, MARSHALL SIMMS 1142 N. ROAD ST. PO BOX 1402 ELIZABETH CITY 27909 DUKE	OPH AC 66 66 72 919 335-5446	SOUTHWORTH, ALVIN JUDSON 1134 N. ROAD STREET ELIZABETH CITY 27909 MED COLL OF VA	OBG AC 57 57 82 919 338-0887	WRIGHT, CHARLES NEWBOLD PO BOX 218 JARVISBURG 27947 TEMPLE U	FP L/RT 41 41 46 919 491-2446

73. PERSON COMPONENT SOCIETY

OFFICERS—**President:** George W. Gentry, M.D., P.O. Box 1038, Roxboro 27573 (919 599-1131)**Secretary:** Andres T. Melero, M.D., P.O. Box 28, Roxboro 27573 (919 599-2953)

BRADSHAW, JAMES DONALD P. O. BOX 168 ROXBORO 27573 BOWMAN GRAY	GP L/RT 45 45 50 919 599-1611	GATLING, H. BEE ROUTE #1, BOX 28 MILTON 27305 BOWMAN GRAY	PH AC 60 60 64 919 234-8656	MELERO, ANDRES TARCISIO P. O. BOX 28 ROXBORO 27573 DUKE	GS /TS AC 51 54 59 919 599-2953
ESTOYE, CESAR ROMERO 601 RIDGE ROAD ROXBORO 27573 U OF PHILIPPINES	GS /GP AC 63 71 76 919 599-0202	LONG, STEPHEN N. PO BOX 797 ROXBORO 27573 BOWMAN GRAY	IM AC 84 86 87 919 599-3212	MONSON, DONALD MALVIN PO BOX 309 ROXBORO 27573 U OF WISCONSIN	R AC 55 62 62 919 597-9101
FITZGERALD, ROBERT GREESON P. O. BOX 856 ROXBORO 27573 U OF MARYLAND	GP AC 47 47 50 919 599-1131	LONG, THOMAS DRUMWRIGHT PO BOX 1058 ROXBORO 27573 BOWMAN GRAY	IM AC 52 52 56 919 599-3212	WINSLOW, JAMES ELBERT 609 PROFESSIONAL DR. ROXBORO 27573 U OF NC	FP AC 70 70 76 919 599-9258

74. PITT COMPONENT SOCIETY

OFFICERS—**President:** Judith S. Yongue, M.D., 107-C Commerce St., Greenville 27834 (919 355-2768)**Secretary:** Gene T. Hamilton, M.D., 6 Medical Pavilion, Greenville 27834 (919 752-4613)**Executive Secretary:** Dianne H. Pickett, P.O. Box 2216, 1705 W. 6th St., Greenville 27834 (919 758-8833)

ADAMS, HARRY GLENN DEPT. OF MEDICINE ECU SCHOOL OF MEDICINE GREENVILLE 27834 BAYLOR	IM /ID AC 68 68 84 919 551-2550	ATKINSON, SAMUEL MARVIN, JR. ECU, DEPT. OF OB-GYN GREENVILLE 27858 DUKE	OBG AC 61 61 85 919 551-4669	BARNETT, STEWART D. R-4 DOCTORS PARK APTS. GREENVILLE 27834 EAST CAROLINA U	S 91 87 919 752-6717
ALLISON, E. JACKSON, JR. ECU, DEPT. OF EMERG.MED. GREENVILLE 27834 U OF NC	EM AC 75 75 73 919 551-4757	AUSTIN, ERLE HARRIS, III DIV. OF CARDIAC SURGERY ECU SCHOOL OF MEDICINE GREENVILLE 27834 HARVARD	CDS /TS AC 74 74 86 919 551-4822	BARROW, ROY DOUGLAS 1711 TREEMONT DR. GREENVILLE 27858 EAST CAROLINA U	S 90 86 919 756-3746
ALQAISI, MUNTHUR E. ECU SCHOOL OF MED. DEPT. OF RADIATION ONCOLOGY GREENVILLE 27834 BAGHDAD U	ON AC 73 83 86 919 551-2900	AVERY, ELEANOR ELIZABETH RT. #2, BOX 305 GREENVILLE 27834 EAST CAROLINA U	S 88 85 919 752-0569	BARTLETT, EDWIN CLARY 622 MEDICAL DR. GREENVILLE 27834 U OF NC	ORS AC 78 79 84 919 752-4613
ALSENTZER, ULRICH KARL REGIONAL REHABILITATION CTR. P. O. BOX 6028 GREENVILLE 27834 U OF TUEBINGEN	PM AC 78 78 85 919 551-4440	BAKER, CHARLES SCOTT, III RT. #1, BOX 93 GREENVILLE 27834 DUKE	FP AC 79 81 87 919 747-2921	BARTLETT, STEPHEN RUSSELL 208 N. LONGMEADOW ROAD GREENVILLE 27834 DUKE	GS L/RT 43 50 50 919 752-3218
AMES, DAVID ANTHONY 313 LONGMEADOW ROAD GREENVILLE 27834 MCGILL U	P AC 68 69 84 919 752-7151	BAKERMAN, SEYMOUR 2902 MEMORIAL DRIVE GREENVILLE 27834 CASE WESTERN RES	PTH AC 59 59 77 919 551-2801	BASKIN, JAYNE FRANCES 3326 LANDMARK ST. D-1 GREENVILLE 27834 EAST CAROLINA U	S 90 86 919 756-5256
ARTIS, ISAAC AMOS, JR. 114 ROANOKE PLACE P. O. BOX 7304 GREENVILLE 27834 MEHARRY MED COLL	IM AC 72 74 82 919 756-6986	BANDY, LAWRENCE C. ECU SCHOOL OF MED. DEPT. OF OB-GYN GREENVILLE 27834 DUKE	GYN /ON AC 77 81 87 919 551-4201	BATTS, MARK BURREL RT. #8, BOX 269 GREENVILLE 27834 EAST CAROLINA U	S 88 86 919 752-3648
		BARNES, VICTOR RUSSELL 108 SARA LANE #B GREENVILLE 27834 EAST CAROLINA U	S 89 85 919 758-1547	BEAMER, MARK EDWARD 119 FLETCHER PL. GREENVILLE 27834 EAST CAROLINA U	S 90 86 919 758-2290

74. PITT COMPONENT SOCIETY (Continued)

BEANE, SCOTT DOUGLAS 3-I COURTNEY SQUARE APTS. GREENVILLE 27858 EAST CAROLINA U	89	85	S	BRESTEL, ERIC PAUL ECU DEPT. OF MEDICINE GREENVILLE 27858 U OF FLORIDA	72	73	88	A /IM AC	CARTER, JAMES WALTER 10 DOCTOR'S PARK GREENVILLE 27834 JOHNS HOPKINS	64	64	72	TS /GS AC
BEEKER, THADDEUS ARLEN APT. 16-F, COURTNEY SQUARE GREENVILLE 27834 EAST CAROLINA U	89	85	S	BRIGHT, DON CLARK 1705 W. SIXTH STREET GREENVILLE 27834 U OF NC	71	71	74	AN AC	CASTELLANI, WM. JOHN ECU SCHOOL OF MEDICINE DEPT. OF CLINICAL PATHOLOGY GREENVILLE 27834 U OF MICHIGAN	80	85	87	PTH AC
BENSON, NICHOLAS HEROD 1309 FANTASIA STREET GREENVILLE 27858 U OF SOU. DAKOTA	80	81	84	BROWN, MICHAEL ASHLEY 114 FLETCHER PLACE GREENVILLE 27834 EAST CAROLINA U	88	85		FP S	CHAMBERLAIN, JACK K. ECU, SCHOOL OF MEDICINE GREENVILLE 27834 U OF ILLINOIS	54	55	80	HEM /ON AC
BENTZEL, CARL JOHAN ECU DEPT. OF RENAL MED. GREENVILLE 27858 U OF ALABAMA	58	58	85	BROWN, WILLIAM EDWARD 2245 STANTONSBURG RD., STE. H GREENVILLE 27834 EAST CAROLINA U	81	82	79	OBG AC	CHAMBERLAIN, MATTHEW P. 136 FOREST ACRES DR. GREENVILLE 27834 EAST CAROLINA U	90	86		S
BERGER, BRUCE R. ECU, DEPT. OF PSY, BRODY BLDG. GREENVILLE 27858 U OF MINN	77	78	84	BROWNE, GEOFFREY H. 1600 LONGWOOD DR. GREENVILLE 27858 EAST CAROLINA U	91	87		S	CHAPLINSKI, THOMAS JOSEPH 1705 W. 6TH ST. GREENVILLE 27834 U OF CHICAGO	77	78	84	ON /HEM AC
BERRETTA, JEANNE SMITH PO BOX 1846 ECU SCHOOL OF MEDICINE GREENVILLE 27834 U OF ALABAMA	79	80	86	BRYANT, LYNETTE PO BOX 7069 GREENVILLE 27835 EAST CAROLINA U	90	86		S	CHITWOOD, WALTER R., JR. 3217 TATES CREEK RD. LEXINGTON, KY 40502 U OF VIRGINIA	74	83	84	CDS /TS AC
BEST, ANDREW ARTHUR P. O. BOX 949 GREENVILLE 27834 MEHARRY MED COLL	51	53	65	BUNDY, STEPHANIE A. 103 SHILOH, APT. #9 GREENVILLE 27834 EAST CAROLINA U	91	87		S	CLARK, TIMOTHY J. 324 DUPONT CIR. GREENVILLE 27858 DUKE	81	85	88	R AC
BINION, MARK LEE 106 SCALES PL., APT. A-7 GREENVILLE 27834 EAST CAROLINA U	89	85		BURCHETTE, BRUCE WILSON G-6 DOCTOR'S PARK APTS. GREENVILLE 27834 EAST CAROLINA U	89	85		S	CLARKE, DONALD KEITH 1530-0 BRIDLE CIR. GREENVILLE 27834 EAST CAROLINA U	89	85		S
BLACKWELL, MICHAEL A. RT. #2, BOX 372 WINTERVILLE 28590 EAST CAROLINA U	90	86		BURKART, THOMAS ELMA 6 DOCTOR'S PARK GREENVILLE 27834 MED U OF SC	73	74	79	NEP AC	CLAY, RICKY PERRY 2577 STANTONSBURG RD. GREENVILLE 27834 U OF ALABAMA	80	81	87	PS AC
BODE, DONALD DENBY, JR. 2573 STANTONSBURG RD. GREENVILLE 27834 U OF MIAMI	74	75	86	BURKE, WILLIAM ALLEN 502 WINSTEAD RD. GREENVILLE 27834 EAST CAROLINA U	82	83	79	D AC	CLEMENT, JAMES EDWIN 101 BETHESDA DRIVE GREENVILLE 27834 DUKE	54	55	62	GYN AC
BORCHERT, LYNN GORDON 2245 STANTONSBURG RD. #A GREENVILLE 27834 U OF MICHIGAN	68	69	80	BUSHER, JANICE THERESE 133 ANTLER RD. GREENVILLE 27834 MED SCH-UMDNJ	79	80	87	IM AC	CLINE, DAVID MARTIN ECU SCHOOL OF MEDICINE BRODY 4W-54 GREENVILLE 27858 WAYNE STATE U	82	83	85	EM AC
BOST, WILLIAM STUART, JR. 8 DOCTOR'S PARK PO BOX 5007 GREENVILLE 27834 U OF NC	62	62	70	BYRD, VERNON DALE 2643 MULBERRY LANE. ARLINGTON SQUARE APTS. GREENVILLE 27858 EAST CAROLINA U	90	86		S	CLINE, KATHLEEN ANN 1211 RED BANKS RD. GREENVILLE 27858 WAYNE STATE U	82	83	85	EM AC
BOTWRIGHT, GENE ROBERT, JR. R-10 DOCTOR'S PARK APTS. GREENVILLE 27834 EAST CAROLINA U	90	85		BYRUM, GRAHAM VANCE, JR. 6 DOCTORS PARK GREENVILLE 27834 BOWMAN GRAY	80	81	79	IM /NEP AC	COLEMAN, NANCY LOU 403 HILLTOP ST. GREENVILLE 27858 EAST CAROLINA U	89	86		S
BOWMAN, CHRIS RICHARDS PO BOX 607 AURORA 27806 EAST CAROLINA U	89	85		CAIN, JAMES R., III ECU SCHOOL OF MEDICINE GREENVILLE 27858 MED U OF SC	76	77	87	NEP AC	COOK, BRIAN DOCTORS PARK APTS. U-1 GREENVILLE 27834 EAST CAROLINA U	89	85		S
BOWMAN, JAMES FREDERICK 117 MEDICAL DRIVE GREENVILLE 27834 TEMPLE U	61	66	67	CALL, KENNETH D. 602-A W. CHURCH ST. FARMVILLE 27828 EAST CAROLINA U	91	87		S	COSTNER, JAMES M. 113 E. 12TH ST. GREENVILLE 27834 EAST CAROLINA U	91	87		S
BOWYER, ALLEN FRANK 2000 VENTURE TOWER DR., STE. 300 GREENVILLE 27834 LOMA LINDA U	59	60	78	CAMNITZ, PAUL SAMUEL BOX 5007 GREENVILLE 27834 U OF NC	74	74	79	OTO AC	COTTEN, AARON R. 108-B CEDAR COURT GREENVILLE 27858 EAST CAROLINA U	90	86		S
BOYETTE, DEANNA MARIE 424 BROOKSIDE DR. CHAPEL HILL 27514 EAST CAROLINA U	88	85		CAMPBELL, DIANE JANE 2315 EXECUTIVE PARK CIR. PO BOX 8307 GREENVILLE 27835 MEHARRY MED COLL	77	78	86	OBG AC	CRAWLEY, GEORGE EDWARD, III 1113 HILLSIDE DR. GREENVILLE 27834 EAST CAROLINA U	88	85		S
BRAME, ROBERT GRIFFIN DEPT. OF OB-GYN ECU SCHOOL OF MEDICINE GREENVILLE 27834 U OF NC	55	55	62	CARLSON, ERIC BARNETT 1705 WEST 6TH ST. GREENVILLE 27834 HAHNEMANN	80	83	84	CD /IM AC	CRISP, SELLERS LUTHER 622 MEDICAL DR. GREENVILLE 27834 U OF NC	60	60	68	ORS AC
BRAMLEY, MICHAEL LAIRD 1800 W. FIFTH STREET GREENVILLE 27834 YALE	73	75	77	CARO, JOSE FRANCISCO ECU, DEPT. OF MEDICINE GREENVILLE 27834 U OF URUGUAY	73	73	83	END /IM AC	CROSKERY, RICHARD WILLIAM 1705 W. 6TH ST., BLDG. E GREENVILLE 27834 OHIO STATE U	81	83	84	IM AC
BREMER, CHARLES CHRISTOPHER 317 PINWOOD ROAD GREENVILLE 27858 DUKE	64	64	68	CARSON, JACK OLIVER P. O. BOX 549 GRIFTON 28530 U OF MARYLAND	52	52	54	FP AC	CROUNSE, ROBERT GRIFFITH RT. #2, BOX 263-T BLOUNTS CREEK 27814 YALE	55	61	83	D /PH AC
	919 756-7974				919 524-4463					919 551-4629			

74. PITT COMPONENT SOCIETY (Continued)

CUNNINGHAM, PAUL R. G. ECU, BRODY BLDG., ROOM 4S-10 GREENVILLE 27834 U OF WEST INDIES	GS AC 72 72 83 919 551-2620	EASLEY, HENRY ALEXANDER, III 101 BETHESDA DR. GREENVILLE 27834 U OF NC	OBG AC 82 82 79 919 758-4181	FREEL, PAUL DUANE 404 HILLCREST DRIVE GREENVILLE 27834 EAST CAROLINA U	S 89 85 919 355-7807
DAGENHART, TIMOTHY LEE 322 SPRINGHILL RD. GREENVILLE 27834 EAST CAROLINA U	FP S 88 85 919 830-1242	EBERT, JAMES B., JR. #4 CARRIAGE HOUSE GREENVILLE 27834 EAST CAROLINA U	S 90 86 919 756-5093	FREEMAN, SANDRA 411 E. FOURTH ST. GREENVILLE 27834 EAST CAROLINA U	S 90 86 919 752-4337
DAINER, PAUL M. ECU, 3E-106 BRODY BLDG. GREENVILLE 27858 JEFFERSON	HEM /ON AC 72 73 88 919 551-2560	EDWARDS, WILSON BARTON, JR. 108 SARA LANE #B GREENVILLE 27834 EAST CAROLINA U	S 89 84 919 758-1547	FULCHER, WILLIAM L., III PO BOX 657 SNOW HILL 28580 U OF NC	FP AC 82 83 86 919 747-2921
DANOFF, JASCHA WOLSEY ECU, DEPT. OF PSYCHIATRY GREENVILLE 27858 U OF TORONTO	CHP /P AC 55 56 82 919 551-2660	EISELE, JOHN EVANS PO BOX 6028 GREENVILLE 27834 U OF WISCONSIN	PD /PM AC 65 67 87 919 551-4440	FURR, SARA MARCELLA 2521 MEMORIAL DR. GREENVILLE 27834 EAST CAROLINA U	S 90 86 919 756-9596
DAUGHERTY, JANICE ELAINE P. O. BOX 339 BETHEL 27812 BOWMAN GRAY	FP AC 78 81 82 919 551-4614	ENGELKE, STEPHEN CARL 220 PINEVIEW DRIVE GREENVILLE 27834 JOHNS HOPKINS	PD /NPM AC 74 79 82 919 551-4665	FURTH, EUGENE DAVID ECU, DEPT. OF MEDICINE GREENVILLE 27834 CORNELL U	IM /END AC 54 57 77
DAVIS, GEORGE EDWARD 8 MEDICAL PAVILION GREENVILLE 27834 U OF TENNESSEE	PD AC 70 71 79 919 758-1750	EVANS, AMOS RAY 1705 W. SIXTH STREET, BLDG. H GREENVILLE 27834 U OF NC	P AC 62 62 66 919 758-4810	GALLOWAY, JAMES MADISON, JR. PO BOX 427 AYDEN 28513 BOWMAN GRAY	FP AC 74 74 78 919 746-3116
DAWKINS, HOWARD G., JR. 2577 STANTONSBURG ROAD GREENVILLE 27834 BOWMAN GRAY	PS /GS AC 68 68 75 919 752-1406	EVANS, JAMES HARVEY E-6 DOCTOR'S PARK GREENVILLE 27834 EAST CAROLINA U	S 90 86 919 758-2577	GALPHIN, CLAUDE MABRY #6 DOCTOR'S PK. GREENVILLE 27834 MED U OF SC	NEP AC 80 80 85
DEBOGORSKI, JOZEFA PO BOX 6028 GREENVILLE 27834 KRAKOW-POLAND	PM AC 75 82 86 919 551-4440	EVATT, W. CHRISTOPHER ECU SCHOOL OF MEDICINE MEDICAL STUDENT GREENVILLE 27858 EAST CAROLINA U	S 89 86 919 758-2059	GAMBLE, ELIZABETH RHODES 607 WINSTEAD RD. GREENVILLE 27834 U OF NC	IM /GER AC 77 80 83 919 756-7901
DEL PERO, ROBERT ALAN 301 BOWMAN GRAY DR. GREENVILLE 27834 U OF CALIF-LA	OPH AC 81 82 88 919 758-4300	FAGUNDUS, DUNCAN MCLEOD 210 N. EASTERN ST. GREENVILLE 27858 EAST CAROLINA U	S 88 85 919 758-3395	GANICK, DOROTHY J. ECU SCHOOL OF MEDICINE PCMH W288-PEDIATRICS GREENVILLE 27834 U OF WISCONSIN	PD /PHO AC 71 71 87 919 757-4676
DELLASEGA, MARK 1705 W. SIXTH ST. GREENVILLE 27834 U OF KANSAS	IM /GE AC 75 76 83 919 752-6101	FEARRINGTON, ERIC 2 MEDICAL PAVILION GREENVILLE 27834 U OF NC	CD /IM AC 57 57 64 919 752-3185	GAVIGAN, JAMES RICHARD 2 DOCTOR'S PARK GREENVILLE 27834 U OF KENTUCKY	U AC 67 68 75 919 752-5077
DEWITT, DONALD EVERETT 321 PINEWOOD DR. GREENVILLE 27834 WAYNE STATE U	FP AC 54 55 87 919 551-4614	FERGUSON, ALFRED LEA 6 DOCTOR'S PARK GREENVILLE 27834 U OF TENNESSEE	NEP /IM AC 61 61 70 919 752-8880	GAY, WILTON CARLYLE, JR. 609 CEDARHURST RD. GREENVILLE 27834 EAST CAROLINA U	FP AC 82 83 79 919 756-4593
DEYTON, ROBERT GUY, JR. 101 BETHESDA DRIVE GREENVILLE 27834 DUKE	OBG AC 55 55 64 919 758-4181	FINESTONE, DOUGLAS H. ECU SCHOOL OF MED. DEPT. OF PSYCHIATRY GREENVILLE 27858 MED COLL OF VA	PYM /PYA AC 79 79 80 919 551-2986	GAYLORD, GREGG M. 115 CARDINAL DR. GREENVILLE 27858 U OF CINCINNATI	DR AC 81 84 87 919 752-5000
DIAMOND, JOHN MICHAEL ECU, DEPT. OF PSYCHIATRY GREENVILLE 27858 HOWARD U	P /CHP AC 79 80 84 919 551-2673	FINLEY, JAMES LEO BRODY 1F79, ECU SCH. OF MED. GREENVILLE 27834 MED COLL OF PENN	PTH AC 78 83 84 919 551-4495	GIBLIN, JOHN MARTIN F-2 DOCTOR'S PARK APTS. GREENVILLE 27834 EAST CAROLINA U	S 89 86 919 752-8619
DIECKMANN, MERWIN R. 209-B MCLEAN DR. SWANBORO 28584 U OF IOWA	FP AC 54 55 83 919 393-6543	FLEMING, DUARD FRANCIS, JR. 425 STANTONSBURG ROAD GREENVILLE 27834 BOWMAN GRAY	N AC 72 73 79 919 752-4848	GILBERT, CHARLES FRANKLIN PITT CO. MEM. HOSP.-LAB. MED. GREENVILLE 27834 U OF NC	PTH AC 59 59 66 919 551-4495
DIXON, JOHN ELLIOTT P. O. BOX 427 AYDEN 28513 DUKE	FP AC 58 58 64 919 746-3116	FLICKINGER, EDWARD GARNER 305 GRANVILLE DRIVE GREENVILLE 27834 DUKE	GS AC 73 75 82 919 551-4629	GODWIN, GWENDOLYN R. Q-2 DOCTORS PARK APTS. GREENVILLE 27834 EAST CAROLINA U	S 90 87 919 752-5092
DOLINAR, LOUIS JOHN ECU SCHOOL OF MEDICINE DEPT. OF PSYCHIATRY GREENVILLE 27858 U OF LOUISVILLE	P AC 76 78 88 919 551-2986	FORE, WILLIAM WHATELY ECU SCH. OF MEDICINE 2N72 GREENVILLE 27858 DUKE	END /IM AC 60 60 67 919 551-2571	GOOD, KEVIN S. 425 STANTONSBURG RD. GREENVILLE 27834 CENTRAL DEL ESTE	N AC 81 83 88 919 752-4848
DOUGLAS, EDGAR SMITH, JR. 101 BETHESDA DRIVE GREENVILLE 27834 MED COLL OF VA	OBG AC 61 64 68 919 758-4181	FOIL, MARY BETH ECU DEPT. OF SURGERY GREENVILLE 27858 EAST CAROLINA U	GS AC 81 81 81	GOODMAN, DAVID K. 321 GENTRY ST. JEFFERSON 28640 EAST CAROLINA U	S 91 87 919 355-5287
DRIVER, ALBERT GARDNER, JR. ECU, DEPT. OF MEDICINE GREENVILLE 27834 PENN STATE U	PUD /IM AC 78 80 84 919 551-4653	FOREMAN, SUSAN DOWNER 505 BREMERTON DR. GREENVILLE 27834 U OF NC	PD AC 78 78 86 919 752-7141	GORDON, SHELLEY G. RT. #3, BOX 103 WINTERVILLE 28590 EAST CAROLINA U	S 89 85 919 355-5963
DUCKETT, CHARLES HOWARD DEPT. OF FAMILY MEDICINE ECU SCHOOL OF MEDICINE GREENVILLE 27858 BOWMAN GRAY	FP AC 57 57 58 919 551-5452	FOWLER, WILLIAM EDWARD 106 SCALES PL., B-1 GREENVILLE 27834 EAST CAROLINA U	FP S 90 85 919 75 2908	GOUGH, JOHN E. E-1 100 DAVID DR. GREENVILLE 27858 EAST CAROLINA U	S 90 87 919 758-6279
DUKES, ROBERT RAYMOND 1301-A DICKINSON AVE. GREENVILLE 27834 EAST CAROLINA U	S 89 86 919 756-9928	FRANKLIN, ROBERT CHARLES 500 CEDARHURST GREENVILLE 27834 BOWMAN GRAY	FP AC 80 81 86 919 752-7133	GOWEN, CLARENCE WM., JR. ECU SCHOOL OF MEDICINE GREENVILLE 27834 MED COLL OF VA	PD /NPM AC 79 81 85 919 551-4812
				GOWEN, MARILYN ALLEY ECU, DEPT. OF PEDIATRICS GREENVILLE 27858 MED COLL OF VA	PD /PDA AC 79 80 85 919 551-4772

74. PITT COMPONENT SOCIETY (Continued)

GRANT, TERRY ALAN 2905-A CEDAR CREEK RD. GREENVILLE 27834 EAST CAROLINA U	89	85	S	HATCH, ALLAN BRAZIEL 127 AVERY ST. APT. #3 GREENVILLE 27834 EAST CAROLINA U	89	86	S	IMBODEN, LEY INEZ 217 E. WOODSTOCK DR. GREENVILLE 27834 EAST CAROLINA U	91	86	S
GRAVELLE-CAMELO, SHERYL RT. #2, BOX 304 ROCKY MOUNT 27801 EAST CAROLINA U	91	87	S	HAVEN, ANDREW EDDY 2245 STANTONSBURG RD.,STE.H GREENVILLE 27834 U OF NC	78	80	OBG AC	IRONS, CARY FREDERICK, JR. 1104 W. ROCK SPRING ROAD GREENVILLE 27834 MED COLL OF VA	41	46	FP L/RT
GRAY, CHARMAINE D. PO BOX 238 HOOKERTOWN 28538 U OF NC	83	85	PD AC	HEATH, STACEY MAURICE 202-A LINDBETH DR. GREENVILLE 27834 EAST CAROLINA U	88	85	S	IRONS, MALENE GRANT 1104 W. ROCKSPRING GREENVILLE 27834 MED COLL OF VA	41	46	PD /GPM L/RT
GRAY, ROBERTA SKINNER ECU DEPT. OF PEDIATRICS GREENVILLE 27834 U OF NC	72	72	PNP AC	HEIZER, MORTIMER DANTZLER 701 N. MAIN STREET FARMVILLE 27828 MED COLL OF VA	61	61	FP AC	IRONS, THOMAS GRANT ECU DEPT. OF PEDIATRICS GREENVILLE 27834 U OF NC	72	72	PD AC
GREASON, FRANCES CRAWFORD 106 SCALES PL. M-2 GREENVILLE 27834 EAST CAROLINA U	90	86	S	HENDERSON, CATHY LYNN 217 E. WOODSTOCK DR. GREENVILLE 27834 EAST CAROLINA U	90	86	S	JAFFURS, WILLIAM J., JR. 5301 WRIGHTSVILLE AVE. WILMINGTON 28403 GEO WASHINGTON U	79	79	EM AC
GREGORY, GLADYS REGINA L-13 DOCTORS PARK APTS. GREENVILLE 27834 EAST CAROLINA U	90	86	S	HENDRIX, JOHN DAVID 1705 W. SIXTH STREET GREENVILLE 27834 U OF FLORIDA	67	68	D AC	JAMES, PAUL ARTHUR PO BOX 549 BETHEL 27812 U OF NC	84	85	FP AC
GREGORY, JERRY GLEN ECU, DEPT. OF PSYCHIATRY GREENVILLE 27858 U OF OKLAHOMA	69	69	P AC	HENGVELD, LOFTUS, JR. 107 IRON WOOD DRIVE GREENVILLE 27834 HAHNEMANN	47	48	EM /AN RT	JANOSKO, EDWARD ORESTES, II 224 KING GEORGE ROAD GREENVILLE 27834 YALE	74	75	U /N/A AC
GRIFFIN, STEPHANIE D. RT. 1, BOX 260 MACCLESFIELD 27852 EAST CAROLINA U	90	86	S	HENSON, DONALD LENTZ, JR. 24 SCOTT ST. GREENVILLE 27834 EAST CAROLINA U	88	85	S	JOHNSON, SAMUEL ANDREW APT. #4, CARRIAGE HOUSE GREENVILLE 27834 EAST CAROLINA U	89	85	S
GRIGGS, JAMES PHILIP, JR. P. O. BOX 172 WINTERVILLE 28590 EAST CAROLINA U	90	85	S	HESTER, T. OMA 106 SCALES PL., L-6 GREENVILLE 27834 EAST CAROLINA U	91	87	S	JOHNSON, THOMAS DUANE DOCTORS PARK APTS. U-4 GREENVILLE 27834 EAST CAROLINA U	90	86	S
HAAR, FREDERICK BEHREND 610 S. OAK STREET GREENVILLE 27834 JEFFERSON	32	32	PD L	HINSON, TONY RAY RT. #1, BOX 434 GREENVILLE 27834 EAST CAROLINA U	89	85	S	JOHNSRUDE, IRWIN STANLEY P. O. BOX 328, RTE. #9 GREENVILLE 27834 U OF MANITOBA	56	66	DR AC
HADI, HAMID A. ECU SCHOOL OF MEDICINE DEPT. OF OB/GYN GREENVILLE 27858 KABUL UNIV	64	65	AC	HODGES, JOSEPH AL, JR. RT. #8, BOX 330-C GREENVILLE 27834 EAST CAROLINA U	89	85	S	JOHNSTONE, WILLIAM MILLER, JR. 1608 BEAUMONT DR. GREENVILLE 27858 EAST CAROLINA U	89	85	S
HAINER, BARRY LEWIS 602 QUEEN ANNE'S ROAD GREENVILLE 27834 GEORGETOWN U	76	77	FP AC	HOLBROOK, CARTER TATE, III ECU, DEPT. OF PEDIATRICS GREENVILLE 27834 U OF NC	75	75	PHO /PD AC	JONES, BILLY ERNEST ECU DEPT. OF MEDICINE GREENVILLE 27834 DUKE	58	58	D AC
HALE, JOHN CHARLES 10 DOCTOR'S PARK GREENVILLE 27834 WAYNE STATE U	70	70	GS /CDS AC	HOLLAND-ZIGLAR, AMY J. 111 RODNEY RD. GREENVILLE 27834 EAST CAROLINA U	91	87	S	JONES, CHRISTOPHER 408 ROTARY AVE. GREENVILLE 27858 EAST CAROLINA U	89	85	S
HALL, BRENT DWAYNE DOCTOR'S PARK APTS, #P-7 GREENVILLE 27834 EAST CAROLINA U	88	85	S	HOLLAND, JAMES EUGENE 2573 STANTONSBURG ROAD GREENVILLE 27834 U OF MISSOURI	75	75	OPH AC	JONES, DAVID RAY 425 W. LONG MEADOW RD. GREENVILLE 27858 EAST CAROLINA U	90	86	S
HAMILTON, GENE THOMAS 6 MEDICAL PAVILION GREENVILLE 27834 NORTHWESTERN U	67	68	ORS AC	HOLTER, JOHN FREDERICK ECU SCHOOL OF MEDICINE PULMONARY DEPT GREENVILLE 27834 PENN STATE U	79	80	IM /PUD AC	JONES, DENNIS EBLEN DARNELL ECU SCHOOL OF MEDICINE GREENVILLE 27858 DUKE	68	68	OBG AC
HANRAHAN, LEO ROBERT, JR. ECU SCHOOL OF MEDICINE DEPT. OF PATHOLOGY GREENVILLE 27834 SUNY-SYRACUSE	72	77	PTH /BLB AC	HOPPMANN, RICHARD A. ECU SCHOOL OF MEDICINE DEPT. OF INTERNAL MED. GREENVILLE 27834 MED U OF SC	82	82	RHU AC	JONES, FRANKLIN D. 125 MOYE BLVD. GREENVILLE 27834 EASTERN VA	77	81	NS AC
HARDY, IRA MAY, II 125 MOYE BOULEVARD GREENVILLE 27834 U OF NC	63	63	NS AC	HOWARD, T. CURRIN R-9 DOCTOR'S PARK APTS. GREENVILLE 27834 EAST CAROLINA U	91	87	S	JONES, JAMES GRADY P. O. BOX 1846 GREENVILLE 27835 BOWMAN GRAY	59	59	FP AC
HARDY, JOHN GREGG 425 STANTONSBURG ROAD GREENVILLE 27834 BOWMAN GRAY	73	73	N AC	HUDSON, RICHARD PAGE, JR. ECU SCHOOL OF MEDICINE DEPT. OF CLINICAL PATHOLOGY GREENVILLE 27858 MED COLL OF VA	56	56	FOP /PTH AC	JONES, JANE C. 202 RODNEY RD. GREENVILLE 27834 EAST CAROLINA U	91	87	S
HARGETT, FRANKLIN 1705 W. 6TH ST. GREENVILLE 27835 U OF NC	83	84	FP/GER AC	HUGHES, C. ANTHONY 120-A HUNTINGRIDGE RD. GREENVILLE 27834 EAST CAROLINA U	91	87	S	KALLMAN, HAROLD ECU DEPT.OF FAMILY MEDICINE GREENVILLE 27834 NEW YORK U	54	55	FP /GER AC
HARRIS, LAWRENCE STANLEY ECU SCHOOL OF MEDICINE DEPT. OF CLINICAL PATH. GREENVILLE 27858 CASE WESTERN RES	62	62	FOP /NA AC	HUGHES, JAMES LEWIS PITT CO. MEM. HOSP. 228-2W GREENVILLE 27834 U OF MARYLAND	55	55	PD AC	KANNON, GEORGIA ANN 114-A HUNTING RIDGE RD. GREENVILLE 27834 EAST CAROLINA U	89	86	S
	919	551	4655		919	355	2460		919	758	2940

74. PITT COMPONENT SOCIETY (Continued)

KATARIA, YASH PAL ECU DEPT. OF MEDICINE GREENVILLE 27858 M C OF AMRTSAR	PUD /IM AC 59 60 79 919 551-4653	LARSON, RICHARD MARTIN 10 DOCTORS PARK STANTONSBURG ROAD GREENVILLE 27834 DUKE	GS /CDS AC 74 76 82 919 758-1747	MAHAFFEY, WILLIAM M. RT. #8, BOX 330-D GREENVILLE 27834 EAST CAROLINA U	S 90 86 919 758-6102
KATZ, EDWARD KENNETH ECU SCHOOL OF MEDICINE GREENVILLE 27858 TUFTS U	P /PYM AC 74 75 86 919 551-2663	LAUPUS, WILLIAM EDWARD ECU SCH. OF MED. DEAN'S OFF. GREENVILLE 27834 YALE	PD /PNP AC 45 45 76 919 551-2201	MAHMUD, REHAN ECU SCHOOL OF MEDICINE SECT. OF CARDIOLOGY GREENVILLE 27858 KING EDWARD COLL	AC 75 80 88 919 551-5395
KENDRICK, PAUL WAYNE 6 DOCTORS PARK STANTONSBURG ROAD GREENVILLE 27834 U OF ALABAMA	NEP /IM AC 66 72 75 919 752-8880	LAVIGNE, MARK KINO DOCTOR'S PARK APTS. C-5 GREENVILLE 27834 EAST CAROLINA U	S 90 86 919 758-1822	MALLETTE, JULIUS Q. ECU DEPT. OF OB-GYN GREENVILLE 27835 EAST CAROLINA U	OBG AC 82 83 87 919 551-4983
KENNY, JEAN BRYCE FELTY ECU DEPT. OF PEDIATRICS GREENVILLE 27858 JOHNS HOPKINS	PD /ID AC 57 57 83 919 551-2511	LAWLER, FRANK H. 4N-51 BRODY, ECU SCH OF MED GREENVILLE 27835 LOMA LINDA U	FP AC 81 82 88 919 551-2613	MANGUM, SARAH ROSE 319-N ST. ANDREWS DR. GREENVILLE 27834 EAST CAROLINA U	S 91 87 919 756-8709
KERR, COLIN PAUL DEPT. OF FAMILY MEDICINE ECU FAMILY PRACTICE CTR. GREENVILLE 27858 U OF PENN	FP /LM AC 77 77 87 919 551-4611	LEE, MARTHA HOPE 2636 MULBERRY LN. GREENVILLE 27858 EAST CAROLINA U	S 90 86 919 578-3190	MANLY, DAVID T. 115 ROSEMOND DR., GREENVILLE 27834 U OF NC	R 86 87 84 919 758-4062
KHURI, RAJA N. ECU SCHOOL OF MEDICINE DEPT. OF MEDICINE GREENVILLE 27858 AMER.U OF BEIRUT	NEP AC 59 64 88 919 551-2545	LEENON, BARBARA M. 44 COLINDALE COURT GREENVILLE 27858 EAST CAROLINA U	S 89 85 919 756-2646	MARCUARD, STEFANO P. ECU, DEPT. OF MEDICINE GREENVILLE 27834 U OF ZURICH	GE /IM AC 77 79 84 919 551-4652
KINARD, JAMES DONALD 33 WEST HILLS TOWNHOMES GREENVILLE 27834 EAST CAROLINA U	S 88 85 919 852-6384	LENNON, YATES ALTON 44 COLINDALE COURT GREENVILLE 27834 EAST CAROLINA U	S 89 85 919 648-4158	MARKELLO, JAMES ROSS ECU SCHOOL OF MEDICINE GREENVILLE NC 27834 ST U OF NY-BUFF	PD AC 61 62 78 919 551-2539
KLEIN, GEORGE 309 GRANVILLE DR. GREENVILLE 27858 AUTONOMA UNIV	FP /OM AC 79 81 84 919 551-4611	LEONARD, JOHN RICHARD, III 125 MOYE BOULEVARD GREENVILLE 27834 U OF NC	NS AC 70 70 76 919 752-5156	MARROW, HENRY GREGORY ECU SCH. OF MEDICINE CLINICAL PATH. BRODY 1508 GREENVILLE 27834 DUKE	PTH AC 78 80 83 919 551-4495
KNOTT, RUFUS HENRY, II PO BOX 5007 GREENVILLE 27835 U OF NC	OTO /A AC 64 64 72 919 752-5227	LEONARD, MARILYN JEAN #18 GLENWOOD APTS. GREENVILLE 27858 EAST CAROLINA U	S 89 85 919 758-0713	MASIUS, WILLIAM GLENN 1801 GREENVILLE BLVD. APT. 19 GREENVILLE 27858 EAST CAROLINA U	S 90 86 919 752-5867
KNUPP, CHARLES LEONARD ECU SCHOOL OF MEDICINE DEPT. OF MEDICINE GREENVILLE 27834 U OF MARYLAND	HEM /IM AC 76 77 84 919 551-2560	LEONHARDT, GARY GENE RT. #13, BOX 434 GREENVILLE 27858 EAST CAROLINA U	S 89 85 919 756-0150	MATHIS, JAMES LARRY ECU, DEPT. OF PSYCHIATRY GREENVILLE 27858 ST LOUIS U	P AC 49 49 77 919 551-2660
KODROFF, MICHAEL BARRY ECU DEPT. OF RADIOLOGY GREENVILLE 27834 JEFFERSON	PDR /NM AC 67 67 85 919 551-4972	LEWIS, LARRY STEWART DEPT. OF SURGERY ECU SCHOOL OF MEDICINE GREENVILLE 27834 WAYNE STATE U	VS AC 77 80 83 919 551-4629	MAY, ALFRED T., III 25-G COURTNEY SQUARE GREENVILLE 27858 EAST CAROLINA U	S 90 86 919 355-5287
KOONTZ, JACK ALEXANDER E. I. DUPONT DENEMOURS CO. P. O. BOX 800 KINSTON 28501 U OF NC	OM AC 64 64 69 919 522-6100	LEWKOW, LAWRENCE M. ECU SCHOOL OF MEDICINE BRODY HALL 3E-102 GREENVILLE 27834 NEW YORK MED COL	HEM AC 75 75 88 919 551-2560	MAYO, KATHY DIANE T-5 DOCTORS PARK APTS. GREENVILLE 27834 EAST CAROLINA U	S 90 86 919 752-2656
KOPELMAN, ARTHUR ECU SCHOOL OF MEDICINE GREENVILLE 27834 U OF ROCHESTER	NPM AC 63 63 79 919 551-4787	LICHSTEIN, PETER RIBACK ECU DEPT. OF MEDICINE GREENVILLE 27834 U OF MICHIGAN	IM AC 76 78 82 919 551-4633	MCCARTY, GREGORY S. 2683 MULBERRY LANE ARLINGTON SQUARE APTS. GREENVILLE 27858 EAST CAROLINA U	S 91 88 919 355-5145
KREMER, WM. ALFRED 2675 MULBERRY LN. GREENVILLE 27858 EAST CAROLINA U	S 91 87 919 355-3130	LJUNG, TOR MARTIN 2707 MULBERRY LANE GREENVILLE 27858 EAST CAROLINA U	S 90 86 919 355-6674	MCCONNELL, ROBERT WILLIAM 1711 W. SIXTH STREET GREENVILLE 27834 MED COLL OF VA	R /NM AC 59 59 69 919 752-5000
KURTZ, KEVIN JOHN PO BOX 396 JEFFERSON 28640 EAST CAROLINA U	S 90 86 919 551-1653	LONDON, DEBORAH LOUISE RT. #2, BOX 561-D AYDEN 28513 EAST CAROLINA U	S 90 86 919 752-0109	MCDONALD, PENELOPE JANE 104 STUART CIR. #B GREENVILLE 27834 EAST CAROLINA U	S 89 85 919 752-7557
KUSHNICK, THEODORE ECU SCHOOL OF MEDICINE GREENVILLE 27834 HARVARD	PD AC 51 53 80 919 551-2529	LONGINO, FRANK HENRY 1914 FOREST HILL DR. GREENVILLE 27834 DUKE	GS /TS RT 47 51 56 919 758-1747	MCGILLICUDDY, DENIS MICHAEL 117 MEDICAL DRIVE GREENVILLE 27834 U OF MICHIGAN	ORS AC 75 77 81 919 758-1777
LANE, CHARLES JENKINS 2905-H CEDAR CREEK RD. GREENVILLE 27834 EAST CAROLINA U	S 89 85 919 758-2884	LUCYK, MARYANN 13 UPTON COURT GREENVILLE 27858 EAST CAROLINA U	OBG S 88 87 919 756-6502	MCLEAN, HARRY H., III ECU STUDENT HEALTH SERVICE WASHINGTON U	FP /EM AC 53 53 54 919 551-6841
LANNIN, DONALD ROWE ECU, DEPT. OF SURGERY GREENVILLE 27858 U OF MINN	GS AC 74 76 83 919 551-5418	MACDONALD, MARK EDWARD 107 DUPONT CIRCLE GREENVILLE 27858 EAST CAROLINA U	S 89 85 919 756-6502	MEECE, JEANNINE MARIE 1800 W. FIFTH ST., STE. #8 GREENVILLE 27834 U OF SOU FLORIDA	PD AC 81 82 86 919 758-1750
LARKIN, ERNEST WADDILL, III ECU SCH. OF MED. BRODY 1F79 GREENVILLE 27834 MED COLL OF VA	PTH AC 70 71 78 919 551-4495	MACKENNA, JARLATH 2157 MAIN ST. SISTERS OF CHARITY HOSP. BUFFALO, NY 14214 NAT U OF IRELAND	OBG /NPM AC 69 73 79	MEGA, LESLY TAMARIN ECU, DEPT. OF PSYCHIATRY GREENVILLE 27858 BOSTON U	CHP /P AC 68 70 83 919 551-2673
				MELTON, BARRY CLINE 1095-K CHEYENNE COURT GREENVILLE 27834 EAST CAROLINA U	S 88 85 919 756-2917

74. PITT COMPONENT SOCIETY (Continued)

MERRILL, RICHARD HOSMER ECU SCHOOL OF MEDICINE GREENVILLE 27834 BOSTON U	NEP /IM AC 66 67 80 919 551-2545	NEWMAN, WALTER JOSEPH 6 DOCTOR'S PARK GREENVILLE 27834 DUKE	NEP AC 75 78 82 919 752-8880	PEARCE, RICHARD EDWARD 202-B LINDBETH DR. GREENVILLE 27834 EAST CAROLINA U	S 88 85 919 756-8447
METZGER, W. JAMES ECU, DEPT. OF MEDICINE GREENVILLE 27834 NORTHWESTERN U	IM /AI AC 71 71 85 919 551-2562	NEWTON, DOUGLAS FRISBIE 1705 W. SIXTH STREET GREENVILLE 27834 SUNY-SYRACUSE	GE /IM AC 68 72 75 919 752-6101	PEARLMAN, WM. GLENN RT. #1, BOX 54-A GREENVILLE 27834 EAST CAROLINA U	S 91 87
MILLER, DAVID T. PITT CO. MEMORIAL HOSPITAL DEPT. OF CLINICAL PATHOLOGY GREENVILLE 27834 BOWMAN GRAY	CLP AC 75 75 87 919 551-9020	NIFONG, LESLIE WILEY 310 HIDDEN BRANCHES CLOSE WINTERVILLE 28590 EAST CAROLINA U	S 90 86 919 355-7477	PEARSALL, DAVID W. 2315 EXECUTIVE PARK CIR. GREENVILLE 27834 U OF NC	GS AC 69 70 87 919 830-5392
MINARD, RAYMOND BRUCE 322 DUPONT CIRCLE GREENVILLE 27834 EAST CAROLINA U	AN AC 81 84 78 919 756-9168	NORRIS, H. THOMAS PITT COUNTY MEM. HOSPITAL GREENVILLE 27834 U OF SOU CALIF	PTH AC 59 60 83 919 551-4951	PEDEN, JAMES GWYN, JR. DEPT. OF MEDICINE ECU SCHOOL OF MEDICINE GREENVILLE 27834 U OF NC	IM /P AC 79 80 84 919 551-4633
MINTEER, WILLIAM JEFFREY #8 PALMETTO PLACE GREENVILLE 27858 PENN STATE U	CD /IM AC 78 81 84 919 752-6101	NOTRICA, MARC ALAN D-3 DOCTORS PARK GREENVILLE 27834 EAST CAROLINA U	S 91 87 919 758-7359	PEREZ-NAVARRO, PAUL A. RT. #8, BOX 330-A GREENVILLE 27834 EAST CAROLINA U	S 91 87 919 757-0532
MITCHELL, CHARLES K., JR. 1400 HOOKER RD., APT. E GREENVILLE 27834 EAST CAROLINA U	S 90 86 919 756-9098	NUTT, SUZANNE HAMILTON 717 SNOW HILL ST. AYDEN 28513 EAST CAROLINA U	S 89 85 919 746-4695	PHILLIPS, STAN DALE 2683 MULBERRY LN. ARLINGTON SQUARE APTS. GREENVILLE 27858 EAST CAROLINA U	S 91 87 919 355-5145
MITCHELL, JOYCE MARIE RT. #1, BOX 416E BETHEL 27812 GEORGETOWN U	EM /IM AC 76 79 82 919 551-4757	O'BRIEN, THOMAS F., JR. ECU SCHOOL OF MEDICINE GREENVILLE 27834 YALE	GE /ADM AC 57 61 61 919 551-2149	PHIPPS, ERVIN LAMAR 2652 MULBERRY LN. GREENVILLE 27834 EAST CAROLINA U	S 90 85 919 551-3379
MONROE, CHARLES T. 1825 W. SIXTH ST. GREENVILLE 27834 U OF NC	PD /PH AC 80 81 87 919 752-4141	O'NEAL, EVA MANN 1924 WHITE HOLLOW DR. GREENVILLE 27858 EAST CAROLINA U	S 90 86 919 756-9049	PICTON, DOUGLAS WM. 3I COURTNEY SQUARE GREENVILLE 27858 EAST CAROLINA U	S 89 88 919 756-9538
MONROE, EDWIN WALL ECU SCHOOL OF MEDICINE GREENVILLE 27834 U OF PENN	IM AC 51 51 57 919 551-2983	OAKLEY, STANLEY PRESTON, JR. ECU, DEPT. OF PSY. MED. GREENVILLE 27834 EAST CAROLINA U	P AC 82 83 79 919 551-2660	PIPPIN, RICHARD LEE 201 N. MAIN ST. FARMVILLE 27828 EAST CAROLINA U	IM AC 83 84 80 919 756-9569
MONROE, WILLIAM MURCHISON DOCTORS PK, STE. I STANTONSBURG ROAD GREENVILLE 27834 U OF NC	OPH AC 64 64 70 919 758-4166	ORR, LYNN HUIE, JR. 1705 W. 6TH ST. BLDG. E GREENVILLE 27834 BOWMAN GRAY	CD /IM AC 74 70 80 919 752-6101	PORIES, WALTER JULIUS 203 CHOWAN ROAD GREENVILLE 27834 U OF ROCHESTER	GS /TS AC 55 56 78 919 551-4629
MONTEITH, LINDA GAIL DOCTORS PARK APTS. N3 GREENVILLE 27834 EAST CAROLINA U	S 91 87 919 758-2124	OWENS, MICHAEL C. 2907-A CEDAR CREEK RD. GREENVILLE 27834 EAST CAROLINA U	S 91 87 919 752-7479	POULOS, JOHN E. 1306-B E. 14TH ST. GREENVILLE 27834 EAST CAROLINA U	S 91 88 919 758-3751
MONTGOMERY, EMMETT FULCHER 804 FORBES ST. GREENVILLE 27834 EAST CAROLINA U	S 89 86 919 752-1490	PAPPAS, PAMELA ANNE DEPT. OF PSY. ECU SCH. OF MEDICINE GREENVILLE 27858 BOWMAN GRAY	P AC 79 83 85 919 551-2404	POWELL, CHARLES S. ECU SCHOOL OF MEDICINE DEPT. OF SURGERY GREENVILLE 27858 U OF KENTUCKY	GS AC 78 80 88 919 551-4667
MOORE, BARRY ALLEN 600 MEDICAL DRIVE GREENVILLE 27834 U OF KANSAS	P AC 70 70 79 919 758-6080	PARK, H. KIM ECU, DEPT. OF CLINICAL PATH. GREENVILLE 27834 EWAH WOMANS U	PTH AC 69 75 77 919 551-4495	POWERS, BARRY 306 STANWOOD DRIVE GREENVILLE 27834 NEW YORK MED COL	DR AC 75 77 81 919 752-5000
MOORE, CAROL ANN 110 S. CONTENTNEA ST., APT. C FARMVILLE 27828 EAST CAROLINA U	S 88 85 919 753-2015	PARKS, WILLIAM B., III 205-B LINDBETH DR. GREENVILLE 27834 EAST CAROLINA U	S 90 86 919 355-5744	PRICE, BILLY LEE, JR. 3260 LANDMARK ST. C-6 GREENVILLE 27834 EAST CAROLINA U	S 90 86 919 756-5425
MOVAHED, ASSAD SECTION OF CARDIOLOGY ECU SCHOOL OF MEDICINE GREENVILLE 27858 AHWAZ MED SCH	CD AC 75 75 87 919 551-4651	PARSONS, RICKEY 1612 OAKLAWN AVE. GREENVILLE 27834 EAST CAROLINA U	S 89 85 919 756-5478	PRICE, DOUGLAS S. ECU SCHOOL OF MEDICINE GREENVILLE 27858 U TX-SAN ANTONIO	GE AC 78 78 88 919 551-4652
MURAD, JOSEPH LOUIS 1730 W. FIFTH STREET, EXT. GREENVILLE 27834 U OF NC	OBG AC 57 57 66 919 758-4855	PATE, DORIS CATHERINE MEDICAL OAKS APTS. #C-2 GREENVILLE 27834 EAST CAROLINA U	S 91 86 919 757-3513	PRIVETTE, DOUGLAS CRAIG 326 DUPONT CR. GREENVILLE 27858 U OF NC	CD /IM AC 76 76 82 919 752-6101
MURPHY, BARBARA ANNE ECU SCHOOL OF MEDICINE DEPT. OF EMERGENCY MED. GREENVILLE 27834 MED COLL OF PENN	EM AC 75 78 88 919 551-4757	PATEL, VIJESH K. 109 STEWARD LANE GREENVILLE 27834 EAST CAROLINA U	S 90 86 919 756-8948	PULKINGHAM, NATHAN CARR 28 LEXINGTON SQUARE APTS. GREENVILLE 27858 EAST CAROLINA U	S 88 85 919 756-4752
NARRON, GREGORY RT. #8, BOX 201 GREENVILLE 27834 EAST CAROLINA U	S 88 85 919 758-3672	PATRONE, NICHOLAS ANGELO ECU DEPT. OF MED.& PED. GREENVILLE 27834 LOYOLA U	RHU /IM AC 76 76 77 919 551-2533	PURCELL, PETER NELSON 220 LORAIN AVE. APT. #3 CINCINNATI, OH 45220 EAST CAROLINA U	S 88 84 ON /HEM AC
NASHOLD, JAMES REUBEN B. 704 WILLOW ST. GREENVILLE 27858 EAST CAROLINA U	S 89 86 919 758-1793	PATTERSON, THOMAS HENRY, JR. 701 N. MAIN STREET FARMVILLE 27828 U OF NC	FP AC 54 55 58 919 753-3193	RAAB, MARY JERISTA ECU SCHOOL OF MEDICINE GREENVILLE 27834 MED COLL OF PENN	ON /HEM AC 68 68 78 919 551-2383
NELSON, PHILIP GROESBECK 1211 E. ROCK SPRING RD. GREENVILLE 27834 U OF LOUVAIN	P L 54 57 59 919 758-3145	PATTON, DENZIL D. DEPT. OF FAMILY MEDICINE ECU FAMILY PRACTICE CTR. GREENVILLE 27858 WEST VA U	FP AC 72 72 87 919 551-4614	RAAB, SPENCER O. ECU SCHOOL OF MEDICINE GREENVILLE 27834 ST U OF NY-BUFF	ON /HEM AC 54 57 78 919 551-2383

74. PITT COMPONENT SOCIETY (Continued)

RABON, THOMAS R.	S	SATTERFIELD, G. HOWARD, JR.	OBG AC	SMITH, MICHAEL EARL	S
RT. #3, BOX 3, RUSTIC RIDGE	91 87	DOCTOR'S PARK, BUILDING #5	57 57 63	ROUTE #2, BOX 93	88 85
GREENVILLE 27858		GREENVILLE 27834		WINTERVILLE 28590	
EAST CAROLINA U	919 758-0645	DUKE	919 758-5246	EAST CAROLINA U	919 756-3960
RAKFAL, SUSAN MAFFEY	TR AC	SAWYER, BARBARA ANN	S	SONG, JULIET KIM	AN AC
ECU SCHOOL OF MED.	81 82 86	BIRCHWOOD SANDS MOBILE HOME	91 87	PHYSICIAN'S QUADRANGLE	65 65 72
RADIATION ONCOLOGY CTR.		ESTATES, LOT #28		GREENVILLE 27834	
GREENVILLE 27835		GREENVILLE 27834		EWHA WOMANS U	919 752-1433
RUTGERS MED SCH	919 551-2900	EAST CAROLINA U	919 758-3155	SPENCER, GEORGE MICHAEL	S
RAMSDALL, CHARLES MICHAEL	RHU /IM AC	SCARANTINO, CHARLES WALTER	TR AC	3000 GOLDEN RD., CONDO #7	89 85
1705 W. SIXTH STREET	65 65 76	RADIATION ONCOLOGY CTR.	73 74 82	GREENVILLE 27834	
GREENVILLE 27834		ECU SCHOOL OF MEDICINE		EAST CAROLINA U	919 758-5617
LA STATE U	919 752-6101	GREENVILLE 27834		STANLEY, FRANKIE EDWARD	S
RAND, CECIL HOLMES, JR.	IM /PUD AC	BOWMAN GRAY	919 551-2900	2410-B E. THIRD ST.	89 85
1800 W. FIFTH STREET	61 61 69	SEHGAL, NARINDER NATH	OBG AC	GREENVILLE 27858	
GREENVILLE 27834		ECU DEPT. OF OB-GYN	54 61 85	EAST CAROLINA U	919 752-6172
U OF NC	919 752-3185	GREENVILLE 27858		STARLING, SUZANNE P.	S
RAWL, RICHARD PRESTON	FP AC	M C OF AMRITSAR	919 551-4622	RT. #14, BOX 94-A	90 86
P. O. BOX 339	78 80 82	SEHGAL, PRAGNA NINA	FP /OBG AC	GREENVILLE 27834	
BETHEL 27812		ECU DEPT. OF FAMILY MED.	67 77 87	EAST CAROLINA U	919 758-0928
BOWMAN GRAY	919 825-0355	PO BOX 1846		STEEL, JOHN GRIFFITH	N AC
RAY, V. GAIL	EM AC	GREENVILLE 27835		425 STANTONSBURG ROAD	77 79 85
DEPT. OF EMERGENCY MED.	77 77 86	MAHATMA GANDHI	919 551-2059	GREENVILLE 27834	
ECU SCHOOL OF MEDICINE		SEITTER, DELLMER B., III	S	U OF NC	919 752-4848
GREENVILLE 27834		201 PINERIDGE DR.	90 86	STEVENSON, PAUL L.	S
U OF ARKANSAS	919 551-4757	GREENVILLE 27834		103 BELMONT DR.	91 87
RECKER, SCOTT F.	PM AC	EAST CAROLINA U	919 551-3384	GREENVILLE 27858	
PO BOX 6028	80 81 87	SESSOMS, RODNEY KEVIN	S	EAST CAROLINA U	919 758-9950
REGIONAL REHABILITATION CTR.		1016-B WESTOVER DR.	89 85	STEWART, ANGELA GRACE	PD AC
GREENVILLE 27834		GREENVILLE 27834		RT. #2, BOX 94-5C	80 81 84
HAHNEMANN	919 551-4440	EAST CAROLINA U	919 830-1453	WINTERVILLE 28590	
REEVES, WM. CHARLES	CD AC	SHAPPLEY, BEN GORDON	PD AC	RUSH MED COLL	919 355-3773
ECU SCHOOL OF MEDICINE	71 71 87	1800 W. FIFTH STREET	66 66 74	STOCKS, ROSE MARY SUTTON	S
SECTION OF CARDIOLOGY		GREENVILLE 27834		406 S. HARDING ST. #B	88 85
GREENVILLE 27858		U OF VIRGINIA	919 752-7141	GREENVILLE 27858	
U OF TEXAS	919 757-4651	SHAW, ROBERT ARNETT	PUD /IM AC	EAST CAROLINA U	919 758-3686
ROBB, JEFFREY WALLACE	AN AC	1705 W. SIXTH STREET	76 77 82	STOUT, THOMAS F.	S
PHYSICIANS QUADRANGLE	80 80 86	GREENVILLE 27834		2673 MULBERRY LN.	91 87
PITT CO. ANESTHESIA		DUKE	919 752-6101	GREENVILLE 27858	
GREENVILLE 27834		SHELTON, STEPHEN LEE	S	EAST CAROLINA U	919 355-5168
WAYNE STATE U	919 752-2140	3320 LANDMARK ST. C-8	91 87	STRAUSBAUGH, PAUL HENRY	PTH AC
ROBERTSON, HOWARD D.	CRS AC	GREENVILLE 27834		1717 MORNINGSIDE PLACE	74 78 79
10 DOCTOR'S PK.	74 75 88	EAST CAROLINA U	919 355-5027	GREENVILLE 27834	
GREENVILLE 27834		SHUPING, JOHN ROSS	N AC	U OF MIAMI	919 551-2809
U OF LOUISVILLE	919 758-1747	425 STANTONSBURG ROAD	76 76 73	SUNDER, THEODORE RALPH	CHN /N AC
ROSE, GREGORY C.	CD AC	GREENVILLE 27834		ECU DEPT. OF PEDIATRICS	72 62 85
ECU SCHOOL OF MEDICINE	80 80 88	BOWMAN GRAY	919 752-4848	GREENVILLE 27834	
SECT. OF CARDIOLOGY		SIDES, STEPHEN N., II	S	JEFFERSON	919 551-4772
GREENVILLE 27858		104 GATES DR.	91 87	SUPIK, LAWRENCE FRANCIS	S
ST LOUIS U	919 551-4651	WINTERVILLE 28590		207 N. JARVIS ST.	89 85
ROSE, JOHN DAVID	CD /IM AC	EAST CAROLINA U	919 355-5185	GREENVILLE 27834	
1800 W. 5TH ST., #2	72 73 78	SILVERMAN, JAN FRANKLIN	PTH AC	EAST CAROLINA U	919 752-7289
GREENVILLE 27834		BRODY, 1F79, ECU SCH. OF MED	70 70 84	SUTTON, STEVEN GLENN	S
U OF PENN	919 752-3185	GREENVILLE 27834		N-2 DOCTORS PARK APTS.	91 87
ROUNDS, JOHN CARSON	S	MED COLL OF VA	919 551-4495	GREENVILLE 27834	
970 BLACKBERRY CIR.	88 85	SIMMONS, EVERETT CASEY	P AC	EAST CAROLINA U	919 752-2322
CHARLOTTE 28209		ECU, DEPT. OF PSYCHIATRY	71 72 82	SWANGER, CYNTHIA Y. K.	S
EAST CAROLINA U		GREENVILLE 27858		RT. #1, BOX 38-B	91 87
RUCKER, WILLIAM L.	GS AC	U OF TENNESSEE	919 551-2660	GREENVILLE 27834	
10 DOCTOR'S PARK	80 81 83	SINAR, DENNIS ROBERT	GE /IM AC	EAST CAROLINA U	919 758-1284
GREENVILLE 27834		ECU-DEPT. OF GE	73 73 82	SWANGER, STEPHEN JAMES	S
MED U OF SC	919 758-1747	GREENVILLE 27834		RT. #1, BOX 38-B	91 87
RUDD, STEPHEN MILES	S	OHIO STATE U	919 551-4652	GREENVILLE 27834	
2462 STANTONSBURG RD. STE. 140	91 87	SLATER, PATRICK W., II	S	EAST CAROLINA U	919 758-1284
GREENVILLE 27834		ROUTE #1, BOX 379	90 86	SWING, DONALD CRAVER, JR.	S
EAST CAROLINA U	919 753-3321	PRINCETON 27569		107 PAUL CIRCLE	89 85
RUMLEY, RICHARD LEE	IM /ID AC	EAST CAROLINA U	919 965-6864	GREENVILLE 27834	
DEPT. OF MEDICINE	78 79 84	SMERASKI, PHILIP JOHN	P AC	EAST CAROLINA U	919 756-6912
ECU SCHOOL OF MEDICINE		ECU SCH. MED-DEPT. OF PSY.	81 83 85	TAFT, RICHARD CHESSON	OBG AC
GREENVILLE 27834		BRODY 4E98		101 BETHESDA DRIVE	72 72 77
U OF NC	919 551-2550	GREENVILLE 27858		GREENVILLE 27834	
SALDANHA, RITA LOUIS	NPM /PD AC	MED COLL OF PENN	919 551-2660	U OF NC	919 758-4181
213 WOODHAVEN ROAD	73 73 82	SMITH, CAMERON LANGLEY	D AC	TANNEHILL, W. BRUCE	S
GREENVILLE 27834		1705 W. SIXTH STREET	71 71 78	213 PINERIDGE DR.	91 87
B J MED COLLEGE	919 551-4684	GREENVILLE 27834		GREENVILLE 27834	
SALLE, GEORGE FREDERIC	U L	U OF NC	919 752-4124	EAST CAROLINA U	919 758-6973
1703 W. SIXTH STREET	33 33 46	SMITH, JAMES DAVID	S	TAYLOR, ALLEN	R AC
GREENVILLE 27834		P-2 DOCTORS PARK	90 86	1711 W. 6TH ST.	47 52 54
MED COLL OF VA	919 752-2507	GREENVILLE 27834		GREENVILLE 27834	
SANCHEZ, RAFAEL CAMILO	FP /ADL AC	EAST CAROLINA U	919 758-7116	DUKE	919 752-5000
DEPT. OF FAM. MED. BRODY 4N72	50 50 85	SMITH, JAMES JEFEOAT	GP RT	TAYLOR, JERRY JURGEN	S
ECU SCHOOL OF MEDICINE		1903 BROOK ROAD	44 44 48	2402-B E. THIRD ST.	89 85
GREENVILLE 27858		GREENVILLE 27834		GREENVILLE 27834	
LA STATE U	919 757-2608	U OF TENNESSEE	919 756-3905	EAST CAROLINA U	919 562-5174

74. PITT COMPONENT SOCIETY (Continued)

TEACHEY, HERMAN MCKINLEY 404 LAUREL ST. GREENVILLE 27834 EAST CAROLINA U	S 89 85 919 758-4139	WAIVERS, LEO EDWARD ECU SCHOOL OF MEDICINE DEPT. OF MEDICINE GREENVILLE 27834 MED SCH-UMDNJ	IM AC 80 81 87 919 551-4633	WILEY, ALBERT LEE, JR. ECU SCHOOL OF MEDICINE DEPT. OF RADIATION ONCOLOGY GREENVILLE 27858 U OF ROCHESTER	ON AC 63 65 88 919 551-2900
THIELE, RONALD LEWIS 503 QUEEN ANNE'S ROAD GREENVILLE 27858 WAYNE STATE U	PD /PH AC 48 49 73 919 756-6721	WALKER, WILLIAM RAY 3109 GORDON DRIVE GREENVILLE NC 27858 MED COLL OF VA	P AC 68 68 77 919 551-2661	WILHELMSEN, BRUCE 117 MEDICAL DRIVE GREENVILLE 27834 DUKE	ORS AC 79 79 85 919 758-1777
THOMAS, FRANCIS THORNTON ECU DEPT. OF SURGERY GREENVILLE 27834 U OF MINN	TS /GS AC 64 67 81 919 551-2620	WALSH, EMMETT JAMES, JR. 2 DOCTOR'S PARK GREENVILLE 27834 ST LOUIS U	U AC 60 60 68 919 752-5077	WILLE, CARL RICHARD DOCTOR'S PK, BLDG. 1 GREENVILLE N C 27834 U OF ROCHESTER	OPH AC 68 69 75 919 758-4166
THOMAS, JERRY D. 2903-D CEDAR CREEK DR. GREENVILLE 27834 EAST CAROLINA U	S 91 87 919 757-1653	WARD, JOSEPH MAJOR 121 W. POWER STREET AYDEN 28513 DUKE	FP /GER AC 47 49 50 919 746-3191	WILLIAMS, JOHN MARK ECU SCHOOL OF MED. DEPT. OF SURGERY GREENVILLE 27858 DUKE	CDS AC 76 85 86 919 551-4822
THOMAS, MILLARD BRADY, III PO BOX 113 NEWELL 28126 EAST CAROLINA U	S 88 85 919 756-2373	WARRINGTON, LEWIS E. 59 LEXINGTON SQUARE GREENVILLE 27858 EAST CAROLINA U	S 91 87 919 756-0393	WILLIAMS, MARTIN KEITH F-6 DOCTORS PARK APTS. GREENVILLE 27834 EAST CAROLINA U	S 89 85 919 752-8619
THOMAS, ROSEMARY ANN 2000 VENTURE TOWER DR. GREENVILLE 27834 U OF VIRGINIA	CD /IM AC 76 77 83 919 551-4651	WARSHAUER, ALBERT DAVID 1608 E. FIFTH STREET GREENVILLE 27858 WASHINGTON U	AN RT 47 47 59 919 752-5296	WILLIAMS, RANDOLPH MEADE 117 MEDICAL DRIVE GREENVILLE 27834 U OF VIRGINIA	ORS AC 71 71 79 919 758-1777
TIMMONS, PHILLIP ZACHARY 2402-B E. THIRD ST. GREENVILLE 27834 EAST CAROLINA U	S 90 85 919 488-8162	WAUGH, WILLIAM HOWARD ECU SCHOOL OF MEDICINE GREENVILLE 27834 TUFTS U	NEP /IM AC 48 48 72 919 551-2773	WILLIAMSON, JOSEPH EDWARD PITT MEMORIAL HOSPITAL GREENVILLE 27834 U OF NC	EM /FP AC 73 73 77 919 355-2370
TIMMONS, ROBERT LANSING 125 MOYE BOULEVARD GREENVILLE 27834 HARVARD	NS AC 53 58 59 919 752-5156	WAYS, DOUGLAS KIRK 121 N. LONGMEADOW RD. GREENVILLE 27834 U OF NC	END AC 80 82 88 919 551-2571	WILLIS, LINDA LEE 130 SHADY KNOLL GREENVILLE 27834 EAST CAROLINA U	S 91 87 919 752-9218
TINGELSTAD, JON BUNDE ECU, DEPT. OF PEDIATRICS GREENVILLE 27834 HARVARD	PD /PDC AC 60 61 76 919 551-2540	WEAVER, MICHAEL DAVID 1711 W. SIXTH STREET GREENVILLE 27834 U OF TENNESSEE	DR AC 71 71 76 919 756-7923	WILLIS, STEPHEN EDGAR 1748 BEAUMONT DR. GREENVILLE 27834 U OF VIRGINIA	FP AC 81 82 84 919 551-4611
TOLSON, TIMOTHY ALEXANDER 200 W. 8TH ST., APT. 5-D GREENVILLE 27858 EAST CAROLINA U	S 91 86 919 752-2099	WEEKS, KATHERINE P. G-2 DOCTORS PARK APTS. GREENVILLE 27834 EAST CAROLINA U	S 91 87 919 758-5374	WILLSON, CHARLES FREDERICK 1800 W. FIFTH ST. GREENVILLE 27834 U OF VIRGINIA	PD AC 74 76 81 919 752-7141
TRANT, CHARLES AMON, JR. 106 SCALES PL., A-8 GREENVILLE 27834 EAST CAROLINA U	S 89 85 919 830-1244	WEHRY, MARK A. 113 E. 12TH ST. GREENVILLE 27834 EAST CAROLINA U	S 91 87 919 757-3217	WILSON, EDWARD T. 32 UNIVERSITY CONDOMINIUMS GREENVILLE 27834 EAST CAROLINA U	S 91 88 919 752-3720
TREADWELL, EDWARD LOUIS ECU, DEPT. OF MEDICINE GREENVILLE 27834 DUKE	RHU /IM AC 75 76 83 919 551-2533	WEISNER, LARRY FELIX #12 COUNTRY MANOR APTS. GREENVILLE 27834 EAST CAROLINA U	S 88 84 919 758-9272	WIMMER, JOHN EASTER, JR. ECU SCHOOL OF MEDICINE GREENVILLE 27834 MED COLL OF VA	NPM AC 71 74 82 919 551-4787
TREVATHAN, G. EARL, JR. ECU, AMBULATORY PED. SECT. GREENVILLE 27834 U OF COLORADO	PD AC 51 54 54 919 551-2535	WELCH, JACK H. PHYSICIANS QUADRANGLE GREENVILLE 27834 U OF NC	AN AC 63 63 70 919 752-2140	WINSTEAD, JOHN LINDSAY, JR. SUITE #1, MEDICAL PAVILION 1800 W. FIFTH ST. GREENVILLE 27834 U OF NC	GS AC 58 58 67 919 752-2159
TROUGHT, WILLIAM STANLEY 19 BAYWOOD DRIVE WINTERVILLE 28590 TUFTS U	DR AC 68 69 75 919 752-5000	WEN, DENNIS Y. DOCTORS PARK APTS. C-5 GREENVILLE 27834 EAST CAROLINA U	S 90 86 919 758-8125	WOOTEN, JOHN LEMUEL 6 MEDICAL PAVILION GREENVILLE 27834 DUKE	ORS AC 47 54 55 919 752-4613
TUCKER, DONALD HUGH 1705 W. SIXTH STREET GREENVILLE 27834 DUKE	IM /CD AC 58 58 64 919 752-6101	WEST, ROBERT LEE RTE. 38, BOX 769 GREENVILLE 27834 U OF NC	PTH AC 59 59 67 919 551-4496	WOOTEN, STEPHEN LAMONT 622 MEDICAL DR. GREENVILLE 27834 DUKE	ORS /HS AC 81 82 80 919 752-4613
TURNER, ROBERT COY ECU, DEPT. OF MEDICINE GREENVILLE 27858 U OF ILLINOIS	IM AC 76 76 80 919 551-4633	WHITE, RANDAL EARL 407 CEDARHURST RD. GREENVILLE 27834 WEST VA U	RHU AC 80 80 85 919 752-6101	YONGUE, ALFRED HARRIS MEDICAL PAVILION, SUITE #9 GREENVILLE 27834 DUKE	P AC 59 59 66 919 758-3145
TWISLTON, LOUISE A R-9 DOCTORS PARK APTS. GREENVILLE 27834 EAST CAROLINA U	S 91 87 919 758-8812	WHITE, SEAN P. E-23 YORKTOWN SQUARE GREENVILLE 27834 EAST CAROLINA U	S 91 87 919 756-6352	YONGUE, JUDITH S. 107-C COMMERCE ST. GREENVILLE 27858 U OF NC	P /FP AC 62 59 78 919 355-2768
VERNON, MICHAEL STEPHEN PO BOX 1846 GREENVILLE 27834 BOWMAN GRAY	FP AC 79 81 84 919 551-4614	WHITE, STEVEN MERLE 301 BOWMAN GRAY DR. GREENVILLE 27834 MED U OF SC	OPH AC 59 63 68 919 758-5800	YOUNG, CHARLES RICHARD 102 DAVID DR., F-2 GREENVILLE 27834 EAST CAROLINA U	S 89 85 919 752-2918
VICK, JOHN BERNARD #10 DOCTOR'S PARK GREENVILLE 27834 BOWMAN GRAY	TS /GS AC 57 57 56 919 758-1747	WICKER, JOSEPH BEAMAN PHYSICIANS QUAD., BLDG. F GREENVILLE 27834 U OF TENNESSEE	AN AC 78 81 84 919 752-2140	YOUNG, GARRET PINKNEY 711 WASHINGTON AVE. AYDEN 28513 EAST CAROLINA U	S 89 85 919 830-1915
VOLKMAN, ALVIN ECU, BRODY 7E, 124 GREENVILLE 27834 ST U OF NY-BUFF	PTH AC 51 52 78 919 551-2804	WIGGS, WILLIAM J., JR. 201 PINERIDGE DR. GREENVILLE 27834 EAST CAROLINA U	S 90 86 919 757-3384	ZAJAC, IRENE M. 2686 MULBERRY LANE ARLINGTON SQUARE APTS. GREENVILLE 27858 EAST CAROLINA U	S 91 87 919 355-7835

75. POLK COMPONENT SOCIETY

OFFICERS—**President:** Sandra McCormack, M.D., 1124 Lynn Rd., Tryon 27872 (704 859-9783)**Secretary:** Brad Whitney, M.D., 108 W. Rutherford St., Landrum, SC 29356 (803 457-3838)

BLOMELEY, CHARLES PERRY PO BOX 608 COLUMBUS 28722 HOWARD U	FP AC 65 65 67 704 894-8213	DUNN, JACK NEWTON 214 HOSPITAL DR. COLUMBUS 28722 MED U OF SC	U 60 60 00 704 692-6262	PERRAUT, THOMAS CHRISTOPHER 212 HOSPITAL DRIVE COLUMBUS 28722 U OF LOUISVILLE	OPH AC 78 79 84 704 894-3037
BOLLING, THOMAS VANCE 208 HOSPITAL DR. COLUMBUS 28722 LOMA LINDA U	GS AC 74 75 86 704 894-3566	JAYNES, GRACE S. PO BOX 1095 FAIRFIELD, TX 75840 MED COLL OF PENN	GP L/RT 30 30 49 214 389-5662	WOODY, JOHN W. AUSTIN 900 LYNN ROAD TRYON 28782 U OF PENN	FP L/RT 37 39 40 704 859-9483
BOYER, GEORGE NORMAN 913 CAROLINA DRIVE TRYON 28782 BOWMAN GRAY	P L 46 46 50 704 859-5439	PAGTER, AMOS TOWNSEND, JR. 107 WILDERNESS ROAD TRYON 28782 DUKE	IM AC 55 61 61 704 859-6697	YURKO, ANTHONY ANDREW ROUTE #1, BOX 440 TRYON 28782 MED COLL OF VA	GS RT 33 34 72 704 859-5133
CURL, KENNETH FRANK 720 HOSPITAL DR. COLUMBUS 28722 EMORY U	PD AC 83 00 88	PALMER, ROBERT MARION P. O. BOX 1159 TRYON 28782 MED U OF SC	FP AC 55 56 56 704 894-3306		

76. RANDOLPH COMPONENT SOCIETY

OFFICERS—**President:** Alan S. Luria, M.D., 220 Foust St., Asheboro 27203 (919 629-1451)**Secretary:** Robert Lyle Dough, Jr., M.D., 375 Sunset Ave., Asheboro 27203

ADAMS, HARVEY 230 FOUST STREET ASHEBORO 27203 U OF NC	GYN AC 55 55 62 919 625-6128	FITZPATRICK, HUGH, III 117 S. MAIN ST. ASHEBORO 27203 MED COLL OF VA	EM AC 50 51 52 919 625-5340	LURIA, ALAN STUART 220 FOUST ST. ASHEBORO 27204 GEO WASHINGTON U	OPH AC 73 81 87 919 629-1451
AINSWORTH, KERRY H. 1800 BACK CREEK CT. ASHEBORO 27203 NORTHWESTERN U	OBG AC 62 62 87 919 626-2184	FITZPATRICK, JOHN FRANCIS RANDOLPH PATHOLOGY P. O. BOX 1948 ASHEBORO 27203 HAHNEMANN	PTH /IM RT 43 64 64 919 629-3282	OWEN, CHARLES FLETCHER, JR. P. O. BOX 146 ASHEBORO 27203 U OF PENN	R L 37 37 40 919 625-5151
BETTS, CHARLES SAMUEL 220-A FOUST STREET ASHEBORO 27203 U OF VIRGINIA	IM AC 67 67 73 919 629-7710	GOBEL, WILLIAM KENNETH P. O. BOX 1886 ASHEBORO 27203 BOWMAN GRAY	FP AC 52 52 54 919 672-0090	QUERY, LUKE WALTER, JR. 132 W. MILLER STREET ASHEBORO 27203 MED COLL OF VA	IM L/RT 41 41 49 919 629-2009
BURNETTE, HOWARD OLSEN 108 N. COBLE STREET RANDLEMAN 27317 MED COLL OF VA	GP RT 47 48 49 919 498-2500	GRAHAM, FREDERICK WILLIAM, JR. 375 SUNSET AVE. ASHEBORO 27203 DUKE	FP AC 55 56 59 919 625-4215	RISNER, ROBERT J. 127 MCARTHUR ST. ASHEBORO 27203 MED COLL OF OHIO	OBG AC 83 84 88 919 626-2184
BUTLER, ROBERT HOYT 132 W. MILLER STREET ASHEBORO 27203 BOWMAN GRAY	GE AC 73 83 83 919 625-3218	GRIFFIN, MARION WILSON 218-D FOUST ST. ASHEBORO 27203 U OF NC	GS /TS AC 62 62 69 919 625-6188	SHACKELFORD, ERNEST D., JR. P. O. BOX 427 ASHEBORO 27204 MED COLL OF VA	DR /NM AC 52 53 55 919 629-0774
CABERWAL, DALJIT SINGH P. O. BOX 1509 ASHEBORO 27203 NILRATAN COLL	U AC 70 68 77 919 625-3997	HAAK, EDWARD DECKER, JR. 208 FOUST ST. P. O. BOX 2839 ASHEBORO 27203 U OF VIRGINIA	IM /CD AC 68 68 85 919 625-4020	SIMPSON, JOHN LARRY 132-A W. MILLER STREET ASHEBORO 27203 BOWMAN GRAY	FP AC 73 73 73 919 625-1360
CANNON, EUGENE BOLIVIA 366 LEXINGTON ROAD ASHEBORO 27203 VANDERBILT U	PD L/RT 37 37 41 919 625-2460	HANSPAL, PRITHVI PAL SINGH 171 MCARTHUR STREET P. O. BOX 1509 ASHEBORO 27203 SAROJNI NAIDU U	U AC 65 77 81 919 625-3997	SINGH, RANBIR 542 WHITE OAK STREET ASHEBORO 27203 M C OF PUNJAB U	ORS AC 63 76 79 919 629-4171
DALTON, BENNIE BOOKER 606 WAYNICK, BOX 8101 WRIGHTSVILLE BEACH 28480 DUKE	GP L/RT 32 33 35 919 256-5956	HENDRICKS, WILLIAM MONROE 407 S. COX ST. ASHEBORO 27203 MED COLL OF VA	D /A AC 74 77 79 919 625-8410	STOUT, CHARLES WALTER 1533 N. FAYETTEVILLE STREET ASHEBORO 27203 U OF NC	FP AC 58 58 62 919 672-0415
DAVIS, GEORGE THOMAS 230 FOUST STREET ASHEBORO 27203 U OF NC	OBG AC 62 62 66 919 625-6128	HUNT, CLYDE MCCOY, JR. 1048 OAKMONT DR. ASHEBORO 27203 BOWMAN GRAY	AN AC 73 74 87	TEAGUE, RANDALL SCOTT 837 OAKMONT DR. ASHEBORO 27203 BOWMAN GRAY	DR /EM AC 74 74 84 919 625-5151
DHATT, MALKIAT SINGH P. O. BOX 2028 ASHEBORO 27203 M C OF AMRITSAR	CD /IM AC 68 74 79 919 629-4176	JAMISON, EDGAR LAMONT 1243 IDLEWOOD RD. ASHEBORO 27203 U OF PITTSBURGH	OPH /OTO L/RT 33 34 64 919 625-6315	THORNTON, WILLIAM COOPER, JR. 132 W. MILLER STREET ASHEBORO 27203 MED U OF SC	IM AC 71 72 77 919 625-3218
DOWNEY, LUCY MCMASTER B. 2000 GUMTREE RD. ASHEBORO 27203 WEST VA U	PD AC 84 84 84	JOYNER, GEORGE WILLIAM 375 LEXINGTON ROAD ASHEBORO 27203 DUKE	GS L/RT 32 37 38 919 625-6465	WALHA, GURMUKH SINGH 542 WHITE OAK STREET ASHEBORO 27203 M C OF AMRITSAR	ORS /HS AC 68 73 81 919 629-4171
DRAELOS, ZOE DIANA 213 PINE RIDGE DR. HIGH POINT 27260 U. OF ARIZONA	D AC 83 87 87	KLOSTERMYER, BROOKS V. 113 CEDAR CREEK DR. ASHEBORO 27203 HAHNEMANN	DR AC 54 59 81 919 629-0774	WILLIFORD, ROBERT EARL 208 FOUST STREET ASHEBORO 27203 EMORY U	FP AC 55 55 59 919 625-4000
EDMONDSON, FRANK, JR. P. O. BOX 2628 ASHEBORO 27203 TEMPLE U	FP L/RT 37 37 39 919 625-3230	LIMBER, GERALD KECK 1867 BACKCREEK COURT ASHEBORO 27203 U OF PITTSBURGH	PTH AC 67 72 80 919 625-5151	ZYLANOFF, PHILLIPA LOUISE 523 UWHARRIE ST. ASHEBORO 27204 MED COLL OF PENN	AN AC 72 73 87 919 625-5151

OFFICERS—President: Fred McQueen, M.D., P.O. Drawer 1257, Hamlet 28345 (919 985-3138)
Secretary: Michael A. Hennigan, M.D., 53 Main St., Hamlet 28345 (919 582-0004)

AHDIEH, MASOUD 302 HYLAN AVENUE HAMLET 28345 TABRIZ U	PD AC 72 80 80 919 997-7180	HALL, DANIEL CRAWFORD 809 LONG DRIVE ROCKINGHAM 28379 BOWMAN GRAY	FP AC 76 76 80 919 895-9075	ROSS, THOMAS EDGAR P. O. BOX 1827 ROCKINGHAM 28379 U OF TENNESSEE	FP AC 59 60 61 919 895-5253
ASKARY, NASSER AGHA PO BOX 1715 ROCKINGHAM 28379 AHWAZ MED SCH	OBG /END AC 66 73 74 919 997-3151	HENNIGAN, MICHAEL ARTHUR 53 MAIN ST. HAMLET 28345 U OF SOU ALA	IM AC 82 83 86 919 582-0004	SCOTT, LEGRAND THURMAN, JR. 1102 CAROLINA DRIVE ROCKINGHAM 28379 MED U OF SC	FP RT 63 67 67 919 895-9901
CLONINGER, GILES LATHERN, JR. 115 MAIN STREET HAMLET 28345 BOWMAN GRAY	FP AC 54 54 58 919 582-1319	HOWELL, EDGAR VASTON, JR. 400 E. WASHINGTON ST. PO BOX 1148 ROCKINGHAM 28379	ORS AC 56 56 82 919 997-4570	STEVENSON, JOHN SAMUEL 926 BIGGS BOULEVARD ROCKINGHAM 28379 BOWMAN GRAY	R /NM AC 67 67 74 919 997-2595
COLLINS, CHARLES DAVID 113 GREY FOX RUN ROCKINGHAM 28379 U OF NC	GS AC 74 76 84 919 895-6301	KHOSHNEVIS, PARVIZ PO BOX 1715 ROCKINGHAM 28379 U OF SHIRAZ	OBG AC 66 73 84 919 997-3151	TRAPASSO, ROBERT LOUIS P. O. BOX 1928 ROCKINGHAM 28379 SUNY-SYRACUSE	PTH AC 76 78 80 919 997-2561
EL-DROUBI, HAZEM 111 MALLARD LN. ROCKINGHAM 28379 EIN SHAMS U	U AC 69 77 79 919 997-5054	MCQUEEN, FRED DOUGLAS, JR. P. O. DRAWER 1257 HAMLET 28345 HOWARD U	FP AC 73 74 78 919 895-3138	VETTER, JOHN STANLEY P. O. BOX 308 ROCKINGHAM 28379 DUKE	FP AC 54 56 57 919 895-9075
FLANNERY, JOHN EDWARD 53 MAIN STREET HAMLET 28345 U OF TEXAS	IM AC 80 80 84 919 582-0004	QUEEN, HUGH OSCAR 315 CHARLOTTE STREET HAMLET 28345 MED COLL OF GA	FP AS 52 54 55 919 582-3241	WELLS, DAVID MORELLE 802 CUMBERLAND CIRCLE ROCKINGHAM 28379 U OF MISSISSIPPI	DR AC 67 67 78 919 997-6311
GARRISON, RALPH BERNARD P. O. BOX 1169 HAMLET 28345 U OF MARYLAND	FP L/RT 33 33 35 919 582-2140	RANKIN, PRESSLEY R., JR. P. O. BOX 40 ELLERBE 28338 BOWMAN GRAY	FP AC 47 48 50 919 652-3321	WHITE, PHILIP FLETCHER P. O. BOX 1827 ROCKINGHAM 28379 HAHNEMANN	GP L 42 48 48 919 895-5253
HAJISHEIKH, MOOSA P. O. BOX 1537 ROCKINGHAM 28379 U OF TEHRAN	CD /IM AC 59 60 73 919 997-3177				

78. ROBESON COMPONENT SOCIETY

OFFICERS—President: Carolyn B. McCormick, M.D., 2606 N. Elm St., Lumberton 28358 (919 738-3718)
Secretary: Samuel E. Britt, II, M.D., 295 W. 27th St., Lumberton 28358 (919 738-8556)

ADAMS, WILLIAM CHAMBLISS 103 W. 27TH ST. LUMBERTON 28358 MED COLL OF VA	PD AC 78 80 82 919 739-3318	BROOKS, MARTIN LUTHER 711 HIGHWAY E. P. O. BOX 37 PEMBROKE 28372 U OF MICHIGAN	GP AC 57 58 80 919 521-4221	EARLY, MICHAEL WAYNE PO BOX 1629 PEMBROKE 28372 EMORY U	FP AC 84 85 88 919 521-2816
ALEXANDER, JOSEPH BLACK 395 W. 27TH STREET LUMBERTON 28358 BOWMAN GRAY	IM AC 47 48 50 919 739-7551	BROWN, ERNEST HYDE, JR. 4300 FAYETTEVILLE ROAD LUMBERTON 28358 U OF NC	OBG AC 57 57 63 919 738-9601	FAX, JOHN NICHOLAS, JR. 204 W. 28TH STREET LUMBERTON 28358 U OF OREGON	ORS AC 66 69 84 919 739-4313
ANDREWS, BOB BARCUS P. O. BOX 847 LUMBERTON 28359 U OF KANSAS	PTH AC 51 57 57 919 738-6441	BURKE, ANNETTE BLACKMON 4117 VANN DRIVE LUMBERTON 28358 BOWMAN GRAY	PD AC 78 79 83 919 739-0243	FLEMING, CHRISTOPHER PAUL 202 W. 28TH ST. LUMBERTON 28358 CASE WESTERN RES	OPH AC 77 78 82 919 739-0606
BAILEY, JOHN RICHARD 205 W. 29TH STREET LUMBERTON 28358 MED U OF SC	OPH AC 62 69 70 919 738-4856	BURKE, JOSEPH ANTHONY 4117 VANN DRIVE LUMBERTON 28358 GEORGETOWN U	R AC 64 66 83 919 276-2121	GASQUE, BOYD BENNETT, JR. P. O. DRAWER 1527 LUMBERTON 28359 U OF NC	DR AC 77 77 82 919 738-8222
BAKER, HORACE MITCHELL, JR. P. O. BOX 1171 LUMBERTON 28358 DUKE	GS L/RT 44 44 48 919 738-8571	BURLESON, WILLIAM ROWELL 101 WEST 27TH STREET LUMBERTON 28358 U OF NC	U AC 64 64 71 919 738-7166	HA, KHIE SEM 229 S. MAIN STREET RED SPRINGS 28377 NATL TAIWAN U	FP AC 68 76 77 919 843-4117
BEASLEY, CHARLES RONALD 206 W. 27TH STREET LUMBERTON 28358 DUKE	IM /PUD AC 80 82 78 919 738-1421	CLARK, DOUGLAS HENDON 295 WEST 27TH STREET LUMBERTON 28358 U OF PENN	GS AC 45 45 52 919 738-8556	HARDIN, JAMES BENFORD 206 W. 28TH STREET LUMBERTON 28358 U OF NC	FP AC 77 77 75 919 739-8164
BERNE, FREEMAN ALBERT P. O. DRAWER 1527 LUMBERTON 28358 DUKE	DR AC 64 64 70 919 738-8222	CROOM, ROBERT DEVANE, JR. 501 MCCASKILL AVE. MAXTON 28364 MED COLL OF VA	GP L/RT 34 34 37 919 844-3160	HEDGPETH, WILLIAM CAREY P. O. BOX 1021 LUMBERTON 28358 NORTHWESTERN U	GYN L/RT 34 33 36 919 738-1141
BIGGS, JOHN IRVIN 1406 N. ELM ST. PO BOX 1004 LUMBERTON 28358 NORTHWESTERN U	ORS L/RT 33 37 38 919 739-6093	DEVINE, GERARD MICHAEL 395 WEST 27TH STREET LUMBERTON 28358 DOWNSTATE ME CTR	IM AC 73 73 77 919 739-7551	HEGDE, SADANANDA B. 4384 FAYETTEVILLE RD. LUMBERTON 28358 KASTURBA U	CD /IM AC 73 77 83 919 738-1141
BRADFORD, ARTHUR LOUIS 123 E. BROAD STREET ST. PAULS 28384 HOWARD U	FP AC 74 74 76 919 865-5170	DOUGLAS, ARTHUR EUGENE, JR. 4 TRINITY DR. LUMBERTON 28358 U OF NC	P AC 59 59 65 919 738-8230	HENDRICKS, ANDREW ADAM 102 WEST 27TH STREET LUMBERTON 28358 U OF VIRGINIA	D AC 74 76 81 919 738-7154
BRITT, SAMUEL EMERSON, II 295 W. 27TH ST. LUMBERTON 28358 BOWMAN GRAY	GS AC 80 80 79 919 738-8556	DUNLAP, JACK ERWYN 4320 FAYETTEVILLE ROAD LUMBERTON 28358 U OF TENNESSEE	ORS AC 52 61 61 919 739-0634	HEPLER, JOHN DAVIS 403 WEST 27TH STREET LUMBERTON 28358 U OF VIRGINIA	OBG AC 69 69 79 919 739-2846
				HITTEL, GLENN PAUL 4112 VANN DR. LUMBERTON 28358 MED COLL OF VA	FP AC 84 85 88 919 628-6711

78. ROBESON COMPONENT SOCIETY (Continued)

HOEKSTRA, JOHN ARTHUR 395 W. 27TH STREET LUMBERTON 28358 U OF ILLINOIS	IM /AI AC 75 79 83 919 739-7551	MCCORMICK, CAROLYN BRUMM 2606 N. ELM ST. LUMBERTON 28358 U OF IOWA	FP AC 72 72 76 919 738-3718	ROZIER, JOHN CHARLES, JR. 4300 FAYETTEVILLE ROAD LUMBERTON 28358 BOWMAN GRAY	OBG AC 67 67 76 919 738-9601
HOFFMAN, CARL WHITE BARKER--TEN MILE RD. PO BOX 1527 LUMBERTON 28358 BOWMAN GRAY	R AC 67 67 73 919 739-9788	MCJILTON, ROY ALAN 4303 LUDGATE ST. LUMBERTON 28358 ST LOUIS U	OTO AC 64 64 84 919 738-4226	RYAN, WILLIAM SCOTT 103 W. 27TH ST. LUMBERTON 28358 U OF KANSAS	PD AC 73 74 85 919 739-3318
HOLBROOK, ROBERT H. 3952 BUCKINGHAM CIR. LUMBERTON 28358 BOWMAN GRAY	EM /FP AC 81 84 80 919 738-7231	MOZINGO, GEORGE WM., III 101 W. 27TH ST. LUMBERTON 28358 MED U OF SC	U AC 76 77 87 919 738-7166	STRAWCUTTER, HOWARD E. PO BOX 1408 LUMBERTON 28359 JEFFERSON	U AC 50 53 56 919 738-7166
HOOKS, RICHARD EUGENE 123 N. SECOND STREET ST. PAULS 28384 U OF MARYLAND	GP AC 47 47 48 919 865-5114	NAIK, SOMNATH 4384 FAYETTEVILLE RD. PO BOX 947 LUMBERTON 28358 U OF BOMBAY	IM /PUD AC 75 76 83 919 738-1141	STUART, DENNIS O'GAREY 3580 FAYETTEVILLE RD. LUMBERTON 28358 MED COLL OF VA	FP AC 82 86 86 919 628-6711
INMAN, CHARLES ERNEST 1212 S. WALNUT ST. FAIRMONT 28340 DUKE	FP L/RT 51 53 53 919 628-7188	NEAL, WALTER ERNEST, JR. 4300 FAYETTEVILLE RD. LUMBERTON 28358 MED COLL OF VA	OBG AC 66 66 73 919 738-9601	THOMPSON, MARVIN WHITAKER P. O. BOX 847 LUMBERTON 28359 BOWMAN GRAY	PTH AC 62 62 67 919 738-6441
JOHNSON, CHARLES T., JR. 222 S. MAIN STREET RED SPRINGS 28377 JEFFERSON	FP AC 53 53 53 919 843-4576	NETTLES, GEORGE STUEARD 2505 N. ELM STREET LUMBERTON 28358 MED U OF SC	IM AC 63 63 71 919 739-2854	VILLANI, PETER LOUIS 33 TRINITY DRIVE LUMBERTON 28358 WEST VA U	GS /VS AC 72 73 82 919 738-8556
JORDAN, BARBARA MOORE 207 W. 29TH STREET LUMBERTON 28358 U OF NC	P AC 54 54 59 919 738-5261	PARSONS, LACY JACK 2204 ROWLAND AVENUE LUMBERTON 28358 NEW YORK U	OBS L/RT 42 43 46 919 739-6431	WARD, D. E., JR. 2604 N. ELM STREET LUMBERTON 28358 BOWMAN GRAY	GS AC 45 45 53 919 738-4276
KNIGHT, EDWARD BERT, III 27TH STREET LUMBERTON 28358 MED U OF SC	PUD /IM AC 76 77 84 919 738-7551	PATEL, URVASHI B. 3067 WESTMINSTER RD. LUMBERTON 28358 LADY HARDINGE	AN AC 81 84 87 919 738-6441	WESTER, THADDEUS BRYAN 101 BRIGHTHURST DR., APT. 101 RALEIGH 27605 DUKE	PD /PH AC 51 53 54 919 738-7231
LATHAM-SADLER, BRENDA 119 N. FLORENCE ST. MAXTON 28364 BOWMAN GRAY	FP AC 82 85 87 919 844-5253	PITTMAN, ALFRED ROWLAND, JR. 2606 N. ELM STREET LUMBERTON 28358 DUKE	IM L/RT 45 45 48 919 739-3362	WILLIAMSON, WARREN LIGON 295 WEST 27TH STREET LUMBERTON 28358 LA STATE U	GS AC 66 66 74 919 738-8556
LAWRENCE, JOHN CHARLES P. O. BOX 1068 LUMBERTON 28358 VANDERBILT U	GS AC 50 57 57 919 738-8571	RICHARDSON, DAVID LEE 395 WEST 27TH STREET LUMBERTON 28358 DUKE	IM AC 74 77 74 919 739-7551	YOUNG, ROBERT LASSITER, JR. 103 WEST 27TH STREET LUMBERTON 28358 DUKE	PD AC 61 61 66 919 739-3318

79. ROCKINGHAM COMPONENT SOCIETY

OFFICERS—President: R. W. Woodward, M.D., 517 Woodrow St., Reidsville 27320

Secretary: C. R. Burkhart, M.D., 618 S. Main St., Reidsville 27320 (919 349-8461)

Executive Secretary: Jo Ann Garrison, 618 S. Main St., Reidsville 27320 (919 349-8461)

BAKER, HERBERT MARVIN 258 THE BOULEVARD ST. EDEN 27288 LOMA LINDA U	FP AC 57 57 58 919 627-1129	DEMASON, MARC 515 THOMPSON ST., STE. B EDEN 27288 U OF MICHIGAN	GS AC 78 80 84 919 623-9118	HUGHES, LOREN E. 401 W. DECATUR MADISON 27025 SOU IL MED SCH	FP AC 83 84 87 919 548-9618
BALSLEY, ROBERT EUGENE 825 CRESCENT DRIVE REIDSVILLE 27320 U OF VIRGINIA	EM /PD AC 44 44 50 919 349-6335	DESTEFANO, NEIL MICHAEL PO BOX 780 REIDSVILLE 27320 NEW YORK MED COL	GS /GYN AC 56 57 64 919 349-8484	JOYCE, CHARLES WELDON 401 W. DECATUR ST. MADISON 27025 BOWMAN GRAY	GP AC 47 48 49 919 548-9618
BRADFORD, WILLIAM STRONG PO BOX 150 REIDSVILLE 27320 UNPHU	GS AC 80 82 86 919 349-4024	FLEISHMAN, HENRY ARNOLD 515 THOMPSON ST., STE. B EDEN 27288 EMORY U	GS /CD AC 74 75 80 919 623-9118	KEELING, J. WAYNE 307 W. MOREHEAD STREET REIDSVILLE 27320 MED COLL OF VA	ORS AC 75 76 81 919 342-6116
BURKHART, CECIL ROBERT 1006 OAKCREST DRIVE REIDSVILLE 27320 U OF CINCINNATI	PTH /CLP AC 58 67 68 919 349-8461	FORBES, THOMAS EARL P. O. BOX 659 REIDSVILLE 27320 JEFFERSON	FP L/RT 40 40 42 919 349-5324	KRISHNAN, C. SETHU 515 THOMPSON ST. STE. C EDEN 27288 M C-PONDICHERRY	U AC 73 84 88 919 623-8451
CALL, DAVID LEE MOREHEAD MEM. HOSP.-RAD EDEN 27288 U OF NC	DR AC 77 77 82 919 623-9711	GONZALEZ, GEO. DANIEL 515 THOMPSON ST. EDEN 27288 U OF MISSISSIPPI	GS /VS AC 80 80 87 704 623-9118	LAUZAU, FRANK JUSTIN 518 S. VAN BUREN RD., SUITE 7 EDEN 27288 U OF NC	IM AC 81 82 85 919 623-4304
KE, LEN GORDON 518 E. MEADOW RD. EDEN 27288 BOWMAN GRAY	FP RT 48 49 53 919 623-6836	HAINES, CARROLL FOGG, JR. 515 THOMPSON ST., STE. A EDEN 27288 HAHNEMANN	OPH AC 78 82 84 919 627-5271	LEWIS, CHARLES PELL, JR. 1307 COACH RD. PO BOX 329 REIDSVILLE 27320 DUKE	OPH /OTO AC 50 52 56 919 342-0588
COUNCIL, ALBERT BARBEE, JR. 701 S. VAN BUREN ROAD EDEN 27288 BOWMAN GRAY	FP AC 51 51 56 919 623-1514	HENDERSON, DAVID JAMES 601 W. HARRISON ST. PO BOX 2299 REIDSVILLE 27320 U OF NC	PD /A AC 79 82 84 919 349-8402	LOTHIAN, GEORGE GENE P. O. BOX 1857 REIDSVILLE 27320 U OF NC	FP AC 68 68 74 919 349-5040
COX, ALEXANDER MCNEIL 325 S. MARKET STREET MADISON 27025 MED COLL OF VA	GP L/RT 32 32 38 919 548-2240				

79. ROCKINGHAM COMPONENT SOCIETY (Continued)

MABE, PAUL ALEXANDER, JR. 1123 S. MAIN STREET REIDSVILLE 27320 DUKE	FP AC 53 54 56 919 342-4286	NASH, CARL WILLIAM 608 LINDEN DRIVE EDEN 27288 U OF ARKANSAS	R AC 62 62 74 919 623-9711	SACRINTY, NICHOLAS WILLIAM 608 LINDEN DR. EDEN 27288 BOWMAN GRAY	IM /GE AC 52 52 60 919 623-9794
MACRI, ANTHONY JOHN 311 DOGWOOD DRIVE EDEN 27288 JEFFERSON	PTH AC 62 63 74 919 623-9711	PAYNE, CLIFTON GADBERRY P. O. DRAWER 1857 REIDSVILLE 27320 U OF NC	FP AC 56 56 60 919 349-5040	SASSER, PAUL WM. 518 S. VAN BUREN RD. #8 EDEN 27288 U OF NC	FP AC 84 85 87 704 623-5171
MCGOUGH, WILLIAM MARION 527 MAPLE AVE. REIDSVILLE 27320 U OF MISSISSIPPI	FP AC 81 81 84 919 349-8461	QURESHI, AYYAZ MAHMOOD 505 N. THIRD AVE. MAYODAN 27027 DOW MED COLLEGE	IM /ON AC 75 75 85 919 548-2456	TRUSLOW, ROY EARL 618 S. MAIN STREET REIDSVILLE 27320 BOWMAN GRAY	R AC 45 45 53 919 349-8461
MCINNIS, ANGUS GUY 1123 S. MAIN STREET REIDSVILLE 27320 DUKE	FP AC 57 57 63 919 342-4286	REYNOLDS, ERNEST HAROLD P. O. BOX 330 REIDSVILLE 27320 NEW YORK U	FP L 35 35 36 919 349-3332	WHITLEY, ROBERT RILEY P. O. BOX 1689 REIDSVILLE 27320 U OF NC	FP AC 68 68 74 919 349-5040
MOORE, DONALD WILSON 401 W. DECATUR ST. MADISON 27025 BOWMAN GRAY	FP AC 76 80 81 919 548-9618	RICHARDSON, GEORGE IRVIN P. O. BOX 1857 REIDSVILLE 27320 U OF NC	FP AC 55 55 58 919 349-5040	WOODWARD, ROBERT WARREN 517 WOODROW ST. PO BOX 448 REIDSVILLE 27320 U OF CHICAGO	OBG AC 61 82 83 919 342-6161
MORICLE, CHARLES HUNTER 1223 CRESCENT DR. REIDSVILLE 27320 U OF MARYLAND	GS /ABS L/RT 39 39 42 919 349-8590	ROBILLARD, ROBERT B. 518 S. VAN BUREN RD. EDEN 27288 AUTONOMA UNIV	OTO AC 79 82 88 919 623-7033	YOUNG, CHARLES GIBSON 403 W. HARRISON STREET P. O. BOX 359 REIDSVILLE 27320 DUKE	IM /OM AC 53 54 74 919 349-5536

80. ROWAN COMPONENT SOCIETY

OFFICERS—President: Thomas G. Thurston, III, M.D., 315 Mocksville Ave., Salisbury 28144
Secretary: Robert G. Steele, M.D., 400 Mocksville Ave., Salisbury 28144 (704 633-6442)

AGNER, ROY AUGUSTA, JR. 611 MOCKSVILLE AVENUE SALISBURY 28144 DUKE	IM AC 51 52 55 704 633-7220	CARLTON, THOMAS KERN, JR. 720 GROVE STREET SALISBURY 28144 DUKE	PD AC 63 63 72 704 636-5576	FIELD, BOB LEWIS 1239 W. HENDERSON ST. SALISBURY 28144 MED COLL OF VA	FP L 31 31 39 704 636-0732
AGNER, ROY CHRISTOPHER 611 MOCKSVILLE AVENUE SALISBURY 28144 DUKE	IM AC 75 77 79 704 636-9820	CLINE, WAYNE ALLEN 909 W. HENDERSON STREET SALISBURY 28144 BOWMAN GRAY	U L/RT 46 47 53 704 633-9441	FINK, GARY LEE BROWN ST., P. O. BOX 610 FAITH 28041 U OF NC	IM AC 83 83 82 704 279-2981
BACHL, FREDERICK JOSEPH 720 GROVE STREET SALISBURY 28144 TUFTS U	PD AC 64 67 74 704 636-5576	CLINE, WAYNE ALLEN, JR. 909 W. HENDERSON STREET SALISBURY 28144 BOWMAN GRAY	U AC 76 76 83 704 633-9441	GINN, THOMAS MOSS 319 MOCKSVILLE AVE. SALISBURY 28144 BOWMAN GRAY	IM AC 75 75 73 704 637-3538
BAILEY, HILDA HART 102 MOCKSVILLE AVENUE SALISBURY 28144 U OF PENN	PD AC 45 46 47 704 633-3727	COCHRAN, W. GERALD 410 MOCKSVILLE AVE. SALISBURY 28144 TEMPLE U	PS AC 67 68 86 704 633-8561	GISH, LARRY MORGAN 611 MOCKSVILLE AVENUE SALISBURY 28144 BOWMAN GRAY	IM AC 64 64 72 704 633-7220
BARR, JOHN FINDLEY CLEVELAND FAMILY PRACTICE PO BOX 310 CLEVELAND 27013 HAHNEMANN	FP AC 80 81 86 704 278-4053	CORPENING, JOSEPH DURHAM 720 GROVE STREET SALISBURY 28144 DUKE	PD AC 52 54 56 704 636-5576	GOODWIN, JOEL SEXTON 315 MOCKSVILLE AVENUE SALISBURY 28144 U OF NC	OBG AC 59 59 68 704 636-9270
BATHAN-ABELLA, ERLINDA PO BOX 530 GRANITE QUARRY 28072 CEBU INST OF MED	IM AC 71 75 84 704 279-7271	CRAWFORD, JOHN ROBERT, III 310 N. MAIN STREET SALISBURY 28144 U OF NC	OPH AC 66 66 71 704 633-7542	GOSS, FREDERICK UHL 611 MOCKSVILLE AVE. SALISBURY 28144 U OF NC	IM AC 80 81 77 704 633-7220
BERTRAM, ROBERT 909 W. HENDERSON ST. SALISBURY 28144 U OF KENTUCKY	U AC 80 80 86 704 633-9441	DONNELLY, GRANT LESTER 240 WINDSOR DRIVE SALISBURY 28144 DUKE	PUD RT 33 33 68 704 637-0905	GREEN, PAUL, JR. 315 G MOCKSVILLE AVE. SALISBURY 28144 DUKE	GYN AC 51 56 58 704 638-0023
BLACK, KYLE EMERSON ONE ACORN LANE SALISBURY 28144 U OF MICHIGAN	GS L 38 41 46 704 636-5510	DULA, FREDERICK MAST, JR. 401 MOCKSVILLE AVE., STE. 100 SALISBURY 28144 U OF NC	R AC 81 82 78 704 633-1023	GULYN, ANNA BAUHOFFER 117 PINETREE ROAD SALISBURY 28144 U OF INNSBRUCK	GP AC 57 62 74 704 636-2351
BLACK, WINSEL O'NEAL 601 MOCKSVILLE AVENUE SALISBURY 28144 HOWARD U	GP AC 61 62 67 704 633-5048	EDDINGER, CHARLES FREDERICK P. O. BOX 45 SPENCER 28159 U OF NC	FP AC 55 55 57 704 636-1720	GULYN, BOHDAN EMANUEL 117 PINETREE ROAD SALISBURY 28144 U OF WIEN	P /GP 40 40 75 704 633-7770
BLOUNT, JOHN MYERS, III 130 WOODSON ST. SALISBURY 28144 U OF NC	FP /OM AC 60 60 62 704 637-3207	ELLIS, CHARLES ROBERT 106 S. MYRTLE ST. CHINA GROVE 28023 BOWMAN GRAY	FP AC 82 84 86 704 857-0137	HALL, BAHNSON DAVID 315 MOCKSVILLE AVENUE SALISBURY 28144 BOWMAN GRAY	OBG AC 74 74 81 704 636-9270
BUMGARNER, JOHN HENRY P. O. BOX 1735 SALISBURY 28144 MED COLL OF VA	AN /PUD AC 66 67 67 704 638-1000	ERB, NORRIS SCRIBNER 8 OAK ROAD SALISBURY 28144 MED COLL OF VA	U AC 44 46 47 704 633-2449	HALL, JOSEPH CULLEN 305 STUART DRIVE SALISBURY 28144 VANDERBILT U	OBG L/RT 42 42 48 704 633-9508
BUSBY, MERLE RUDY 901 W. HENDERSON STREET SALISBURY 28144 DUKE	GS AC 70 70 79 704 633-1581	FARRINGTON, CECIL MURRAY, JR. 322 MOCKSVILLE AVENUE SALISBURY 28144 U OF NC	FP AC 72 72 77 704 637-1123	HINSON, JAMES NOAH 102 MOCKSVILLE AVE., STE. 204 SALISBURY 28144 BOWMAN GRAY	IM AC 60 60 71 704 633-3136
		FEEZOR, CHARLES NOEL 6 PINETREE ROAD SALISBURY 28144 TEMPLE U	FP L 37 37 40 704 633-1787	HOLT, CHARLES RICHARD 17 CAMELOT RD., KINGS FOREST SALISBURY 28144 BOSTON U	EM /GS AC 52 57 80 704 637-7504

80. ROWAN COMPONENT SOCIETY (Continued)

JACKSON, JOSEPH A., III 800 W. CEMETERY STREET SALISBURY 28144 U OF FLORIDA	OPH AC 66 67 73 704 633-0345	PARADA, MALCOLM PERRY 315 MOCKSVILLE AVENUE SALISBURY 28144 U OF CINCINNATI	OBG AC 64 64 71 704 636-9270	SPENCER, FREDERICK BRUNELL, JR 803 CONFEDERATE AVE. SALISBURY 28144 MED COLL OF VA	IM AC 45 45 48 704 636-5016
JORDAN, RICHARD DORN 7 PINETREE ROAD SALISBURY 28144 U OF NC	R AC 61 61 67 704 633-1022	PARROTT, FRANK STRONG P. O. BOX 637 SALISBURY 28144 U OF MARYLAND	GS L/RT 43 43 54	STEELE, ROBERT GIBSON 400 MOCKSVILLE AVENUE SALISBURY 28144 EMORY U	ORS AC 73 74 78 704 633-6442
KOONTZ, WAYNE CARSON 720 GROVE STREET SALISBURY 28144 BOWMAN GRAY	PD AC 64 64 69 704 636-5576	POTTS, RONALD SARGENT 115 WAVERLY CIRCLE SALISBURY 28144 MCGILL U	PTH AC 54 59 82 704 633-7765	TANNEHILL, ROBERT BRUCE 720 GROVE STREET SALISBURY 28144 MED COLL OF GA	PD AC 59 62 62 704 636-5576
LAMM, LEROY BARDEN P. O. BOX 427 ROCKWELL 28138 BOWMAN GRAY	P AC 46 46 77 704 279-7034	RENDLEMAN, DAVID ATWELL, JR. P. O. BOX 4327 SALISBURY 28144 EMORY U	FP AC 44 44 48 704 633-0844	THOMPSON, WILLARD C., III 116 RUTHERFORD ST. SALISBURY 28144 BOWMAN GRAY	IM /CD AC 81 81 87 704 633-2732
LOCKERT, CHARLES RAY 102 MOCKSVILLE AVENUE SALISBURY 28144 VANDERBILT U	ORS AC 62 66 69 704 637-0500	REYNOLDS, JAMES W., JR. 826 W. HENDERSON STREET SALISBURY 28144 U OF NC	OTO /A AC 64 64 72 704 633-8276	THOMPSON, WILLARD RAY 102 MOCKSVILLE AVENUE SALISBURY 28144 MED COLL OF VA	OTO AC 69 69 77 704 637-3344
LOMAX, DONALD HENRY KETNER CENTER SALISBURY 28144 BOWMAN GRAY	FP AC 51 51 55 704 636-5626	REYNOLDS, JOHN OZMENT, JR. 410 MOCKSVILLE AVE. SALISBURY 28144 U OF NC	OPH AC 71 71 76 704 637-0158	THURSTON, THOMAS GARDINER, II P.O. DRAWER 2608 SALISBURY 28144 HARVARD	R /NM L 41 41 47 704 636-0848
LOMBARD, R. ELIZABETH P. O. BOX 457 ROCKWELL 28138 LOMA LINDA U	FP AC 53 54 54 704 279-7227	ROBERTSON, LLOYD HARVEY, JR. 909 W. HENDERSON STREET SALISBURY 28144 DUKE	U AC 60 60 65 704 633-9441	THURSTON, THOMAS GARDINER, III 315 MOCKSVILLE AVENUE SALISBURY 28144 DUKE	OBG AC 68 68 76 704 636-9270
MARSH, FRANK BAKER 725 LAKE DRIVE SALISBURY 28144 JEFFERSON	IM L/RT 19 20 22 704 633-2344	SCOTT, ALAN FULTON P. O. BOX 63 SALISBURY 28144 U OF PENN	FP AC 43 43 47 704 636-5431	WALSH, CARLE DOUGLAS 921 CONFEDERATE AVENUE SALISBURY 28144 COLUMBIA U	D L/RT 31 31 56 704 636-2466
MARTIN, RICHARD W. 327 MOCKSVILLE AVE. PO BOX 1665 SALISBURY 28144 CORNELL U	GS AC 57 66 67 704 637-2750	SHAFER, FRANK TYACK P. O. BOX 2129 SALISBURY 28144 BOWMAN GRAY	IM AC 51 51 52 704 636-1826	WALSH, HARRY MARTIN 14 OAK ROAD SALISBURY 28144 U OF MARYLAND	GS AC 52 52 87 704 636-2351
MASON, WILLIAM TERRY 400 MOCKSVILLE AVENUE SALISBURY 28144 U OF MARYLAND	ORS AC 66 66 76 704 633-6044	SHANNON, WILLIAM GARY ROUTE #8, BOX 315 SALISBURY 28144 BOWMAN GRAY	AN AC 72 72 75 704 637-3599	WARD, DEMMING MORTON 319 MOCKSVILLE AVENUE SALISBURY 28144 BOWMAN GRAY	IM AC 74 74 80 704 637-3538
MAYRAND, ELIZABETH 701 BARKER ST. SALISBURY 28144 U OF ILLINOIS	PTH AC 45 64 69 919 998-8433	SHINN, GEORGE CLYDE 111 N. MAIN STREET CHINA GROVE 28023 U OF MARYLAND	GP L 33 33 40 704 857-7098	WATTS, HUGH BOYD 130 MOCKSVILLE AVE. SALISBURY 28144 U OF TENNESSEE	ORS AC 62 62 71
MCCABE, JAMES MICHAEL 102 MOCKSVILLE AVE. SALISBURY 28144 U OF NAVAVVA	P /N AC 79 81 81 919 722-2235	SKOWRONEK, DAVID GORDON 11 SPICEWOOD LANE SALISBURY 28144 BOWMAN GRAY	EM /ORS AC 74 74 79 704 638-1035	WEAR, JOHN EDMUND 401 MOCKSVILLE AVE., STE. 100 SALISBURY 28144 NORTHWESTERN U	R AC 46 52 52 704 633-1022
MCKENZIE, EDWARD BURT 709 BARKER STREET SALISBURY 28144 U OF ROCHESTER	GS AC 51 56 57 704 633-3441	SLOOP, NORMAN RAY 310 STATESVILLE BOULEVARD SALISBURY 28144 BOWMAN GRAY	GP AC 59 59 62 704 636-5326	WEBB, WILLIAM WHITAKER, JR. P.O. BOX 2145 SALISBURY 28145 U OF NC	D AC 71 71 79 704 636-0971
MURPHY, THOMAS LYNCH 409 MOCKSVILLE AVE. SALISBURY 28144 HARVARD	GE /GE L/RT 43 43 54 704 633-2732	SMITH, DAVID NIMMONS 102 MOCKSVILLE AVE., STE. 103 SALISBURY 28144 BOWMAN GRAY	IM /CD AC 66 66 67 704 636-6632	WHICKER, WINFRIY EVANS P. O. BOX 595 CHINA GROVE 28023 BOWMAN GRAY	FP AC 63 63 66 704 857-1108
NEWMAN, HAROLD H., JR. 516 MOCKSVILLE AVENUE SALISBURY 28144 JOHNS HOPKINS	GP /OM AC 45 45 48 704 633-7070	SMITH, JAY LELAND, JR. P. O. BOX 85 SPENCER 28159 JEFFERSON	GP L 42 42 46 704 636-8046	WOOTEN, WAYNE BROWN 401 MOCKSVILLE AVE., STE. 201 SALISBURY 28144 BOWMAN GRAY	DR AC 74 74 78 704 633-1023
NICHOLSON, DAVID R. 141 E. CORRIHER AVE. SALISBURY 28144 U OF OKLAHOMA	AN AC 84 85 87 704 638-1000	SPARGO, JOHN PRICHARD P. O. BOX 278 COOLEEMEE 27014 BOWMAN GRAY	FP AC 55 55 59 704 284-2331	WRIGHT, RICHARD BRANDON, JR. 102 MOCKSVILLE AVENUE SALISBURY 28144 TULANE U	FP L 42 42 47 704 633-6010
OLIVER, JOSEPH ANDREW P. O. BOX 458 ROCKWELL 28138 LOMA LINDA U	FP L 33 34 37 704 279-7227	SPENCER, ALLEN 820 W. HENDERSON STREET SALISBURY 28144 U OF NC	GS /GYN AC 54 54 60 704 633-2883		

81. RUTHERFORD COMPONENT SOCIETY

OFFICERS—**President:** Douglas D. Sheets, M.D., P.O. Box 1208, Rutherfordton 28139 (704 287-7383)**Secretary:** James Van Jura, M.D., P.O. Box 1407, Rutherfordton 28139 (704 286-2302)

BECKNELL, GEORGE FRANKLIN, JR. 407 S. BROADWAY FOREST CITY 28043 MED U OF SC	GP AC 51 52 53 704 245-4838	ELIZONDO, MERCEDITAS O. 20 N. MAIN STREET CLIFFSIDE 28024 CEBU INST OF MED	GP /PTH AC 64 77 82 704 657-9742	HUGHES, JOE DON P. O. BOX 1208 RUTHERFORDTON 28139 U OF TEXAS	OBG AC 59 64 65 704 287-7383
CARTER, JOHN JEFFERSON, JR. CITY RT. #3, 311 FAIRGROUND RD SPINDALE 28160 U OF ALABAMA	P /CHP AC 75 76 85 704 287-2211	HARDING, ROBERT WILLIAM NORRIS-BIGGS CLINIC RUTHERFORDTON 28139 ST U OF NY-BUFF	IM AC 64 65 71	HYDE, AUSTIN TABER, JR. NORRIS-BIGGS CLINIC PO BOX 970 RUTHERFORDTON 28139 U OF VIRGINIA	A /IM AC 51 54 57 704 286-9036

81. RUTHERFORD COMPONENT SOCIETY (Continued)

JAMES, CHARLES NEWTON	FP AC	MEBANE, JOHN GILMER	IM L/RT	SHAPIRO, WILLIAM HARTMAN	IM /CD AC
P. O. BOX 518	67 68 69	P. O. BOX 1405	41 48 49	NORRIS-BIGGS CLINIC	61 61 69
CAROLEEN 28019		RUTHERFORDTON 28139		RUTHERFORDTON 28139	
MED COLL OF VA	704 657-5371	HARVARD	704 287-3515	OHIO STATE U	704 286-9036
JASKI, THOMAS JOHN	GE /IM AC	MITCHELL, LANDIS PATTERSON	FP L	SHEETS, DOUGLAS DEAN	OBG AC
NORRIS-BIGGS CLINIC	67 67 74	200 OHIO STREET	38 38 40	TRYON RD., PO BOX 1208	74 74 81
P. O. BOX 970		SPINDALE 28160		RUTHERFORDTON 28139	
RUTHERFORDTON 28139		WASHINGTON U	704 286-2391	INDIANA U	704 287-7383
ST LOUIS U	704 286-9036	MOORING, STEWART LEE	R /NM AC	TANNER, KENNETH SPENCER, JR.	GS L/RT
LAWRENCE, ROBERT S.	FP AC	RUTHERFORD HOSPITAL	55 55 62	PO BOX 468	43 47 48
313 PINE STREET	75 75 86	RUTHERFORDTON 28139		RUTHERFORDTON 28139	
RUTHERFORDTON 28139		U OF NC	704 287-7371	HARVARD	704 286-9036
MED U OF SC	704 286-2302	MOSS, GEORGE OREN	GP /PH L/RT	WHEELER, MICHAEL STEVENS	PTH AC
LESHER, DONALD TICE	DR AC	ROUTE #1, BOX 397JJ	27 28 29	15 SQUIRREL DEN DRIVE	77 79 75
909 N. WASHINGTON STREET	76 76 81	BOSTIC 28018		RUTHERFORDTON 28139	
RUTHERFORDTON 28139		EMORY U	704 245-2853	U OF NC	704 287-7371
U OF TENNESSEE	704 286-5233	RADFORD, HOWARD LEE	FP L/RT	WHITWORTH, CLAUDE PHILLIP	IM AC
LLOYD, HARRY DAVIDSON	U AC	P. O. BOX 427	54 54 56	RT. 3, BOX 315 BB	79 81 85
NORRIS-BIGGS CLINIC	64 66 72	CLIFFSIDE 28024		FOREST CITY 28043	
RUTHERFORDTON 28139		BOWMAN GRAY	704 657-5221	U OF NC	704 286-9036
U OF FLORIDA	704 286-9036	ROGERS, HOBART RAY	ORS /HS AC	WINKER, JOEL EDWARD	OBG AC
LOVELACE, THOMAS CLAUDE	GP /OBS L/RT	103 LANE DR.	63 63 72	P. O. BOX 1208	63 64 73
P. O. BOX 295	17 20 20	RUTHERFORDTON 28139		RUTHERFORDTON 28139	
HENRIETTA 28076		BOWMAN GRAY	704 286-4298	CORNELL U	704 287-7383
NC MED COLL	704 657-5118	SELF, JERRY LEE	DR AC		
MARSTON, CHARLES THOMAS, JR.	PD AC	PO BOX 886	77 77 75		
117 TRYON ROAD	78 81 76	217 W. SECOND ST.			
RUTHERFORDTON 28139		RUTHERFORDTON 28139			
U OF NC	704 286-9049	U OF NC	704 287-2984		

82. SAMPSON COMPONENT SOCIETY

OFFICERS—**President:** John L. Rouse, M.D., 403 Fairview St., Clinton 28328 (919 592-6011)

Secretary: John E. Scarff, M.D., 603 Beaman St., Clinton 28328 (919 592-7129)

AYERS, JAMES SALISBURY	FP L/RT	JONES, CARL H., III	FP AC	ROUSE, JOHN LAWRENCE, III	FP AC
113 FINCH ST.	32 32 37	403 FAIRVIEW ST.	73 74 88	403 FAIRVIEW ST.	73 73 77
CLINTON 28328		CLINTON 28328		CLINTON 28328	
JEFFERSON	919 592-2541	MED U OF SC	919 592-6011	BOWMAN GRAY	919 592-6011
BARR, FALVY CARL, JR.	PTH /FOP AC	KENDALL, JOHN HAROLD	GP L	ROYAL, DONNIE MARTIN	GP L
404 BUTLER DRIVE	72 75 82	715 STEWART AVENUE	35 35 35	BOX 156	26 26 28
CLINTON 28328		CLINTON 28328		SALEMBURG 28385	
LA STATE U	919 592-8511	LOMA LINDA U	919 592-2161	MED COLL OF VA	919 525-4538
CALDWELL, BRUCE FRANCIS	EM /GS AC	LEAK, FRANK WALTER	FP AC	SCARFF, JOHN EDWIN, JR.	U /GS AC
P. O. BOX 1006	63 63 70	CLINTON MEDICAL CLINIC	67 67 70	603 BEAMAN ST.	63 63 80
CLINTON 28328		CLINTON 28328		CLINTON 28328	
U OF NC	919 592-8511	U OF NC	919 592-6011	BOWMAN GRAY	919 592-7129
CARR, HENRY JAMES, JR.	IM AC	MARGOLIS, JEFFREY ALAN	IM AC	SIY-HIAN, BIENVENIDO CHAN	IM /CD AC
603 BEAMAN STREET	54 54 62	413 LAFAYETTE ST.	78 79 80	603 BEAMAN STREET	71 76 78
CLINTON 28328		CLINTON 28328		CLINTON 28328	
DUKE	919 592-6114	U OF NC	919 592-6114	U OF EAST	919 592-1545
DAMBECK, ALLYN BENARD	EM AC	NANCE, JOHN WESLEY	FP AC	SMITH, JOHN BRASWELL, JR.	FP AC
312 FOX LAKE DRIVE	54 56 78	403 FAIRVIEW STREET	48 49 52	403 FAIRVIEW STREET	77 77 80
CLINTON 28328		CLINTON 28328		CLINTON 28328	
U OF VERMONT	919 592-8511	BOWMAN GRAY	919 592-6011	U OF NC	919 592-6011
EHRlichMAN, GLORIA S.	PD AC	NEWTON, JOHN THOMAS	FP AC	SUMPIO, BERNARDO D.	EM /IM AC
603 BEAMAN STREET	55 56 74	403 FAIRVIEW ST.	81 82 78	209 FOX LAKE DRIVE	54 77 77
CLINTON 28328		CLINTON 28328		CLINTON 28328	
U OF PUERTO RICO	919 592-7712	U OF NC	919 592-6011	MANILA U	919 592-8847
FAJARDO, AGAPITO LACSON	GP AC	OWENS, WILLIAM LAWRENCE	IM AC	SURRATT, JOHN PEELER	D AC
407 BEAMAN ST.	71 75 77	WOODSIDE PROF. BLDG.	61 61 68	603 BEAMON ST.	71 71 78
CLINTON 28328		CLINTON 28328		CLINTON 28328	
U OF SANTO TOMAS	919 592-1462	U OF NC	919 592-4605	U OF NC	919 592-5583
HERRING, RUFUS MCPHAIL, JR.	PD AC	PEAK, LATHAM CONRAD	FP AC	SWANTON, MARGARET CATHERINE	PTH AC
403 FAIRVIEW STREET	69 69 74	ROSEBORO MEDICAL CLINIC	51 51 56	P. O. BOX 1089	46 49 53
CLINTON 28328		ROSEBORO 28382		CLINTON 28328	
BOWMAN GRAY	919 592-6011	BOWMAN GRAY	919 525-5055	JOHNS HOPKINS	919 592-8511
HOWARD, JOSEPH COOPER, JR.	GS RT/AC	REITER, RICHARD MARTIN	GS AC	WOODS, THOMAS J. C.	OPH /EM AC
HOSPITAL PROF. BLDG.	42 42 47	603 BEAMON ST.	70 75 87	WOODSIDE PROF. BLDG.	74 74 82
CLINTON 28328		CLINTON 28328		CLINTON 28328	
TEMPLE U	919 592-2167	HOWARD U	919 592-8711	U OF MISSISSIPPI	919 592-7860
HUBBARD, HAMPTON	U AC	ROBERTS, JOHN MILTON, JR.	OBG AC	YOUNG, RICHARD L.	ORS AC
WOODSIDE PROF. BLDG.	47 47 73	400 COOPER DRIVE	74 74 81	603 BEAMAN ST.	79 79 87
CLINTON 28328		CLINTON 28328		CLINTON 28328	
MED COLL OF VA	919 592-7129	BOWMAN GRAY	919 592-1414	MED U OF SC	919 592-5004

83. SCOTLAND COMPONENT SOCIETY

OFFICERS—**President:** Fred H. Mabry, Jr., M.D., 418 King St., Laurinburg 28352 (919 276-7570)

Secretary: James M. Currin, M.D., 515 Lauchwood Dr., Laurinburg 28352 (919 276-1340)

ALCINI, JOHN JOSEPH, JR.	DR /NM AC	BALL, FRANK JERVEY, JR.	IM AC	BLUE, DANIEL WILLIAM	AN AC
SCOTLAND MEMORIAL HOSPITAL	67 68 74	601 LAUCHWOOD DR.	76 78 81	PO BOX 854	70 70 85
LAURINBURG 28352		LAURINBURG 28352		LAURINBURG 28352	
WAYNE STATE U	919 276-2121	MED U OF SC	919 276-7727	BOWMAN GRAY	919 462-2011

83. SCOTLAND COMPONENT SOCIETY (Continued)

CURRIN, JAMES MITCHELL, JR. 515 LAUCHWOOD DRIVE LAURINBURG 28352 BOWMAN GRAY	FP AC 77 77 81 919 276-1340	MCKEITHEN, MURDOCH RITCHIE P. O. BOX 1808 LAURINBURG 28352 WASHINGTON U	OBG AC 53 53 56 919 276-4432	RODGERS, THEODORE YOUNG, III 507 W. COVINGTON STREET LAURINBURG 28352 NEW YORK MED COL	ORS AC 52 53 78 919 276-3541
FRENCH, THOMAS NASH LAURINBURG SURGICAL CLI. PO BOX 1808 LAURINBURG 28352 U OF NC	U AC 66 66 75 919 276-3541	MCQUEEN, JAMES AUBREY 418 KING STREET LAURINBURG 28352 U OF NC	PD AC 70 70 79 919 276-7570	RUSH, PAUL F. RT. #6, BOX 99E ANGUS DR. LAURINBURG 28352 UNIV. OF S.C.	ORS AC 82 83 87 919 276-4611
LIAO, FU CHE RT. #6, CYPRESS DR. LAURINBURG 28352 TAIWAN U-TAIPEI	OTO AC 60 61 75 919 276-8391	MITCHENER, JAMES SAMUEL, JR. P. O. BOX 1808 LAURINBURG 28352 JOHNS HOPKINS	GS AC 47 47 56 919 276-3541	SMITHWICK, JAMES DAVID ROUTE #3, BOX 238-B LAURINBURG 28352 U OF NC	PD AC 70 70 78 919 276-7570
MABRY, FREDERICK HARRISON, JR. 418 KING STREET LAURINBURG 28352 U OF NC	PD AC 77 77 75 919 276-7570	MOORE, JEFFREY ALAN RT. #6, BOX 94 BLUE'S FARM RD. LAURINBURG 28352 WEST VA U	PUD AC 82 87 88 919 275-7727	TATUM, BEN SULLIVAN P. O. BOX 1599 LAURINBURG 28352 MED U OF SC	OBG AC 59 60 67 919 276-4432
MATTSON, MARK WARREN PO BOX 1808 LAURINBURG 28352 NORTHWESTERN U	GS AC 77 78 84 919 276-3541	NISBETT, DONALD ALWIN 616 ATKINSON ST. LAURINBURG 28352 ALBERT EINSTEIN	FP AC 79 80 85 919 277-0971	WILLITTS, BRUCE KIRBY P. O. BOX 1808 LAURINBURG 28352 CASE WESTERN RES	OBG AC 56 56 79 919 276-4432
MCARN, HUGH MUNROE, JR. 422 KING STREET LAURINBURG 28352 DUKE	FP/GP AC 53 53 56 919 276-2100	PURCELL, WILLIAM ROBERT 418 KING STREET LAURINBURG 28352 U OF NC	PD AC 56 56 61 919 276-7570	WINN, BARBARA JANE PETERS 605 PEDEN STREET LAURINBURG 28352 MED COLL OF PENN	IM AC 52 67 68 919 276-6637
MCCASKILL, LLOYD CURTIS P. O. BOX 788 MAXTON 28364 U OF NC	EM/FP AC 55 55 57 919 844-3236				

84. STANLY COMPONENT SOCIETY

OFFICERS—**President:** Eric Johnson, M.D., 1007 N. 6th St., Albemarle 28001 (704 983-3121)**Secretary:** Paul Pastornini, M.D., 303 Yadkin St., Albemarle 28001 (704 982-5150)

BALLENGER, CLAUDE N., JR. 1003 N. SIXTH STREET ALBEMARLE 28001 U OF VIRGINIA	PD AC 54 59 60 704 982-2133	HILL, WILLIAM HENRY 124 E. NORTH ST. ALBEMARLE 28001 BOWMAN GRAY	GP AC 44 44 46 704 982-5812	MAC, SURENDRAPAL SINGH P. O. BOX 1230 ALBEMARLE 28001 MAHATMA GANDHI	ORS /HS AC 70 75 80 704 983-3314
BARRON, BRUCE JOSEPH 901 N. THIRD ST. PO BOX 1398 ALBEMARLE 28001 U OF OTTAWA	GS AC 69 69 77 919 982-0161	JENKINS, LARRY PARKER 121 YADKIN STREET ALBEMARLE 28001 U OF TENNESSEE	OPH AC 64 64 73 704 983-1102	MANGUM, ADDISON GOODLOE P. O. BOX 1258 ALBEMARLE 28002 U OF NC	R AC 58 58 67 704 982-5319
BUJARD, ROBERT S., JR. 331 N. FIRST ST. ALBEMARLE 28001 BAYLOR	P AC 58 58 86 704 433-2058	JOHNSEN, ERIC MERRIMAN 1007 N. 6TH ST. ALBEMARLE 28001 WAYNE STATE U	FP AC 77 78 80 704 983-3121	MCKENZIE, WAYLAND NASH P. O. BOX 248 ALBEMARLE 28002 MED COLL OF VA	GP L 35 35 37 704 982-3312
CABUGWASON, LUCILA NOVAL 28 N. MAIN ST. PO BOX 726 NORWOOD 28128 CEBU INST OF MED	GP AC 63 78 80 704 474-3317	JOLLY, WILLIAM OSCAR, III 320 YADKIN STREET ALBEMARLE 28001 U OF NC	FP AC 63 63 67 704 982-9144	MCLEOD, WILLIAM LOUIS P. O. BOX 100 OAKBORO 28129 TEMPLE U	GP L 38 38 40 704 485-3319
EDDINS, GEORGE EDGAR, JR. 214 E. NORTH STREET ALBEMARLE 28001 CORNELL U	IM/CD AC 45 51 51 704 982-1136	KANDL, LOUIS CHARLES 331 N. FIRST ST. ALBEMARLE 28001 HAHNEMANN	IM/ID AC 72 79 81 704 982-2189	MEHTA, NALIN CHIMANLAL 815 N. THIRD ST. ALBEMARLE 28001 B J MED COLL	IM/ON AC 70 75 82 704 983-3508
FORT, WILKINSON DAVIS 1000 N. FIFTH STREET ALBEMARLE 28001 U OF TENNESSEE	OBG AC 60 64 64 704 982-8112	KELLEY, THOMAS FRANCIS 320 YADKIN STREET ALBEMARLE 28001 DUKE	FP L 46 49 50 704 982-9144	MURRAY, JOHN P. PO BOX 819 ALBEMARLE 28001 WASHINGTON U	OTO AC 66 66 86 704 983-6950
FREEMAN, WILLIAM HARRISON P. O. DRAWER 1398 ALBEMARLE 28001 BOWMAN GRAY	GS AC 44 44 47 704 982-0161	LACROIX, CAROL ANN 320 YADKIN STREET ALBEMARLE 28001 WRIGHT STATE U	FP AC 80 80 81 704 982-9144	ROSS, WILLIS RICHARD 320 YADKIN STREET ALBEMARLE 28001 MED U OF SC	FP AC 52 53 53 704 982-9144
GAITHER, ROBERT HUTH 1000 N. FIFTH STREET ALBEMARLE 28001 GEO WASHINGTON U	OBG AC 64 64 72 704 982-8112	LEFLER, RUFUS STAMEY, III 214 E. NORTH STREET ALBEMARLE 28001 BOWMAN GRAY	IM/CD AC 78 78 75 704 982-1136	SELTZER, STEPHEN CHARLES 320 YADKIN STREET ALBEMARLE 28001 U OF IOWA	FP AC 74 75 79 704 982-9144
GASKIN, JOHN STOVER, JR. 206 W. MAIN ST. PO BOX 126 LOCUST 28097 DUKE	FP AC 59 59 61 704 888-6156	LEIBY, GEORGE MARTIN 5201 ROMA AVE., NE ALBUQUERQUE, NM 87108 VANDERBILT U	GPM L/RT 31 33 34 505 898-1384	SMITH, WHITMAN ERSKINE, JR. P. O. BOX 1398 ALBEMARLE 28001 DUKE	GS/VS AC 57 57 64 704 982-0161
GREEN, FRANCIS WEATHERLY 1009 N. 6TH ST. ALBEMARLE 28001 U OF NC	IM AC 56 56 64 704 982-8169	LILES, RICHARD VERNON, JR. 320 YADKIN STREET ALBEMARLE 28001 U OF NC	FP AC 57 57 62 704 982-9144	SYKES, DELIA C. 1408 NORTHRIDGE DR. ALBEMARLE 28001 U OF EAST	AN AC 77 80 88 704 983-4469
HERRING, JOHN HARVARD 1000 N. FIFTH STREET ALBEMARLE 28001 U OF TENNESSEE	OBG AC 58 68 68 704 982-8112	MAC, HARJIT BALA P. O. BOX 1230 ALBEMARLE 28002 B J MED COLL	PM AC 70 70 84 704 983-3314	WALLACE, JOHN MORRIS P. O. BOX 1489 ALBEMARLE 28001 MED U OF SC	PTH AC 59 61 64 704 982-0148

86. SURRY-YADKIN COMPONENT SOCIETY

OFFICERS—President: Charles Bokesch, M.D., 708 S. South St., Mount Airy 27030 (919 786-6146)
Secretary: J. Gillum Burke, M.D., 414 W. Lebanon St., Mount Airy 27030 (919 789-9041)

APPLER, MARK LEE 1006 OLD ROCKFORD ST. MT. AIRY 27030 BOWMAN GRAY	GE /IM AC 80 81 80 919 786-9088	GULLEY, PAUL HUDSON 180-B PARKWOOD DR. ELKIN 28621 BOWMAN GRAY	IM /END AC 78 81 84 919 835-3136	MCNEILL, CLAUDE ACKLE, JR. 248 DUTCHMAN CREEK RD. ELKIN 28621 BOWMAN GRAY	FP L/RT 43 43 48 919 835-3136
BOKESCH, CHARLES RICHARD P. O. BOX 1547 MOUNT AIRY 27030 EMORY U	CD /IM AC 73 74 78 919 786-6146	HALL, JAMES GRAYSON P. O. BOX 158 DOBSON 27017 U OF NC	FP AC 57 57 63 919 386-8270	MERLO, RICHARD BARTLETT 773 BROOKWOOD DRIVE ELKIN 28621 DUKE	R /NM AC 61 61 67 919 835-3722
BRITT, TILMAN CARLISLE, JR. 216 GRACE STREET MOUNT AIRY 27030 BOWMAN GRAY	CD /IM RT 47 48 52 919 786-5745	HALL, JOHN MOIR 357 IVY CIRCLE ELKIN 28621 U OF VIRGINIA	GP L/RT 42 47 47 919 835-4534	PERRY, HENRY BAKER, JR. 477 HAWTHORNE RD. ELKIN 28621 U OF MARYLAND	GYN L/RT 43 43 47 919 835-6183
BURKE, JAMES GILLUM 414 W. LEBANON STREET P. O. BOX 1544 MOUNT AIRY 27030 EMORY U	ORS AC 73 74 79 919 789-9041	HALL, LOCKSLEY S. L.C. HOOTS MEMORIAL HOSP. YADKINVILLE 27055 BOWMAN GRAY	GS AC 59 59 61 919 679-2041	RIDGWAY, ALTON H. RFD #3, BOX 34-I EAST BEND 27018 INDIANA U	AN /FP AC 42 43 84 919 699-8283
CALDWELL, ROBERT MANFRED 227 GRACE ST. MOUNT AIRY 27030 U OF VIRGINIA	PH L/RT 36 36 40 919 374-2131	HUGHES, CARLISLE BEE, JR. RT. 2, BOX 567 YADKINVILLE 27055 MED COLL OF VA	GS L/RT 40 51 52 919 679-8285	SIMMONS, JIMMIE DALE SURRY COUNTY HEALTH DEPT. PO BOX 1062 DOBSON 27017 BOWMAN GRAY	PH /FP AC 57 57 61 919 374-2131
COOKE, RALPH MCBRIDE 631 ELK SPUR ST. ELKIN 28621 U OF LOUISVILLE	GP /GER L 40 46 47 919 835-3525	JACKSON, DAVID DEWITT P. O. BOX 191 MOUNT AIRY 27030 BOWMAN GRAY	GS /CDS AC 73 73 79 919 789-9176	SMITH, ROBERT LEE 320 ROBIN ROAD MOUNT AIRY 27030 U OF VIRGINIA	PTH AC 64 64 74 919 789-9710
CROWE, JAMES EARL RADIOLOGY DEPT. NORTHERN HOSP. OF SURRY CO. MOUNT AIRY 27030 BOWMAN GRAY	DR AC 66 66 73 919 789-9541	JACKSON, RICHARD DEWITT 1067 GREENHILL ROAD MOUNT AIRY 27030 TEMPLE U	GS L/RT 45 46 56 919 786-2400	SOULSBY, DAVID L. 414 W. LEBANON ST. BOX 1544 MOUNT AIRY 27030 WEST VA U	ORS AC 82 82 87 919 789-9041
CROWE, JOHN ALBERT, JR HOOTS MEM. HOSPITAL BOX 68 YADKINVILLE 27055 MED COLL OF GA	GS AC 67 68 74 919 689-3111	JARRELL, WILBURN ERIC 2007 SALEM ROAD MOUNT AIRY 27030 U OF VIRGINIA	FP AC 54 56 58 919 786-5050	STABLER, CAREY VASTINE NORTHERN HOSP.-SURRY CO. MOUNT AIRY 27030 U OF ARKANSAS	EM /IM AC 62 62 74 919 789-9541
DUDLEY, CHARLES COUNCIL, JR. 320 IVY CIRCLE ELKIN 28621 U OF NC	PTH /FP RT 55 55 59 919 835-2931	KERLEY, ROGER KENNY 917 WORTH ST. PO BOX 985 MOUNT AIRY 27030 U OF NC	IM AC 79 80 84 919 789-7833	STUART, HAL MARTIN 180-C PARKWOOD DRIVE ELKIN 28621 BOWMAN GRAY	FP AC 56 56 61 919 835-3613
EVERHART, CARLTON DHU 911 WORTH ST. MOUNT AIRY 27030 BOWMAN GRAY	FP AC 58 58 61 919 786-5108	LARSON, KIP LEROY 805 MERITA ST. MOUNT AIRY 27030 EASTERN VA	FP AC 78 79 86 919 789-0454	SYKES, CHARLES LOUIS P. O. BOX 590 MOUNT AIRY 27030 GEORGETOWN U	FP /IM L 38 38 39 919 786-6105
FENCL, RAYMOND JOHN 180-0 PARKWOOD ELKIN 28621 U OF ILLINOIS	U AC 69 71 87 919 526-2000	LAWRENCE, BENJAMIN J., JR. 813 ROCKFORD ST. PO BOX 72 MOUNT AIRY 27030 JEFFERSON	GS /PS RT 47 47 48 919 786-7871	TAYLOR, VERNON WILLIAMS, JR. 815 N. BRIDGE STREET ELKIN 28621 JEFFERSON	FP L 38 38 41 919 835-3425
GITT, KENNETH DARYL 708 S. SOUTH STREET MOUNT AIRY 27030 U OF NEBRASKA	OBG AC 80 84 85 919 786-4522	LEVINE, MAX PHILLIP 180 N. PARKWOOD MED. CTR. ELKIN 28621 CHICAGO MED SCH	GS /CDS AC 68 70 80 919 835-7600	VAUGHN, TOM JIMISON, JR. PO BOX 1408 MOUNT AIRY 27030 U OF VIRGINIA	OBG AC 75 78 85 919 786-4522
GRIFFIN, ADRIAN MARK PO BOX 1623 913 WORTH ST. MOUNT AIRY 27030 BOWMAN GRAY	EM /P AC 77 77 74 919 786-2001	MATTHEWS, MARJORIE E.F. P. O. BOX 667 PILOT MOUNTAIN 27041 BOWMAN GRAY	FP AC 61 61 65 919 368-4198	WATERS, DEAN GALE PO BOX 1408 MOUNT AIRY 27030 JOHNS HOPKINS	OBG AC 56 64 65 919 786-4522
		MCGRATH, JAMES STUART EAST BEND FAMILY PRACTICE P. O. BOX 126 EAST BEND 27018 TULANE U	FP AC 80 80 84 704 699-3936	WOOD, WILLIAM LUPTON, SR. P. O. BOX 367 YADKINVILLE 27055 BOWMAN GRAY	GP L/RT 45 45 47 919 679-8689

87. SWAIN COMPONENT SOCIETY

OFFICERS—President: Charles H. Toledo, M.D., P.O. Drawer 760, Bryson City 28713 (704 488-2283)
Secretary: Kenneth M. Mathiesen, M.D., 960 Plateau St., Bryson City 28713 (704 488-6844)

BACON, HAROLD LYLE 948 RICHMOND BRYSON CITY 28713 NORTHWESTERN U	GP L 34 35 36 704 488-2438	MATHIESEN, KENNETH MARLIN 960 PLATEAU ST. BRYSON CITY 28713 LOMA LINDA U	FP /A L 38 38 39 704 488-6844	TOLEDO, CHARLES H. PO DRAWER 760 BRYSON CITY 28713 U OF FLORIDA	PD AC 84 87 88 704 488-2283
CUNNINGHAM, EDWARD RAY P. O. BOX 760 BRYSON CITY 28713 U OF NC	GS /GP AC 75 80 84 704 488-2283	MITCHELL, WILLIAM E. P. O. BOX 760 BRYSON CITY 28713 U OF TENNESSEE	GS /GP AC 45 50 50 704 488-2283		

88. TRANSYLVANIA COMPONENT SOCIETY

OFFICERS—**President:** James M. Keeley, M.D., 223 W. Jordan St., Brevard 28712 (704 883-3905)**Secretary:** Ian E. Trace, M.D., P.O. Box 280, Mountain Home 28758 (704 883-8833)**Executive Secretary:** Donna Franks, P.O. Box 1116, Brevard 28712 (704 884-9111)

CHRISTIANSON, DANA J. 102 WATER OAK SUITES BREVARD 28712 VANDERBILT U	OPH AC 81 85 87 704 884-7320	HAWK, ROBERT JOE 1220 ASHEVILLE HIGHWAY BREVARD 28712 EMORY U	OBG AC 65 65 79 704 883-8115	RYAN, ALBERT OLEN, JR. P. O. BOX 200 PISGAH FOREST 28768 U OF CINCINNATI	OM AC 47 47 62 704 877-2806
DUNKELBERG, RAY HAMILTON NEWLAND MED. BLDG. BREVARD 28712 MED U OF SC	IM/NEP AC 67 67 76 704 884-9030	HENDEL, ROBERT CHARLES MEDICAL PARK DR., BLDG #1 BREVARD 28712 U OF CONNECTICUT	GS AC 72 73 85 704 884-2198	SANDERS, JAMES HENRY, JR. P. O. BOX 389 BREVARD 28712 MED U OF SC	FP/GER AC 51 52 53 704 884-9362
DUVALL, PAUL BRANDON NEWLAND MED. BLDG. GALLIMORE ROAD BREVARD 28712 U OF NC	FP AC 80 80 77 704 884-9030	LEFLER, CHARLES WATER OAKS SUITES BREVARD 28782 U OF NC	IM AC 70 70 85 704 884-4134	TYSON, JAMES WILLIAM NEWLAND MEDICAL BUILDING BREVARD 28712 U OF TEXAS	FP AC 66 68 70 704 884-9030
FOLGER, JOHN RUSSELL, JR. 207 E. MAIN ST. BREVARD 28712 BOWMAN GRAY	FP/PH AC 53 53 57 704 966-9633	NEWLAND, CHARLES LOGAN 104 WOODSIDE DR. BREVARD 28712 MED COLL OF VA	FP L/RT 27 28 32 704 883-2156	WELLS, MARIUS HUGHEY NEWLAND MED. BLDG. 11 GALLIMORE RD. BREVARD 28712 MED U OF SC	GS AC 52 53 59 704 884-9030
GASQUE, MAC ROY 5 FORTUNE COVE RD. BREVARD 28712 U OF VIRGINIA	OM/PH L 44 47 47 704 884-2503				

90. UNION COMPONENT SOCIETY

OFFICERS—**President:** John Vick, M.D., 808 Circle Dr., Monroe 28110 (704 289-5443)**Secretary:** Paul N. Erckman, M.D., 1307-E Franklin St., Monroe 28110 (704 283-1515)

ABDA, SANDRA MARIE 701 ROOSEVELT BLVD., BLDG 600 MONROE 28110 MED COLL OF PENN	ORS AC 73 74 79 704 289-4595	GREENBERG, WILLIAM ROGER P. O. BOX 2188 MONROE 28110 U OF TEXAS	AN AC 71 71 83 704 289-3247	OLEEN, GEORGE GERHARD PO BOX 973 MONROE 28110 U OF KANSAS	FP/IM L 39 46 48 704 283-6622
AUSTIN, ROBERT GRAY, JR. 1410 FRANKLIN ST., EAST MONROE 28110 BOWMAN GRAY	OPH AC 70 70 77 704 289-5455	GREENE, JOSEPH ELMO 303 OLD HIGHWAY 74 MARSHVILLE 28103 MED COLL OF GA	GP/OM AC 49 61 62 704 624-2125	ORMAND, THOMAS LANE 1408 E. FRANKLIN ST. MONROE 28110 U OF NC	GYN AC 58 58 64 704 289-2553
BARRINGER, PHIL LOUIS P. O. BOX 968 MONROE 28110 JEFFERSON	GS L 42 42 46 704 283-2738	GREENE, PHILLIP 603 E. ROOSEVELT BLVD. MONROE 28110 MED U OF SC	GP AC 82 82 86 704 283-8193	OSTMAN, DAVID LEE 518 ROBIN DR. MONROE 28110 WAYNE STATE U	OBG AC 82 83 86 704 283-1553
BOWER, EDWARD BIRCH 900 SUNSET DR. MONROE 28110 JEFFERSON	GS AC 70 71 77 704 289-2561	HARTNESS, JOHN F., JR. 1307 DOVE STREET MONROE 28110 U OF NC	IM/EM AC 70 70 80 704 289-6474	SALVAGGIO, MARK ANTHONY 900 SUNSET DR. MONROE 28110 HAHNEMANN	GS/VS AC 80 80 86 704 289-2561
CATTIE, JOHN VINCENT 106 E. PHIFER STREET MONROE 28110 JEFFERSON	GS/CDS AC 74 75 83 704 289-8528	IPAPO, VIRGILIO SORIANO 1309 E. FRANKLIN ST. MONROE 28110 U OF SANTO TOMAS	GS/VS AC 71 71 86 704 289-3024	SNYDER, ALEXANDER BENJAMIN 1420 E. FRANKLIN ST. MONROE 28110 ALBANY MED COLL	IM AC 65 65 77 704 289-8427
COOK, DONALD EUGENE, JR. 808 CIRCLE DR. UNION FAMILY PRACTICE, PA MONROE 28110 BOWMAN GRAY	FP AC 81 83 84 704 289-5443	JEWELL, GARY WELCH 1408 FRANKLIN STREET MONROE 28110 U OF LOUISVILLE	GYN AC 71 74 77 704 289-2553	SOWDEN, RICHARD GUY 1503 E. FRANKLIN STREET MONROE 28110 JEFFERSON	U AC 70 72 79 704 289-5402
DESKINS, WILLIAM CYPHERS 1420 E. FRANKLIN ST. MONROE 28110 BOWMAN GRAY	FP AC 62 62 66 704 289-8427	KING, JOSEPH JOHN, JR. 701 ROOSEVELT BLVD., BLDG.600 MONROE 28110 JEFFERSON	ORS AC 73 73 84 704 289-4595	STEWART, FRANCIS ASBURY 102 E. MARSHVILLE BLVD. MARSHVILLE 28103 U OF NC	FP AC 55 55 56 704 624-5889
ELBER, ERWIN RICHARD 1501 E. FRANKLIN STREET MONROE 28110 TUFTS U	OTO AC 69 70 79 704 289-9415	KITCHIN, ALVIN PAUL, JR. 1420 E. FRANKLIN ST. MONROE 28110 BOWMAN GRAY	FP AC 62 62 67 704 289-8724	TAYLOR, JIMMY LYNN 1420 E. FRANKLIN ST. MONROE 28110 BOWMAN GRAY	FP AC 62 62 66 704 283-1521
ERCKMAN, PAUL NEFF 1307-B E. FRANKLIN STREET MONROE 28110 MED COLL OF GA	PD AC 63 63 69 704 283-1515	LEE, FRANCIS BROWN 501 S. CHURCH ST. PO BOX 457 MONROE 28110 MED COLL OF VA	GS L/RT 43 51 52 704 283-4324	TAYLOR, RICHARD ALLEN 901 OAK FOREST DRIVE MONROE 28110 BOWMAN GRAY	PD AC 69 69 74 704 289-2556
EVANS, DAVID ARNOLD 1408 E. FRANKLIN ST. MONROE 28110 U OF NC	GYN AC 67 67 72 704 289-2553	MACDONALD, DONALD EWAN 1310 MCCRAY STREET MONROE 28110 U OF ST ANDREWS	P AC 48 53 54 704 289-5431	WALDMAN, GARY DAVID 1307 E. FRANKLIN ST. MONROE 28110 RUSH MED COLL	D AC 77 78 83 704 289-9448
FRIEDRICH, THOMAS CHARLES 1104 OAK HILL DR. MONROE 28110 INDIANA U	ORS AC 79 79 86 704 289-4595				

91. VANCE COMPONENT SOCIETY

OFFICERS—President: Michael Smith, M.D., Four County Surgical Associates, Henderson 27536 (919 438-2070)
Secretary: Steven H. Dennis, M.D., Vance Med. Arts Bldg., Henderson 27536 (919 492-9720)

BERNSTEIN, DANIEL MEDICAL SERVICE BLDG. RUIN CREEK ROAD HENDERSON 27536 WAYNE STATE U	OPH AC 68 69 77 919 492-8021	HOLT, THOMAS 209 FAIRVIEW STREET WARRENTON 27589 MED COLL OF VA	OPH /OTO L 38 38 48 919 257-3746	REDDY, PUTLUR RAMACHANDRA MEDICAL ARTS BUILDING RUIN CREEK ROAD HENDERSON 27536 OSMANIA MED COLL	IM /ON AC 62 72 77 919 492-6127
BOYD, JOSEPH ALSTON, JR. 1909 PARKER LANE HENDERSON 27536 MED COLL OF VA	R L/RT 45 46 52	JONES, HARVEY MICHAEL ROUTE #3, BOX 25W HENDERSON 27536 WASHINGTON U	PTH /CLP AC 66 66 76 919 492-4477	RENNICK, JOHN H., JR. PO BOX 425 MANSON 27553 U OF NC	FP AC 82 83 87 919 456-2181
BURWELL, WALTER BRODIE 317 ORANGE STREET HENDERSON 27536 TULANE U	IM L 41 45 46 919 438-5619	KAPLOWITZ, GARY L. RUIN CREEK ROAD MEDICAL SERVICE BLDG. HENDERSON 27536 AUTONOMA UNIV	ORS AC 78 79 84 919 438-3186	ROLLINS, CHARLES DICK 507 GRANITE STREET HENDERSON 27536 U OF PENN	GP L 35 35 39 919 438-7263
CALLAHAN, JOSEPH BRODHEAD MEDICAL ARTS BUILDING HENDERSON 27536 U OF PITTSBURGH	OBG AC 68 75 76 919 492-8576	MAYO, JOSEPH DIXON, JR. MEDICAL SERVICES BLDG. RUIN CREEK RD. HENDERSON 27536 U OF PENN	FP AC 49 49 50 919 438-3155	SMITH, BERNARD MICHAEL VANCE MEDICAL ARTS BLDG. RUIN CREEK ROAD HENDERSON 27536 U OF KENTUCKY	VS /GS AC 74 76 86 919 438-2070
CATHCART, CORNELIUS F. MARIA PARHAM HOSPITAL HENDERSON 27536 U OF NC	PD AC 76 76 83 919 492-9565	MCCASKILL, SAMUEL GAULT, JR. RUIN CREEK ROAD HENDERSON 27536 BAYLOR	OBG AC 73 73 84 919 492-8576	TORRES-HECKER, LUZVIMINDA 542 W. RIDGEWAY ST. WARRENTON 27589 U OF PHILIPPINES	IM AC 71 74 88 919 257-3141
CHARLTON-ALSTON, LEI S. HEALTHCO INC. PO BOX 425 MANSON 27553 MEHARRY MED COLL	IM AC 81 83 87 919 456-2181	MEADOR, PHILIP D., JR. MEDICAL SERVICE BLDG. RUIN CREEK ROAD HENDERSON 27536 U OF NC	D AC 71 71 86 919 492-2123	TUCKER, GEORGE REGINALD, JR. RUIN CREEK RD. STE. A HENDERSON 27536 U OF NC	FP AC 55 55 59 919 492-3152
DENNIS, STEVEN HENRY VANCE MEDICAL ARTS BLDG. HENDERSON 27536 U OF NC	OTO AC 81 82 88 919 492-9720	MILLS, JOHN FRANKLIN RUIN CREEK ROAD HENDERSON 27536 BOWMAN GRAY	FP AC 82 84 85 919 492-3152	TUCKER, WILLIAM BEVERLY RUIN CREEK ROAD HENDERSON 27536 U OF NC	FP AC 66 66 71 919 492-3152
DRAKE, WILTON RODWELL, JR. VANCE MEDICAL ARTS CENTER HENDERSON 27536 U OF NC	FP AC 72 72 76 919 492-3152	MILLS, RANDOLPH DENNIS RUIN CREEK RD. MEDICAL ARTS CTR. HENDERSON 27536 BOWMAN GRAY	FP AC 51 51 52 919 492-3152	VIJAYA, LINGA RUIN CREEK ROAD HENDERSON 27536 ANDHIA MED COLL	U AC 61 61 77 919 492-8711
GOODWIN, JAMES OSCAR MEDICAL ARTS BUILDING RUIN CREEK ROAD HENDERSON 27536 U OF NC	OBG AC 70 70 76 919 492-8576	PARHAM, SUMNER MALONE 973 MEADOW LANE HENDERSON 27536 U OF MARYLAND	GYN /OBS L/RT 45 45 52 919 438-3751	WESTER, MILLARD WINSTON, JR. VANCE MED. ARTS BLDG. #A HENDERSON 27536 DUKE	FP AC 52 52 54 919 492-3152
GREEN, JAMES PRESTON 176 BECKFORD DRIVE HENDERSON 27536 MEHARRY MED COLL	FP AC 55 59 65 919 492-2161	PETROU, HOMER DONALD RUIN CREEK ROAD HENDERSON 27536 U OF CINCINNATI	GS AC 58 58 75 919 438-5755		

92. WAKE COMPONENT SOCIETY

OFFICERS—President: Edgar C. Garrabrant, M.D., P.O. Box 18946, Raleigh 27619 (919 787-7171)
Secretary: Robert Jeffers, M.D., 3803 Computer Dr., Ste. 207, Raleigh 27609 (919 782-5273)
Executive Secretary: Annette Boutwell, P.O. Box 10387, Raleigh 27605 (919 821-2226)

ADELMAN, RICHARD D. 7320 SIX FORKS RD. STE. 260 RALEIGH 27615 NORTHWESTERN U	FP AC 75 76 86 919 846-9292	ALLEN, ROBERT LEE 3009 NEW BERN AVE. PO BOX 14027 RALEIGH 27620 BOWMAN GRAY	NS AC 79 79 85 919 832-4448	ASHBURN, PHILIP EUGENE 3100 BLUE RIDGE RD. #300 RALEIGH 27612 BOWMAN GRAY	IM /GE AC 74 74 78 919 781-7500
AGAYOFF, JOHN D., JR. 3320 EXECUTIVE DR. STE. 119 RALEIGH 27609 DOWNSTATE ME CTR	GE AC 65 66 88 919 878-9465	ANDERSON, DONNA GREY 3900 BROWNING PL. RALEIGH 27609 DUKE	PD AC 82 85 88 919 787-0266	ASKEW, ANNE PRESTON 4016 BARRETT DR., STE. 101 RALEIGH 27609 DUKE	PD AC 56 56 65 919 781-2438
ALDERMAN, ALLISON M., JR. 242 BRYAN BLDG. CAMERON VILLAGE RALEIGH 27605 BOWMAN GRAY	FP AC 46 47 52 919 832-1205	ANDREW, WALLACE F., JR. 3515 GLENWOOD AVE. PO BOX 10707 RALEIGH 27605 U OF VIRGINIA	ORS /HS AC 75 81 82 919 781-5600	ATKINSON, ALVAN WILLIAM 3400 EXECUTIVE DR. STE. 102 RALEIGH 27609 JEFFERSON	CDS /TS AC 71 74 80 919 872-8080
ALLEN, CYRIL ANTHONY P. O. BOX 14005 RALEIGH 27620 U OF NC	IM /HEM AC 74 76 80 919 828-3466	ANDRUS, THOMAS ROSS, JR. 6104 VALLEY FIELD CIRCLE RALEIGH 27612 U OF NC	D AC 78 82 76 919 782-3782	AUMAN, GEORGE LOUIS 3900 BROWNING PLACE RALEIGH 27609 BOWMAN GRAY	PD AC 68 68 73 919 787-0266
ALLEN, LEROY 3009 NEW BERN AVE. PO BOX 14027 RALEIGH 27620 BOWMAN GRAY	NS AC 46 47 55 919 832-4448	ARANA, GUILLERMO F. 975 WALNUT ST., STE. 255 CARY 27511 U OF SAN SIMON	FP /PTH AC 62 63 75 919 467-4141	AVERY, FRANK WALTON RALEIGH COMMUNITY HOSP. PO BOX 28280 RALEIGH 27611 U OF NC	PTH AC 67 67 74 919 872-4800
ALLEN, LOUIS DAVID 3001 ESSEX CIRCLE RALEIGH 27608 MED COLL OF GA	PD AC 78 81 84 919 782-0021	ARCHIE, JOSEPH PATRICK, JR. 3020 NEW BERN AVE. #560 RALEIGH 27610 U OF NC	VS AC 68 68 82 919 833-8404	BALLOCH, MOHAMMAD HAROON 2800 BLUE RIDGE BLVD. STE. 402 RALEIGH 27607 KING EDWARD COLL	FP AC 70 70 82 919 787-0486
				BARISH, CHARLES FRANKLIN 3100 BLUE RIDGE RD., STE. 300 RALEIGH 27612 U OF FLORIDA	IM /GE AC 80 81 85 919 781-7500

92. WAKE COMPONENT SOCIETY (Continued)

BARRICK, HARRY W., JR. 1900 HIGHLAND PL. RALEIGH 27607 DUKE	FP AC 57 57 59 919 787-4429	BOERNER, DAVID FRANKLIN 3100 BLUE RIDGE RD. STE. 300 RALEIGH 27612 PENN STATE U	IM /PUD AC 76 76 81 919 781-7500	CAMP, THOMAS FRANCIS, JR. 2800 BLUE RIDGE, STE. 205 RALEIGH 27607 EMORY U	IM /CD AC 62 62 69 919 782-0414
BARRINGER, THAD JONES 3900 BROWNING PL., STE. 201 RALEIGH 27609 VANDERBILT U	P AC 53 57 59 919 787-7125	BOLDING, WILLIAM ROBERT 2032 THORPSHIRE DR. RALEIGH 27609 U OF NC	AN AC 81 83 80 919 755-8000	CAMPBELL, DONALD BARNES 3100 BLUE RIDGE RD. RALEIGH 27612 U OF ALABAMA	IM AC 71 72 76 919 781-7500
BARRINGER, THADDEUS J., JR. 3900 BROWNING PL., STE. 201 RALEIGH 27609 TULANE U	P AC 78 78 83 919 787-7125	BOONE, STEPHEN CHRISTOPHER 3009 NEW BERN AVE. PO BOX 14027 RALEIGH 27620 DUKE	NS /EM AC 65 65 78 919 832-4448	CANNON, WOODWARD 2800 BLUE RIDGE BLVD. STE. 305 RALEIGH 27607 HARVARD	GS AC 70 72 78 919 781-7416
BARTELS, GEORGE THOMAS 1201 AVERSBORO ROAD GARNER 27529 DUKE	FP /NTR AC 78 80 80 919 779-6330	BOSSE, HELEN HALL P. O. BOX 10502 RALEIGH 27605 MED COLL OF VA	AN AC 50 53 55 919 733-7611	CARBONELL, ANTONIO MIGUEL 3320 EXECUTIVE DR. STE. 222 RALEIGH 27609 GEORGETOWN U	PS AC 69 70 85
BATTLE, CONSTANCE Y. 3613 HAWORTH DR. RALEIGH 27609 U OF MIAMI	OBG AC 82 86 87 919 781-5550	BRADSHAW, PRESTON H., JR. 1200 KERSHAW DR. RALEIGH 27609 DUKE	U AC 60 60 67 919 783-6687	CARR, MARJORIE BARNWELL 2800 BLUE RIDGE BLVD., STE. 501 RALEIGH 27607 U OF NC	PD AC 76 76 73 919 781-7490
BEAN, GARY OWEN 1109 DRESSER COURT RALEIGH 27609 BOWMAN GRAY	FP AC 76 80 83 919 872-4900	BRANAMAN, GUY HEWITT, JR. 915 WILLIAMSON DR. RALEIGH 27608 MED COLL OF VA	GYN L/RT 39 47 47 919 833-4080	CARTER, JEAN WHITMORE 100 S. BOYLAN AVE. RALEIGH 27603 MED U OF SC	OBG AC 78 86 88 919 832-5529
BECKER, DENIS I. 3410 EXECUTIVE DR., SUITE 205 RALEIGH 27609 U OF KENTUCKY	END /IM AC 72 72 77 919 876-7692	BRASHEAR, RALPH GUY P. O. BOX 827 WENDELL 27591 OHIO STATE U	FP AC 60 61 61 919 365-7366	CASTELLOE, THOMAS EDISON P. O. BOX 10707 RALEIGH 27605 U OF NC	ORS AC 56 56 61 919 781-5600
BELLAMY, WILLIAM E., JR. 3101 ESSEX CIRCLE RALEIGH 27608 BOWMAN GRAY	IM /PUD AC 47 48 60 919 782-2631	BRITT, BENJAMIN EARL 1209 GLEN EDEN DR. RALEIGH 27612 DUKE	P AC 55 55 60 919 876-0287	CAVANAUGH, PATRICK JOSEPH 4420 LAKE BOONE TRAIL RALEIGH 27607 ST LOUIS U	TR AC 51 51 71 919 783-3018
BENSEN, VLADIMIR BASIL 422 ST. MARY'S STREET RALEIGH 27605 NEW YORK MED COL	FP /GS L 46 49 49 919 832-6855	BROWN, DANIEL ELMER 3001 ESSEX CIRCLE RALEIGH 27608 U OF NC	PD AC 65 65 70 919 782-0021	CAVINNESS, VERNE STRUDWICK 913 VANCE STREET RALEIGH 27608 JEFFERSON	CD /IM L/RT 21 21 26 919 832-4258
BENSON, JOHN DEWITT 4420 LAKE BOONE TRAIL RALEIGH 27607 U OF NC	PTH AC 78 79 82 919 755-3040	BROWN, DONALD CLAUDE 305-B S. ACADEMY ST. CARY 27511 U OF NC	FP /GER AC 74 74 85 919 467-3730	CEFALU, SALVADOR JOSEPH DOROTHEA DIX HOSPITAL RALEIGH 27611 LA STATE U	P /GER AC 60 60 67 919 733-5518
BERRY, WILLIAM ROSSER PO BOX 30098 RALEIGH HEM/ONCOLOGY CLI. RALEIGH 27622 DUKE	ON /HEM AC 74 78 79 919 781-7070	BRUGGERS, BARRY ALAN 101 S. W. CARY PKY. STE. 170 CARY 27511 LA STATE U	OBG AC 80 80 84 919 467-5941	CELLA, JOHN ROBERT P. O. BOX 19509 RALEIGH 27619 U OF NC	R AC 64 64 70 919 833-1407
BERTICS, GREGORY M. 3821 MERTON DR. RALEIGH 27609 DUKE	N AC 82 86 87 919 782-3456	BUCHIN, DAVID LEE 14212 CROSS CREEK ROAD RALEIGH 27614 ST U OF NY-BUFF	EM /P AC 66 67 81 919 876-8333	CHAMBLEE, HUBERT ROYSTER, JR. 20 ENTERPRISE STREET RALEIGH 27607 DUKE	OPH AC 60 60 67 919 829-1948
BEST, RANDALL MARK 3000 NEW BERN AVE. RALEIGH 27610 U OF NC	EM AC 81 82 88 919 755-8500	BUGG, CHARLES PAULETT 5807 SENTINEL DR. RALEIGH 27609 JOHNS HOPKINS	PD AC 51 51 57 919 733-7611	CHARLTON, OLIVER PATRICK 4420 LAKE BOONE TRAIL RALEIGH 27607 U-WITWATERSRAND	DR AC 61 77 77 919 755-3023
BETHEL, MILLARD BAIMBRIDGE 25 BANBURY LANE CHAPEL HILL 27514 U OF TENNESSEE	PH L/RT 36 36 39 919 929-5606	BULLARD, DENNIS EUGENE 3009 NEW BERN AVE. PO BOX 14027 RALEIGH 27620 ST LOUIS U	NS AC 75 75 83 919 832-4448	CHASSON, ALBERT LEON REX HOSPITAL RALEIGH 27607 U OF CINCINNATI	PTH AC 54 62 62 919 783-3058
BETTS, WILMER CONRAD 901-F PAVERSTONE DR. RALEIGH 27615 DUKE	P AC 48 50 56 919 847-2624	BURROUGHS, FREDERICK D. 100 SUNNYBROOK ROAD, STE. 202 RALEIGH 27610 MEHARRY MED COLL	PD AC 66 69 75 919 821-3180	CHAUDHRY, ABDUL GHAFOR 2800 BLUE RIDGE BLVD. STE. 306 RALEIGH 27607 KING EDWARD COLL	CDS /GS AC 70 70 82 919 782-7900
BILBRO, ROBERT HODGES 3521 HAWORTH DR. RALEIGH 27609 U OF NC	IM /CD AC 66 66 72 919 782-1806	BURROUGHS, PAUL LEACH, JR. 3410 EXECUTIVE DRIVE RALEIGH 27609 U OF NC	ORS AC 66 66 71 919 872-5296	CHEELY, GEORGE RAYBURN 3020 NEW BERN AVE., STE. 420 RALEIGH 27610 U OF PENN	CD /IM AC 74 77 79 919 833-5111
BISHOP, JOHN MASON, JR. 2800 BLUE RIDGE BLVD. STE. 206 RALEIGH 27607 MED COLL OF VA	OBG AC 57 61 61 919 781-7450	BURROUGHS, RUTH REUBEN 6413 MARGATE COURT RALEIGH 27612 U OF NEBRASKA	PH /PD RT 37 37 69 919 781-5015	CHIARAMONTI, ALEXANDER 101 CARY PKWY. SW, #210 CARY DERMATOLOGY CTR. CARY 27511 U OF MICHIGAN	D AC 76 76 77 919 467-8556
BLACKLEY, ROY JACKSON 4907 QUAIL HOLLOW DR. RALEIGH 27609 MCGILL U	P /GPM AC 53 53 54 919 733-4506	BURTON, EARL EDWARD, JR. 3900 BROWNING PLACE RALEIGH 27609 MED COLL OF VA	D /IM AC 68 70 73 919 782-2735	CHIAVETTA, STEPHEN VICTOR 4420 LAKE BOONE TRAIL RALEIGH 27607 M C OF WISCONSIN	PTH /HEM AC 69 70 77 919 755-3040
BLAKE, GERALD WAYNE 3521 HAWORTH DR. RALEIGH 27609 U OF NC	IM /ID AC 67 67 75 919 782-1806	BURTON, PHILIP DOUGLAS 802 S. MAIN ST. WAKE FOREST 27587 EAST CAROLINA U	FP AC 81 81 88 919 556-7111	CHURCH, C. FRANKLIN 1109 DRESSER COURT RALEIGH 27609 DUKE	FP /D AC 63 63 68 919 872-4900
BLUMENTHAL, BARRY HOWARD 3125 GLENWOOD PROF. VILLAGE RALEIGH 27608 MED COLL OF VA	P AC 81 83 85 919 782-0166	BYRUM, CLIFFORD CONWELL 2800 BLUE RIDGE RD., STE. 301 RALEIGH 27607 JEFFERSON	GYN L 43 43 46 919 782-0124	CLINE, WILLIAM TUCKER 3400 EXECUTIVE DRIVE RALEIGH 27609 DUKE	GS /CDS AC 78 79 83 919 876-2732
BOARD, ROBERT JEFFREY 3320 EXECUTIVE DR. STE. 111 RALEIGH 27609 DUKE	OPH AC 74 77 84 919 876-2427				

92. WAKE COMPONENT SOCIETY (Continued)

COFFER, BERTRAM WATTS P.O. BOX 18139 2800 BLUE RIDGE RD. STE. 204 RALEIGH 27619 U OF NC	AN AC 69 69 76 919 781-7420	DAVIS, GLENN MILLER 2501 NORTH ST. STE. 500 RALEIGH 27609 MED U OF SC	PS AC 74 75 87 919 782-7762	EURE, CHARLES ALLAN 3521 HAWORTH DR. RALEIGH 27609 U OF NC	IM AC 67 67 73 919 782-1806
COLLMAN, MITCHELL SCOTT PO BOX 17569 RALEIGH 27619 ALBANY MED COLL	CD /IM AC 79 80 84 919 783-5273	DAVIS, JAMES HOWELL 2800 BLUE RIDGE BLVD., STE 306 RALEIGH 27607 U OF KANSAS	CDS /TS AC 54 65 66 919 782-7900	EVANS, WALLACE NICKLES, II 121 EDINBURGH SOUTH, STE. 100 CARY 27511 U OF ALABAMA	FP AC 73 73 75 919 467-3281
COMBS, JOSEPH JOHN 335 SPRINGMOOR DR. RALEIGH 27615 COLUMBIA U	IM /PUD L/RT 26 26 29 919 848-7335	DE LISSIO, MICHAEL G. 101 S. W. CARY PARKWAY CARY 27511 ST U OF NY-BUFF	GE AC 80 81 88 919 469-1858	EYSTER, JAMES M. 1028 WASHINGTON ST. PO BOX 10956 RALEIGH 27605 INDIANA U	DR AC 80 80 86 919 834-8733
COOK, CHARLES ALVIN 1108 DRESSER COURT RALEIGH 27609 TUFTS U	NEP /IM AC 75 77 82 919 872-8550	DEBNAM, GEORGE CLYDE 524 S. BLOUNT STREET RALEIGH 27601 MEHARRY MED COLL	GP /OBS AC 51 51 71 919 832-1667	FAJGENBAUM, DAVID MONIEK 3410 EXECUTIVE DRIVE RALEIGH 27619 TULANE U	ORS AC 75 75 80 919 872-5296
COOK, PAUL P. 3320 WAKE FOREST RD. RALEIGH 27609 MED COLL OF GA	IM /ID AC 82 84 88	DELEON, ARTURO DEJESUS 1109 DRESSER COURT RALEIGH 27609 FAR EAST U	FP /IM AC 61 71 75 919 872-4900	FARLEY, WILLIAM WINFREE 3814 BROWNING PLACE RALEIGH 27609 MED COLL OF VA	PD AC 43 47 52 919 782-8326
COPELAND, DANA DERWARD 10004 GRADY CIRCLE RALEIGH 27609 DUKE	PTH /NA AC 72 73 79 919 755-8260	DELEON, ROSEMARY ESPINO 2903 ADRIAN COURT RALEIGH 27604 FAR EAST U	AN AC 61 61 78 919 829-9550	FARMER, JOHN LOVELACE, JR. 231 BRYAN BUILDING RALEIGH 27605 DUKE	D AC 55 55 62 919 828-0288
CORNWALL, THOMAS PAUL 2501 NORTH ST., STE. 330 RALEIGH 27607 NORTHWESTERN U	PYA /CHP AC 70 72 83 919 782-4954	DETWEILER, DONALD GENE 756 WEATHERGREEN DR. RALEIGH 27615 EMORY U	DR AC 78 80 83 919 783-3023	FEIN, ALAN BRUCE 108 WATER LEAF LANE CARY 27511 COLUMBIA U	DR /IM AC 78 79 87 919 755-8511
CORPENING, ALBERT NEWTON 141 E. MAIN ST. PO BOX 158 YOUNGSVILLE 27596 BOWMAN GRAY	FP AC 55 55 58 919 556-2126	DIAB, ALBERT JOSEPH 3801 COMPUTER DRIVE RALEIGH 27609 U OF NC	IM AC 54 54 59 919 787-5217	FERDON, BENJAMIN BETHEA 3100 BLUE RIDGE BLVD., #300 RALEIGH 27612 TULANE U	IM AC 62 62 69 919 781-7500
COURIE, MAURICE NICKOLA 3145 ESSEX CIRCLE RALEIGH 27608 DUKE	GYN AC 59 59 66 919 782-3698	DORFMAN, MARGARET JEANNE DOROTHEA DIX HOSP.-PSY. RALEIGH 27611 TUFTS U	P AC 77 81 82 919 733-9917	FLEMING, PAUL ARTHUR 3613 HAWORTH DR. RALEIGH 27609 U OF UTRECHT	GYN /PYM AC 55 60 61 919 781-5550
COVINGTON, CONNELL 100 SUNNYBROOK RD. STE. 202 RALEIGH 27610 U OF NC	PD /GP AC 76 78 79 919 821-3180	DUNLAP, WILLIAM MARSHALL 3521 HAWORTH DR. RALEIGH 27609 DUKE	ON /IM AC 65 65 73 919 782-1806	FLEMING, ROBERT HENRY 2800 BLUE RIDGE BLVD., STE 501 RALEIGH 27607 BOWMAN GRAY	PD AC 60 60 64 919 781-7490
COXE, JAMES SHERWOOD, III 3410 EXECUTIVE DRIVE RALEIGH 27609 U OF NC	END /IM AC 71 71 79 919 876-7692	DURFEE, MICHAEL FULK WAKE TEEN MEDICAL SERVICES 619 OBERLIN RD. RALEIGH 27605 U OF VIRGINIA	ADL /PD AC 63 63 78 919 828-0035	FORTIER, KENNETH JOSEPH 2800 BLUE RIDGE BLVD. STE. 502 RALEIGH 27607 DARTMOUTH U	OBG AC 76 76 85 919 781-5513
CRITTENDEN, SUSAN LAWRENCE 103 BAINES CT. CARY 27511 U OF NC	IM AC 81 82 86 919 467-6125	DURR, ROBERT ALAN 3320 OLD WAKE FOREST RD. RALEIGH 27609 ST U OF NY-BUFF	PUD /IM AC 80 81 88 919 872-4850	FOSTER, WILLIAM WADE 3320 EXECUTIVE DR., STE. 111 RALEIGH 27609 BOWMAN GRAY	OPH AC 72 72 76 919 876-2427
CURRIN, JOE BADGETT, JR. 500 N. ENNIS STREET FUQUAY-VARINA 27526 BOWMAN GRAY	IM AC 61 61 65 919 552-2275	EASTWOOD, FREDERICK THOMAS P. O. BOX 30203 RALEIGH 27622 TEMPLE U	PD L/RT 44 51 52 919 787-1961	FOX, POWELL GRAHAM, JR. 3320 WAKE FOREST RD. STE. 100 PO BOX 17908 RALEIGH 27609 MED COLL OF VA	U AC 52 59 60 919 790-0036
DAMERON, THOMAS BARKER, JR. P. O. BOX 10707 RALEIGH 27605 DUKE	ORS AC 47 53 54 919 781-5600	EDMUNDSON, WARNER LEE WELLS 3900 BROWNING PLACE RALEIGH 27609 U OF NC	IM AC 80 80 77 919 781-9650	FRANKLIN, EARL RUFFIN 3803-A COMPUTER DR. RALEIGH 27609 U OF NC	PD AC 73 75 76 919 782-5273
DANIEL, THOMAS BRANTLEY 110 SELMA RD. PO BOX 845 WENDELL 27591 BOWMAN GRAY	U L/RT 43 43 52 919 365-5550	EDWARDS, ELMO STEPHEN 2800 BLUE RIDGE BLVD., STE. 501 RALEIGH 27607 DUKE	PD AC 63 63 68 919 781-7490	FREEDMAN, STEVEN MITCHELL PO BOX 40999 RALEIGH 27629 U OF PENN	N AC 72 72 80 919 782-3456
DANIEL, WALTER EUGENE 312 BUNCOMBE STREET RALEIGH 27609 U OF NC	AN AC 79 79 76 919 832-7988	EDWARDS, GEORGE S., JR. 3410 EXECUTIVE DR. RALEIGH 27609 U OF NC	HS /ORS AC 78 79 85 919 872-5296	FREEMAN, DOUGLAS G., JR. 3831 MERTON DRIVE RALEIGH 27609 DUKE	RHU /AI AC 68 68 77 919 781-9633
DASCOMB, HARRY EMERSON 3000 NEW BERN AVENUE RALEIGH 27610 U OF ROCHESTER	IM /ID AC 43 43 81 919 755-8520	EDWARDS, GEORGE SADLER, SR. 3410 EXECUTIVE DRIVE RALEIGH 27609 U OF NC	ORS AC 57 57 62 919 872-5296	FULGHUM, JAMES SPENCER, III 3009 NEW BERN AVE. PO BOX 14027 RALEIGH 27610 U OF NC	NS AC 74 71 77 919 832-4448
DAVIDIAN, VARTAN AMBAR, JR. 1112 DRESSER COURT RALEIGH 27609 U OF NC	PS /GS AC 67 67 75 919 872-2616	EDWARDS, JAMES RONALD ROUTE #7, BOX 210-E RALEIGH 27614 U OF NC	PTH AC 58 58 72 919 755-8260	FULGHUM, MARY SUSAN KIRK 100 S. BOYLAN AVENUE RALEIGH 27603 U OF NC	GYN AC 71 71 77 919 832-5529
DAVIS, ARTHUR EMERSON, JR. 1209 COWPER DRIVE RALEIGH 27608 U OF MINN	PTH /A AC 53 62 63 919 833-9839	EMERY, DARYL CHARLES 1212 CEDARHURST DR. RALEIGH 27615 BOWMAN GRAY	CD /IM AC 81 82 86 919 872-4850	GADA, PRESTON HERBERT 2800 BLUE RIDGE BOULEVARD RALEIGH 27607 MED COLL OF VA	GS /TS AC 63 68 68 919 781-7412
DAVIS, DWIGHT GROOME, JR. 5825 MAPLE RIDGE RD. RALEIGH 27609 JEFFERSON	GS /TS AC 54 61 61 919 876-3671	EPNER, RONALD ALAN 101 S.W. CARY PARKWAY CARY 27511 CORNELL U	ORS /HS AC 76 81 83 919 467-4992	GADDY, ROBERT EDWIN, JR. 3900 BROWNING PLACE RALEIGH 27609 DUKE	R AC 67 68 75 919 755-3023

92. WAKE COMPONENT SOCIETY (Continued)

GALLOWAY, JAMES HERVEY 2617 ROYSTER ROAD RALEIGH 27608 U OF PENN	FP L/RT 50 50 53	HAAKENSON, GARY ALVIN 3126 BLUE RIDGE RD. RALEIGH 27612 BAYLOR	OBG AC 72 72 79	HEATON, FREDERICK CHRISTIAN 3805 COMPUTER DR. RALEIGH 27609 U OF NC	OBG AC 72 72 76
GARDNER, JEROME BATCHELOR PO BOX 18568 RALEIGH 27619 EAST CAROLINA U	OBG AC 83 84 80	HAIZLIP, THOMAS MATTHEWS 5201 REMBERT DRIVE RALEIGH 27612 U OF NC	CHP /P AC 58 58 69	HEDRICK, WILLIAM WESTON 7411 LIGON MILL RD. WAKE FOREST 27587 BOWMAN GRAY	FP AC 57 57 62
GARRABRANT, EDGAR C. 3010 ANDERSON DR. PO BOX 18946 RALEIGH 27619 U OF NC	OTO AC 66 66 74	HALL, WARNER LEANDER, JR. P. O. BOX 18568 RALEIGH 27619 DUKE	OBG AC 61 61 69	HELTON, WILLIAM CHARLES 3020 NEW BERN AVE. #560 RALEIGH 27610 U OF MIAMI	CDS /TS AC 69 69 78
GARSDIE, WILLIAM BLAKE 1112 DRESSER COURT RALEIGH 27609 ST LOUIS U	PS AC 64 64 74	HAMMER, DOUGLAS IRA P. O. BOX 30788 RALEIGH 27622 TUFTS U	EM /GPM AC 62 63 75	HEMMERLEIN, ARTHUR HANS 1209 RAINWOOD LANE RALEIGH 27605 ST LOUIS U	EM /FP AC 73 74 86
GASKIN, LEWIS JAMES P. O. BOX 18139 RALEIGH 27619 EMORY U	AN AC 58 61 61	HAMRICK, ALGER VASON, III 1109 DRESSER COURT RALEIGH 27609 U OF NC	FP AC 72 72 79	HENDERSON, DAVID YEARDLEY 3126 BLUE RIDGE RD. RALEIGH 27612 MED COLL OF VA	OBG AC 81 84 85
GINN, WILLIAM M., JR. 2800 BLUE RIDGE, STE. 205 RALEIGH 27607 U OF NC	CD /IM AC 59 59 66	HANNA, DONALD PAUL 103 BAINES COURT CARY 27511 WAYNE STATE U	PS AC 79 82 87	HENRICK, WILLIAM ROBERT RALEIGH ANES. ASSOCIATES P. O. BOX 18139 RALEIGH 27619 JEFFERSON	AN AC 71 72 80
GOFF, DAVID ALBERT 7202 FALLS OF NEUSE RD. RALEIGH 27615 U OF NC	IM /PD AC 81 82 78	HARDISON, CYNTHIA STOLTZE 1212 CEDARHURST DR. RALEIGH 27609 NORTHWESTERN U	IM AC 54 63 65	HICKS, CHARLES HENRY 3400 EXECUTIVE DR. RALEIGH 27609 U OF NC	CD AC 76 77 82
GOLDMAN, ALAN LAWRENCE 2800 BLUE RIDGE BLVD., STE. 501 RALEIGH 27607 WASHINGTON U	PD AC 63 63 71	HARDISON, JOSEPH H., JR. 3320 WAKE FOREST RD. RALEIGH 27609 DUKE	IM /GE AC 56 56 64	HILL, JAMES CARVER 1316 YUBINARANDA CIRCLE CARY 27511 U OF NC	FP /EM AC 84 85 82
GOLDSTON, WILLIAM ROBERT 2800 BLUE RIDGE BLVD., STE. 207 RALEIGH 27607 DUKE	OBG AC 63 63 73	HARPER, ROBERT NORMENT, JR. P. O. BOX 18700 1212 CEDARHURST DR. RALEIGH 27609 BOWMAN GRAY	GE /IM AC 77 77 82	HOELLERICH, VINCENT L. PO BOX 18139 RALEIGH 27619 U OF NEBRASKA	AN AC 83 84 88
GOODSON, JOHN PHILLIP 3814 BROWNING PLACE RALEIGH 27609 U OF NC	GS AC 63 63 75	HARPER, ROBERT NORMENT, SR. 3153-G GLENWOOD PROF. VILL. RALEIGH 27608 BOWMAN GRAY	P AC 51 51 53	HOFFMAN, LEROY G., JR. PO BOX 10407 TRIANGLE ONCOLOGY SERVICES RALEIGH, 27605 BOWMAN GRAY	TR /PD AC 75 75 88
GRANADOS, JUAN L. 3000 NEW BERN AVE. RALEIGH 27610 U OF MADRID	OBG AC 66 73 88	HARPER, WAYNE LEE 2501 NORTH ST. RALEIGH 27607 DUKE	IM AC 78 80 82	HOLT, WINDSOR AUSTIN 3320 WAKE FOREST RD., STE. 120 RALEIGH 27609 CASE WESTERN RES	OBG AC 64 64 71
GRANOVETTER, DAVID ALAN 3831 MERTON DRIVE RALEIGH 27609 YALE	RHU /AI AC 74 77 79	HARRIS, ROBERT THOMAS 2800 BLUE RIDGE RD., STE. 503 RALEIGH 27607 EMORY U	IM /PYM AC 78 81 86	HONEYCUTT, LATTIE FULLER P. O. BOX 17947 RALEIGH 27619 U OF NC	DR AC 67 67 76
GRANT, GEORGE REDD, JR. 3101 ESSEX CIRCLE RALEIGH 27608 DUKE	IM AC 63 63 69	HART, TIMOTHY BERTRAND 1212 CEDARHURST DRIVE RALEIGH 27609 MED COLL OF VA	IM /PUD AC 79 80 84	HORTON, ROBERT MARSHALL 3039 ESSEX CIRCLE, BLDG. A RALEIGH 27608 MED COLL OF VA	FP AC 72 73 75
GRANT, HUGH JUDD, JR. 100 S. BOYLAN AVENUE RALEIGH 27603 U OF NC	OBG AC 69 69 75	HARTZOG, HENRY GERARD, III 3814 BROWNING PLACE RALEIGH 27609 U OF NC	GS AC 62 62 69	HOWIE, JOHN SANDALL 3129 ESSEX CIRCLE RALEIGH 27608 U OF NC	PYA /P AC 58 64 64
GREEN, JULIUS ALPHEUS, JR. P. O. BOX 19366 RALEIGH 27615 U OF NC	R AC 57 57 64	HATTAWAY, ALEXANDER C., III 3010 ANDERSON DR. PO BOX 18946 RALEIGH 27619 U OF NC	OTO /HNS AC 65 65 70	HULL, KEITH LOWELL, JR. PO BOX 40999 RALEIGH 27629 DUKE	N /IM AC 75 79 82
GREER, THOMAS BYWATER P. O. BOX 18568 RALEIGH 27619 BOWMAN GRAY	OBG AC 54 54 61	HAYES, DAVID ALLEN 1212 CEDARHURST DRIVE RALEIGH 27609 U OF VIRGINIA	PUD /IM AC 72 72 79	HUNTER, ROBERT MERRILL 3020 NEW BERN AVE. #560 RALEIGH 27610 BOWMAN GRAY	CDS /TS AC 78 83 78
GROCE, JAMES GRAY 508 RALPH DR. CARY 27511 U OF NC	P AC 71 71 80	HAYES, RICHARD IVAN 3320 WAKE FOREST RD. RALEIGH 27609 OHIO STATE U	OBG AC 66 66 75	HWANG, YINNAH G. PO BOX 425 ZEBULON 27597 CHINA MED COLL	FP AC 70 84 86
GROSSHANDLER, STANLEY LOUIS 1108 DRESSER CT. RALEIGH 27609 OHIO STATE U	AN AC 55 55 78	HAYNES, LAWRENCE BOWMAN 1205 KERSHAW DR. RALEIGH 27609 U OF TENNESSEE	AN AC 61 61 70	JACOBSON, ROBERT CARL P. O. BOX 18139 RALEIGH 27619 GEORGETOWN U	AN AC 79 84 85
GUGELMANN, RICHARD JOHN 919 KILDAIRE FARM ROAD CARY 27511 U OF TEXAS	PD /ADL AC 71 71 84	HAYWOOD, HUBERT BENBURY, III 3320 WAKE FOREST RD. PO BOX 18700 RALEIGH 27609 U OF NC	ID /IM AC 72 72 79	JAIN, REKHA 5813 NORTH BOULEVARD RALEIGH 27604 MAHATMA GANDHI	IM /PD AC 76 80 84
GULLEDGE, SIDNEY LOY, III 3400 EXECUTIVE DR., STE. 101 RALEIGH 27609 BOWMAN GRAY	OPH AC 76 76 82	HAYWOOD, HUBERT BENBURY, JR. 2109 BANBURY ROAD RALEIGH 27608 DUKE	OPH L/RT 41 46 52	JEFFERS, ROBERT GORDON 3803 COMPUTER DR. STE. 207 RALEIGH 27609 TULANE U	PD /ADL AC 74 74 83
GUSTKE, SUSAN SHAW 4100 STRANAVER PLACE RALEIGH 27612 WEST VA U	IM /HEM AC 64 70 76		919 782-0236		919 782-5273

92. WAKE COMPONENT SOCIETY (Continued)

JENKINS, ALBERT MILTON 400 SCOTLAND ST. RALEIGH 27609 U OF CINCINNATI	R AC 47 53 53 919 787-4754	KERMON, LOUIS TODD 2708 PEACHTREE ST. RALEIGH 27608 JEFFERSON	IM /CD L/RT 50 50 52 919 782-0563	LEE, WILLIAM DAVID 3100 BLUE RIDGE RD., STE. 302 RALEIGH 27612 U OF NC	FP AC 74 74 77 919 782-0146
JOHNSON, ALBIN WILLARD 2800 BLUE RIDGE BLVD., STE. 409 RALEIGH 27607 DUKE	OPH AC 58 64 65 919 781-7400	KILEY, JAMES WILLIAM 3320 EXECUTIVE DR. RALEIGH 27609 U OF CINCINNATI	OPH AC 76 76 81 919 876-2427	LEET, DOUGLAS CHARLES 3320 WAKE FOREST RD., STE. 100 RALEIGH 27609 U OF CHICAGO	U AC 75 77 82 919 790-0036
JOHNSON, CHARLES ROSS 4000 BLUE RIDGE RD. STE. 100 RALEIGH 27612 BOWMAN GRAY	P AC 65 65 70 919 781-8700	KIM, YOUNG CUE 209 W. MILLBROOK ROAD RALEIGH 27609 KOREA U	IM AC 68 75 77 919 781-5933	LEGRAND, GORDON BUCK 3000 NEW BERN AVENUE RALEIGH 27610 U OF NC	PTH AC 65 65 72 919 755-8260
JOHNSON, JOY MOORING 4612 GUNSTON PL RALEIGH 27612 EAST CAROLINA U	IM AC 82 85 79 919 783-5312	KIMBRELL, ODELL C., JR. 240 BRYAN BUILDING RALEIGH 27605 U OF PENN	IM /END AC 51 51 60 919 828-6393	LEHAN, LEIGH STEELE 2800 BLUE RIDGE RD., STE. 501 RALEIGH 27607 U OF NC	PD AC 81 84 86 919 781-7490
JOHNSON, ROBERT BRUCE 101 CARY PKWY. SW #210 CARY DERMATOLOGY CTR. CARY 27511 DUKE	D AC 78 82 86 919 467-8556	KING, JAMES LEROY 2700 KINGSLEY RD. RALEIGH 27612 BOWMAN GRAY	AN AC 58 58 62 919 832-7988	LEVINE, RONALD H. 2404 WHITE OAK ROAD RALEIGH 27609 DOWNSTATE ME CTR	PH /PD AC 59 65 66 919 782-0838
JOHNSON, STEPHEN EDWARD 10501 LEAFWOOD COURT RALEIGH 27612 CASE WESTERN RES	EM /IM AC 75 76 82 919 755-3100	KIRK, CHARLES DAYTON RALEIGH ANESTHESIA ASSOC. P. O. BOX 18139 RALEIGH 27619 U OF NC	AN AC 69 69 77 919 872-4800	LITTLETON, ROBERT ELTON 3622 HAWORTH DR. RALEIGH 27609 U OF NC	OBG AC 81 82 85 919 782-1273
JOHNSTON, FRANK SMITH, JR. 3900 BROWNING PLACE RALEIGH 27609 U OF NC	IM AC 59 59 69 919 781-9650	KITCHIN, TINA CIESIEL DEVELOPMENTAL EVAL. CTR. 321 ASHE AVE. RALEIGH 27609 U OF OREGON	PD AC 78 81 82 919 782-0341	LOCKLEAR, JIMMY 3320 OLD WAKE FOREST RD. PO BOX 18700 RALEIGH 27609 U OF NC	IM /CD AC 80 83 85 919 872-4850
JONES, DAVID HERMAN 3900 BROWNING PLACE RALEIGH 27609 U OF NC	OPH AC 59 59 66 919 787-2758	KOOMEN, JACOB, JR. 909 DOGWOOD LANE RALEIGH 27607 U OF ROCHESTER	PH L/RT 45 58 60 919 834-4355	LONG, FRED JOSEPH, JR. PO BOX 14445 RALEIGH 27620 MEHARRY MED COLL	GS AC 72 73 80 919 821-5771
JORDAN, H. MENDALL 2800 BLUE RIDGE BLVD. #302 RALEIGH 27607 BOWMAN GRAY	D AC 68 68 72 919 781-1001	KOPP, ELLIOT JOSEPH 3831 MERTON DR. RALEIGH 27609 SUNY-SYRACUSE	RHU /AI AC 73 73 86 919 781-9633	LOWRY, ROY FRANK, JR. 4024 BARRETT DR., STE. 104 RALEIGH 27609 U OF NC	OPH AC 68 68 74 919 787-3241
KAASA, LAURIN JUUL 3000 NEW BERN AVENUE RALEIGH 27610 U OF MINN	PTH L 42 61 61 919 755-8260	KORNEGAY, RAYMOND DEWITT BOX 10976 RALEIGH 27605 BOWMAN GRAY	CDS /TS AC 45 45 56 919 782-3969	LUCEY, DONALD TRUESDELL 2800 BLUE RIDGE BLVD. STE. 403 RALEIGH 27607 DUKE	U AC 63 63 71 919 781-7113
KAMM, RICK RANDE 3805 COMPUTER DR. RALEIGH 27609 U OF IOWA	OBG AC 70 71 77 919 781-6200	KRATZ, ROBERT KEVIN 3000 NEW BERN AVE. RALEIGH 27610 U OF KENTUCKY	EM /IM AC 73 73 78 919 782-3969	MACCORMACK, JOHN NEWTON P. O. BOX 2091 RALEIGH 27602 U OF NC	PH AC 62 62 75 919 733-3421
KANE, RICHARD DOUGLAS 3901 COMPUTER DR. WAKE UROLOGICAL RALEIGH 27609 NORTHWESTERN U	U AC 71 73 78 919 781-5104	KUNSTLING, TED RICHARD 3320 WAKE FOREST RD. RALEIGH 27609 DUKE	PUD /IM AC 68 68 75 919 872-4850	MADDOX, THOMAS WILBUR 3814 BROWNING PLACE RALEIGH 27609 U OF ALABAMA	GS /VS AC 79 80 86 919 781-0710
KANICH, ROBERT EMIL 4420 LAKE BOONE TRAIL RALEIGH 27607 MED COLL OF VA	PTH AC 62 62 77 919 783-3057	KURZMANN, RICHARD WALTER 2800 BLUE RIDGE BLVD. STE. 206 RALEIGH 27607 U OF VIRGINIA	OBG AC 69 72 78 919 781-7450	MADRY, HERBERT RAYMOND, JR. 2105 WHITE OAK ROAD RALEIGH 27608 BOWMAN GRAY	DR AC 56 56 62 919 833-9838
KANOF, ELIZABETH PASCHER 3400 EXECUTIVE DRIVE RALEIGH, N. C. 27609 NEW YORK U	D AC 60 65 66 919 878-0310	KUSUMI, YOSHITARO 1004 DRESSER COURT, STE. 106 RALEIGH 27609 NIHON U	P /PYM AC 61 71 75 919 876-5530	MAGOLAN, JEROME JOSEPH, JR. 3320 EXECUTIVE DR., STE. 210 RALEIGH 27609 M C OF WISCONSIN	OPH AC 81 82 85 919 872-0572
KAYYE, PAUL THOMAS 325 N. SALISBURY ST. RALEIGH 27611 U OF MIAMI	P /CHP AC 62 63 86 919 733-7011	LAMBETH, WILLIAM ARNOLD, III 1112 DRESSER COURT RALEIGH 27609 U OF NC	PS /GS AC 71 71 82 919 872-2616	MAJORS, ROBERT POWELL, JR. 3010 ANDERSON DR. PO BOX 18946 RALEIGH 27619 GEO WASHINGTON U	OTO AC 61 61 71 919 787-7171
KEENER, JOSEPH KEITH 101 DURYER COURT CARY 27511 ST LOUIS U	NEP /IM AC 75 75 86 919 782-3378	LANG, JOHN ALBERT, III 615 ST. MARY'S STREET RALEIGH 27605 U OF NC	IM /DIA AC 74 76 83 919 828-7773	MANGANO, CHARLES A., JR. 3020 NEW BERN AVE. STE. 420 RALEIGH 27610 U OF ROCHESTER	CD /IM AC 74 75 79 919 833-5111
KEENEY, RONALD ERIC 5 MOORE DR., GLAXO, INC. RESEARCH TRIANGLE PK 27709 U OF MISSOURI	PD /ID AC 68 69 78 919 248-2568	LANNING, CHARLES FREDRIC 14208 ALLISON DR. RALEIGH 27614 U OF KANSAS	AN AC 69 70 74 919 832-7988	MANLY, ISAAC VAUGHN 2800 BLUE RIDGE BOULEVARD RALEIGH 27607 HARVARD	GS /TS AC 46 46 55 919 781-7410
KELLEY, JOHN SIMPSON 3100 BLUE RIDGE RD. RALEIGH 27610 BOWMAN GRAY	IM /CD AC 74 74 78 919 781-7500	LAPP, CHARLES WARREN 3400 EXECUTIVE DRIVE RALEIGH 27609 ALBANY MED COLL	IM /PD AC 74 74 74 919 878-0900	MANLY, JAMES HOLLOWELL, JR. 2800 BLUE RIDGE BLVD. #303 RALEIGH 27607 U OF PENN	GS AC 46 46 54 919 781-7425
KENAN, LEROY FULTON 3801 COMPUTER DRIVE RALEIGH 27609 BOWMAN GRAY	FP AC 56 56 59 919 787-0302	LEATHERMAN, HUGH K., JR. 3901 COMPUTER DR. RALEIGH 27609 MED U OF SC	U AC 81 83 88 919 781-5104	MANN, CARROLL LAMB, III 3009 NEW BERN AVE. PO BOX 14027 RALEIGH 27620 U OF NC	NS AC 63 63 70 919 832-4448
KENNEDY, WILLARD LEE 3400 EXECUTIVE DR., STE. 201 RALEIGH 27609 BOWMAN GRAY	CD /IM AC 75 75 81 919 872-8920	LEB, STEPHEN MARC 3801 COMPUTER DR. #207 RALEIGH 27609 U OF MIAMI	GS AC 75 77 88 919 787-8393	MANN, JAMES TIFT, III WAKE HEART ASSOCIATES PO BOX 14427 RALEIGH 27620 U OF NC	CD AC 69 70 78 919 832-9253

92. WAKE COMPONENT SOCIETY (Continued)

MARKS, JOHN JACOB 5512 HAWTHORNE PARK RALEIGH 27612 U OF NC	GYN AC 79 80 86 919 848-1990	MILLER, WILLIAM STACEY 3803-A COMPUTER DR. RALEIGH 27609 U OF NC	D AC 61 61 69 919 782-2152	NG, GODOFREDO TAN 1101 DRESSER COURT RALEIGH 27609 U OF PHILIPPINES	GS /TS AC 62 62 70 919 876-2010
MARTIN, PHILIP L. 3320 EXECUTIVE DR., STE. 210 RALEIGH 27609 U OF NC	OPH AC 73 75 76 919 872-0572	MILLWARD, DAVID KENT 1212 CEDARHURST DR. RALEIGH 27609 GEO WASHINGTON U	CD /IM AC 65 65 72 919 872-4850	NICHOLS, MARK LOVEL 2425 COLEY FOREST PLACE RALEIGH 27612 MED COLL OF VA	IM /EM AC 71 73 84 919 755-8589
MARTIN, SIDNEY ARNOLD 3141 ESSEX CIRCLE RALEIGH 27608 BOWMAN GRAY	OM /FP AC 53 53 57 919 782-0911	MODROW, PETER ALBERT 805 FAULKNER PLACE RALEIGH 27609 U OF NC	AN /P AC 65 66 72 919 876-0581	NICHOLSON, CHARLES H. PO BOX 18139 RALEIGH 27619 ST U OF NY-BUFF	AN AC 82 83 86 919 781-7420
MARUCHECK, JOHN THOMAS 6217 DRESDEN LANE RALEIGH 27612 U OF OKLAHOMA	IM AC 78 79 83 919 878-0900	MOHR, LINDA CHAPPELL 3220 WAKE FOREST RD. RALEIGH 27609 U OF NC	OBG AC 80 81 85 919 876-8225	NOAH, VAN BATCHELOR 3900 OLD WAKE FOREST RD. SUITE 104 RALEIGH 27609 BOWMAN GRAY	OPH AC 66 66 72 919 872-3242
MASON, ERIC W. PO BOX 18139 RALEIGH 27619 U OF MIAMI	AN AC 80 81 85 919 783-3034	MONG, JAMES ARTHUR 100 S. BOYLAN AVENUE RALEIGH 27603 U OF CINCINNATI	OBG AC 80 83 84 919 832-5529	NOBLE, RICHARD CLAIBORNE 2620 NEW BERN AVE. RALEIGH 27615 U OF NC	IM AC 84 85 82 919 755-1111
MASSENGILL, G.K. 3308 TIMBER LAKE ROAD RALEIGH 27604 DUKE	GS L/RT 36 36 57 919 872-6924	MONTGOMERY, STEPHEN PAUL P. O. BOX 10707 RALEIGH 27605 RUSH MED COLL	ORS AC 74 74 80 919 781-5600	NONEMAN, JACK W., JR. 3400 EXECUTIVE DR., STE. 201 RALEIGH 27609 U OF NC	CD AC 77 77 87 919 872-8920
MCALLISTER, JAMES GRAY, III 1004 DRESSER CT., STE. 108 RALEIGH 27609 U OF NC	P AC 60 60 68 919 876-0287	MOORE, GEORGE HORACE 833 DURHAM RD., STE. C WAKE FOREST 27587 EAST CAROLINA U	FP AC 81 81 80 919 556-6762	NUNNALLY, JAMES THOMAS, III 2000 YORKGATE DRIVE RALEIGH 27612 MED COLL OF GA	CHP /P AC 59 59 71 919 781-1160
MCBRIDE, JACK M., JR. 1109 DRESSER COURT RALEIGH 27609 DUKE	FP AC 82 82 00 919 872-4900	MORESCHI, RAFAEL MARIANO 105-A KILMAYNE DR. CARY 27511 U OF ASUNCION	IM /CD AC 72 81 84 919 467-2253	NUTT, JAMES EDWARD 3400 EXECUTIVE DR., STE. 201 RALEIGH 27609 MED COLL OF GA	CD /IM AC 74 75 81 919 872-8920
MCDANIEL, WILLIAM JASON, JR. P. O. BOX 10707 RALEIGH 27605 U OF NC	ORS AC 67 67 72 919 781-5600	MORRIS, PETER JOSEPH 2108 YORKGATE DR. RALEIGH 27613 U OF NC	PD /PH AC 78 78 76 919 755-0761	OATES, LARRY ALLEN 2900 HIGHWOODS BLVD. RALEIGH 27604 OHIO STATE U	IM AC 64 64 84 919 878-9870
MCDOWELL, ROBERT WARREN 734 ROCK QUARRY ROAD RALEIGH 27610 MEHARRY MED COLL	GP AC 51 53 67 919 832-5389	MORROW, SARAH TAYLOR 3304 WADE AVE. RALEIGH 27607 U OF MARYLAND	PH /PD AC 44 45 61 919 851-9305	OLIVER, FREDERICK CARLTON, JR. 103 BAINES COURT CARY 27511 MED U OF SC	IM AC 75 76 79 919 467-6125
MCGRORY, EDWARD JOSEPH, JR. 3900 OLD WAKE FOREST ROAD RALEIGH 27609 MED U OF SC	OPH AC 74 75 80 919 872-3242	MOSELEY, JAMES RENNIE 340 N. MAIN STREET WAKE FOREST 27587 U OF ALABAMA	FP AC 54 54 70 919 556-4826	OLLER, DALE WILLIAM 3000 NEW BERN AVE. RALEIGH 27610 GEO WASHINGTON U	GS /VS AC 68 72 88 919 755-8698
MCKAY, MICHAEL DIXON 1212 CEDARHURST DR. RALEIGH 27609 MED COLL OF GA	GE AC 82 83 87 919 872-4850	MOSELEY, ROBERT GALLOWAY BOX 7304, NCSU-S.H.S. RALEIGH 27695 DUKE	PD AC 57 57 62 919 737-2563	ORNITZ, ROBERT DAVID 4420 LAKE BOONE TRAIL RALEIGH 27607 U OF OKLAHOMA	ON /TR AC 71 75 79 919 783-3018
MCKENZIE, SHEPPARD A., III 3805 COMPUTER DRIVE RALEIGH 27609 U OF NC	OBG /IM AC 74 74 79 919 781-6200	MOSER, WADE HAUSER, JR. CAPITAL RADIOLOGY ASSOC. P. O. BOX 17947 RALEIGH 27619 U OF NC	DR AC 74 74 73 919 847-8564	OSCHWALD, DONALD L.A., JR. 1112 DRESSER COURT RALEIGH 27609 U OF NEW MEXICO	PS AC 78 79 87 919 892-2616
MCLAIN, LEE WILLIAM, JR. PO BOX 40999 RALEIGH 27629 DUKE	N AC 61 61 86 919 782-3456	MULVANEY, GERALD GARFIELD 11613 APPALOOSA RUN, WEST RALEIGH 27612 BOSTON U	OBG AC 78 80 83 919 755-8535	OSTROW, BARRY SEYMOUR 3049 ESSEX CIR. BLDG. A RALEIGH 27608 U OF MICHIGAN	P AC 66 66 74 919 782-1366
MCMAHON, KEVIN D. 3100 BLUE RIDGE RD. STE. 200 RALEIGH 27612 ALBERT EINSTEIN	OPH AC 83 87 87 919 787-2211	MUNT, ROBERT LAWRENCE, JR. 4505 FAIR MEADOWS LN. #101 RALEIGH 27607 U OF NC	PD AC 77 77 82 919 787-5495	OVERCASH, HAROLD PAYNE 3616 ALAMANCE DR. RALEIGH 27609 U OF NC	PD AC 79 82 77 919 787-0266
MCMANUS, HUGH FORREST, JR. 3331 WHITE OAK RD. RALEIGH 27609 MED U OF SC	IM L 38 38 41 919 832-6510	MURPHY, TERRANCE P. 516 RIDGECREST RD. CARY 27511 LA STATE U	PD AC 84 84 88 919 755-2236	PAAR, JOHN ARTHUR 3200 OLD WAKE FOREST RD. RALEIGH 27609 U OF PITTSBURGH	CD /IM AC 60 61 68 919 872-4850
MCREE, CHRISTINE ELLIS DOROTHEA DIX HOSP.-PSY RALEIGH 27611 TULANE U	CHP AC 46 46 75 919 733-5344	MYERS, RICHARD STANTON 2800 BLUE RIDGE BOULEVARD RALEIGH 27607 WASHINGTON U	GS /TS AC 65 65 73 919 781-7414	PACKER, JOHN WESLEY 3515 GLENWOOD AVE. PO BOX 10707 RALEIGH 27605 BOWMAN GRAY	ORS /HS AC 65 65 72 919 781-5600
MEDLIN, CHARLES THOMAS 2000 HIGHWAY 70 WEST GARNER 27529 BOWMAN GRAY	FP AC 52 52 53 919 772-3266	NELSON, ROBERT BARRY P. O. BOX 10707 RALEIGH 27605 NORTHWESTERN U	ORS AC 65 65 72 919 781-5600	PAGE, ERNEST BENJAMIN, JR. 2500 BLUE RIDGE RD., STE. 201 RALEIGH 27607 DUKE	IM AC 49 53 55 919 881-0054
MELTZER, MORTON ROUTE 1, BOX 231-A CAMERON 28326 NEW YORK MED COL	FP /P AC 65 65 70 919 245-4819	NEWELL, LANNING RICHARD 3320 EXECUTIVE DR., STE. 119 RALEIGH 27609 U OF NC	GE /IM AC 75 77 81 919 878-9465	PARKER, MICHAEL YOUNG 3100 BLUE RIDGE RD., STE. 201 RALEIGH 27612 U OF NC	OTO /HNS AC 78 80 76 919 787-1374
MERWARTH, CHARLES RICHARD 2800 BLUE RIDGE BLVD. #503 RALEIGH 27607 DUKE	IM /A AC 55 55 63 919 782-7500	NEWMAN, WILLIAM NEAL WAKE HEART ASSOCIATES PO BOX 14427 RALEIGH 27620 DUKE	CD /IM AC 77 82 83 919 832-9253	PARNELL, JEROME PATRICK, II 3901 COMPUTER DR. RALEIGH 27609 DOWNSTATE ME CTR	U AC 74 75 82 919 781-5104
MILLER, PHILIP RAIFORD 3100 BLUE RIDGE RD. RALEIGH 27612 BOWMAN GRAY	IM /CD AC 67 67 73 919 781-7500				

92. WAKE COMPONENT SOCIETY (Continued)

PARSONS, JAMES SHERIDAN 704 W. JONES STREET RALEIGH 27603 U OF NC	IM AC 76 76 75 919 832-5125	QUIGLESS, MILTON DOUGLAS, JR. 100 SUNNYBROOK ROAD P. O. BOX 14445 RALEIGH 27620 MEHARRY MED COLL	GS AC 71 72 79 919 821-5771	RUSSELL, ROGER BIVINS 2501 NORTH ST., STE. 500 RALEIGH 27607 BOWMAN GRAY	PS/GS AC 76 80 84 919 782-7762
PASCHAL, GEORGE W., JR. 3334 ALAMANCE DRIVE RALEIGH 27609 JEFFERSON	GS L/RT 31 31 46 919 787-2177	QUINN, CLIFTON LEE 3125 GLENWOOD PROF VILLAGE RALEIGH NC 27608 U OF NC	P AC 54 54 55 919 782-0166	SAAD, MAGED HANNA 3010 FALSTAFF ROAD RALEIGH 27610 CAIRO U	P/GP AC 61 75 75 919 821-0300
PASCHAL, GEORGE W., III 3814 BROWNING PLACE RALEIGH 27609 BOWMAN GRAY	GS/CDS AC 73 73 78 919 781-0710	RADFORD, WANDA LEE 2800 BLUE RIDGE BLVD., STE. 206 RALEIGH 27607 U OF NC	OBG AC 75 75 75 919 781-7450	SALEEBY, RICHARD GEORGE 3801 COMPUTER DRIVE RALEIGH 27609 JEFFERSON	CRS AC 46 47 55 919 787-2542
PATE, DEWEY HARRIS WAKE MEMORIAL HOSPITAL RALEIGH 27610 U OF NC	PTH AC 58 66 67 919 755-8260	RAMQUIST, NEIL ALBERT 2713 TOWNEDGE CT. RALEIGH 27612 U OF CA-DAVIS	DR AC 77 78 79 919 783-3023	SALTER, TERESA PALMER 101 W. DURHAM ROAD CARY 27511 U OF NC	PD AC 75 75 80 919 467-5543
PATTERSON, HUBERT CLIFTON P. O. BOX 18946 RALEIGH 27619 U OF NC	OTO/PSF AC 74 74 84 919 787-7171	REDDY, AMARENDRA BUSA 3020 NEW BERN AVE., STE. 410 RALEIGH 27610 GANDHI MED COLL	CD/IM AC 68 74 76 919 828-8967	SANCHEZ, CLARE JEANNE 3000 NEW BERN AVE. WAKE AHEC MED. TEACHING SERV. RALEIGH 27610 U OF COLORADO	GER/IM AC 75 77 85 919 755-8520
PEARSON, JOHN KENT P. O. BOX 727 APEX 27502 DUKE	FP AC 53 53 56 919 362-8312	REES, MICHAEL STEVENS 3101 ESSEX CIRCLE, BLDG. E RALEIGH 27608 VANDERBILT U	IM AC 76 76 79 919 782-2631	SANDERS, LEE HYMAN 2502 ANDERSON DRIVE RALEIGH 27608 TEMPLE U	PD L/RT 42 42 46 919 787-9888
PEDIADITAKIS, NICHOLAS P. 5100 LEADLINE ROAD RALEIGH 27612 U THESSALONIKI	P AC 54 61 61 919 787-0710	REIBEL, DONALD BAUMANN P. O. BOX 10707 RALEIGH 27605 INDIANA U	ORS AC 57 64 64 919 781-5600	SATTERFIELD, BENTON SAPP 3126 BLUE RIDGE RD. RALEIGH 27612 DUKE	OBG AC 62 62 65 919 782-3865
PETERS, BRYAN MACLIN 3821 MERTON DR. RALEIGH 27609 DUKE	DR AC 81 85 80 919 755-8511	REKUC, GREGORY M. 1212 CEDARHURST DR. RALEIGH 27609 U OF FLORIDA	IM AC 81 81 87 919 872-4850	SCANLAN, JAMES GEORGE 3400 EXECUTIVE DR., STE. 201 RALEIGH 27609 NORTHWESTERN U	CD/IM AC 73 74 80 919 872-8920
PIERSON, WILLARD CRESSE, JR. 1212 CEDARHURST DR. RALEIGH 27609 DUKE	GE/IM AC 66 66 73 919 872-4850	RENDLEMAN, DAVID ATWELL, III 3410 EXECUTIVE DRIVE RALEIGH 27609 U OF NC	ORS AC 70 70 78 919 872-5296	SCARBOROUGH, DAWSON E. WAKE CO. MED. CTR.,-PATH. RALEIGH 27610 U OF NC	PTH AC 62 62 71 919 755-8260
PIKE, MICHAEL ROBERT 101 S. W. CARY PARKWAY CARY 27511 MT SINAI SCH MED	GE/IM AC 73 74 81 919 469-1858	RHODES, JOHN FLINT 2800 BLUE RIDGE BLVD. STE. 403 RALEIGH 27607 U OF NC	U AC 62 62 70 919 781-7113	SCARBOROUGH, WALTER A., JR. 1004 DRESSER COURT, STE. 101 RALEIGH 27609 DUKE	P AC 67 67 75 919 876-0090
PITTMAN, JERRY MICHAEL 220 OAKCREST DR., WAKE FOREST 27587 U OF SOU. ALA.	AC 79 82 88 919 846-7403	RHYNE, JIMMIE LEE DIV. OF HEALTH SERVICES PO BOX 2091 RALEIGH 27602 U OF MARYLAND	PH/PD AC 48 48 56 919 733-7791	SCHAAF, ROBERT EDMUND WAKE RADIOLOGY CONSULTANT P. O. BOX 19366 RALEIGH 27619 TUFTS U	DR AC 76 77 81 919 787-8199
POLLOCK, MORRIS ARTHUR 1212 CEDARHURST DR. RALEIGH 27609 JEFFERSON	GE/IM AC 69 70 77 919 872-4850	RICH, KENNETH J. 3320 WAKE FOREST RD. STE. 410 RALEIGH 27609 ST U OF NY-BUFF	NS AC 78 79 88 919 850-9911	SCHECTER, NANCY POST 3320 EXECUTIVE DRIVE RALEIGH 27609 DUKE	N AC 79 83 84 919 872-0940
POOLE, JAMES MORRISON 3803 COMPUTER DR., STE. 207 RALEIGH 27609 MED U OF SC	PD/ADL AC 76 79 84 919 782-5273	ROBERTS, SURRY PARKER 700 RUNNYMEDE ROAD RALEIGH 27607 U OF NC	RHU/IM RT 66 66 76 919 781-1274	SCHMITT, JOHN WILSON 2800 BLUE RIDGE BLVD #502 RALEIGH 27607 U TX-SAN ANTONIO	OBG AC 83 83 83 919 781-5510
POOLE, TERRY WAYNE 2500 BLUE RIDGE CTR., STE. 401 RALEIGH 27607 BOWMAN GRAY	OBG AC 73 73 79 919 781-5510	ROBINSON, CHARLES HALL, JR. 3900 OLD WAKE FOREST ROAD SUITE 104 RALEIGH 27609 DUKE	OPH AC 75 76 73 919 872-3242	†SCHURTER, LONIS LEON 505 NORTHWOOD CIRCLE GARNER 27529 DECEASED-6-6-88 U OF OKLAHOMA	LM RT 46 65 66 919 772-3363
POWELL, DAVID CLIFTON 1101 DRESSER COURT RALEIGH 27609 U OF NC	GS AC 78 79 75 919 876-2010	ROLLINS, ROBERT LEROY, JR. 2500 WAKE DRIVE RALEIGH 27608 DUKE	FPY AC 56 56 60 919 733-5525	SCHWARZ, RONALD PAUL 3521 HAWORTH DR. RALEIGH 27609 CORNELL U	GE/IM AC 77 79 83 919 782-1806
PRATT, LAURA WINSTEAD 3400 EXECUTIVE DR. STE. 203 RALEIGH 27609 BOWMAN GRAY	FP AC 72 72 74 919 878-0340	ROSENSON, MALCOLM D. 1212 CEDARHURST DR. RALEIGH 27612 LA STATE U	ID/IM AC 81 81 88 919 872-4850	SCOTT, HARRY WHITE 3900 BROWNING PL., STE. 202 RALEIGH 27609 U OF NC	D AC 62 62 71 919 782-2735
PRICE, HARVEY CRAIG 1905 STURBRIDGE COURT RALEIGH 27612 U OF NC	HNS AC 78 80 83 919 782-8955	ROYSTER, CHAUNCEY LAKE 1801 MCDONALD LANE RALEIGH 27608 CORNELL U	IM L/RT 35 35 41 919 832-0796	SCOVIL, JAMES A., JR. 4021 BARRETT DR. RALEIGH 27609 U OF NC	CD/IM AC 71 71 81 919 782-1550
PRITCHETT, NEWTON GEORGE 2800 BLUE RIDGE, STE. 205 RALEIGH 27607 DALHOUSIE U	IM AC 42 53 53 919 782-0414	RUARK, ROBERT JAMES 525 WADE AVENUE, APT. #51 RALEIGH 27605 U OF PENN	OBG L/RT 31 32 34 919 832-4722	SEDWITZ, JOSEPH LEE 231 HOSPITAL ROAD ZEBULON 27597 U OF VIRGINIA	GS/GYN AC 51 61 61 919 269-9310
PROCTER, WILLIAM IVAN 3900 BROWNING PLACE RALEIGH 27609 DUKE	IM AC 57 57 64 919 781-9650	RUBINO, JOHN 3521 HAWORTH DR. RALEIGH 27609 U OF CONNECTICUT	IM/A AC 83 84 87 919 782-1806	SELLERS, BOBBY EUGENE 3900 BROWNING PLACE RALEIGH 27609 U OF TENNESSEE	P AC 63 64 64 919 787-7125
PUGH, VERNON WATSON, JR. 1321 OBERLIN ROAD RALEIGH 27608 JEFFERSON	PD AC 53 53 57 919 828-4747	RUIZ, FERNANDO REY 4096 BARRETT DR. RALEIGH 27609 U OF CHILE	P/GER AC 65 69 82 919 832-7606	SENER, WILLIAM JEFFRESS 704 W. JONES STREET RALEIGH 27603 U OF MARYLAND	IM L 42 42 49 919 832-5125
QUEEN, LAURINDA LEE 4505 FAIR MEADOWS LN., STE. 103 RALEIGH 27607 U. OF ARIZONA	D AC 81 82 86 919 783-7877				

92. WAKE COMPONENT SOCIETY (Continued)

SHAH, PRIYAVADAN MANEKLAL 121 EDINBURGH ST. #208 CARY 27511 BARODA U	CD /IM AC 72 73 82 919 469-9919	STYRON, CHARLES WOODROW 615 ST. MARY'S STREET RALEIGH 27605 DUKE	IM /DIA L 38 41 46 919 828-7773	TUCKER, GEORGE FRANKLIN P. O. BOX 246 ZEBULON 27597 MED COLL OF VA	FP AC 52 52 53 919 269-9144
SHAW, DALE RUSSELL P. O. BOX 19366 RALEIGH 27619 DUKE	DR AC 73 73 73 919 787-8199	SULLIVAN, WILLIAM GREGORY 3400 EXECUTIVE DR., STE. 104 P. O. BOX 17200 RALEIGH 27619 LOYOLA U	GS AC 60 61 73 919 876-2732	TUMEN, JON JAY 3100 BLUE RIDGE RD., STE. 300 RALEIGH 27610 DUKE	IM /PUD AC 80 86 79 919 781-7500
SHEARIN, WILLIAM ARTHUR 2800 BLUE RIDGE BLVD., STE. 405 RALEIGH 27607 DUKE	OPH AC 62 62 67 919 781-7373	SUMMERLIN, ARTHUR ROGERS 2800 BLUE RIDGE BLVD. #401 RALEIGH 27607 U OF VIRGINIA	OBG AC 48 48 56 919 781-5504	TYREE, LARRY ALLEN 1109 DRESSER COURT RALEIGH 27609 BOWMAN GRAY	FP AC 62 62 68 919 872-4900
SHICK, JAFAR MO 7321 GRIST MILL RD. RALEIGH 27609 U OF TEHRAN	AN AC 61 62 72 919 755-8000	SWAIM, LINDIAN JOSEPH, JR. 2500 BLUE RIDGE RD., STE. 219 RALEIGH 27607 U OF NC	OBG AC 73 73 83 919 782-9005	UMPHLET, THOMAS LEONARD 2519 WHITE OAK ROAD RALEIGH 27609 U OF PENN	IM L/RT 34 34 39 919 787-9650
SIDES, EVIN HENDERSON, III 3320 EXECUTIVE DR. RALEIGH 27609 U OF NC	IM /ID AC 65 65 71 919 876-9688	SWEENEY, CHARLES LESLIE, JR. P. O. BOX 17263 RALEIGH 27619 DUKE	FP AC 57 57 62 919 787-5211	UNGER, HENRY ALAN 101 S. W. CARY PARKWAY CARY 27511 VANDERBILT U	U AC 72 76 81 919 467-3203
SINCLAIR, LOUIS GORDON 3309 WHITE OAK ROAD RALEIGH 27609 U OF PENN	GS /GYN L/RT 33 33 39 919 787-9356	TANAS, KHALIL S. 111 WEDGEWOOD CT. MORGANTOWN 28655 AMER U OF BEIRUT	AC 72 75 88	VALONE, JAMES AUSTIN 2800 BLUE RIDGE BLVD., #304 RALEIGH 27607 ST U OF NY-BUFF	PS /GS L 36 47 54 919 781-7430
SMITH, JANE SWAN 3320 OLD WAKE FOREST RD. RALEIGH 27609 U OF CINCINNATI	IM AC 81 81 86 919 872-4850	TAYLOR, MICHAEL ALAN 4505 FAIR MEADOWS LN. STE. 101 RALEIGH 27607 U OF LOUISVILLE	PD AC 76 77 80 919 787-5495	VAUGHN, DONALD EUGENE 120 WIND CHIME COURT RALEIGH 27615 U OF TENNESSEE	EM /FP AC 57 61 61 919 847-8821
SMITH, STEPHEN WAYNE 2800 BLUE RIDGE, STE. 205 RALEIGH 27607 U OF NC	IM /CD AC 73 74 75 919 782-0414	TELFER, JAMES GAVIN, JR. 305 S. ACADEMY STREET CARY 27511 WASHINGTON U	IM /FP AC 71 77 78 919 467-7528	VENTERS, GEORGE COLE 3410 EXECUTIVE DRIVE RALEIGH 27609 U OF NC	ORS AC 71 71 76 919 872-5296
SNYDER, EDWARD SUTTON 1216 BARCROFT PLACE RALEIGH 27615 GEORGETOWN U	DR /NM AC 65 65 72 919 847-1289	THOMAS, BEN DAVID P. O. BOX 247 ZEBULON 27597 MED U OF SC	FP AC 44 46 47 919 269-9111	VEST, HOWARD RYLAND, JR. RALEIGH ANESTHESIA ASSOC. P. O. BOX 18139 RALEIGH 27619 U OF VIRGINIA	AN AC 71 71 74 919 781-7420
SPAIN, ROBERT SPRUILL 3707 OLD LASSITER MILL ROAD RALEIGH 27609 WASHINGTON U	IM AC 46 46 55 919 782-2805	THOMAS, EDWIN SCOTT 106 E. PARK ST. CARY 27511 U OF NC	IM AC 64 64 85 919 467-8168	WALDENBERG, LEOPOLD MARK 3400 EXECUTIVE DR. STE. 104 P. O. BOX 17200 RALEIGH 27619 TUFTS U	GS AC 65 65 72 919 876-2732
SPARROW, NATHANIEL LOUIS 3010 ANDERSON DR. PO BOX 18946 RALEIGH 27619 U OF NC	OTO AC 57 57 65 919 787-7171	THOMPSON, BENJAMIN E., JR. 301 S. ACADEMY STREET CARY 27511 U OF NC	GP AC 58 58 61 919 467-9961	WALKER, PRESTON ALMAND TAYLOR HALL DOROTHEA DIX HOSPITAL RALEIGH 27611 MED U OF SC	CHP /P AC 59 60 67 919 733-5130
SPRUNT, WM HUTCHINSON, III 6508 BROOKHOLLOW DR. RALEIGH 27609 HARVARD	R /RHU AC 45 48 53 919 787-8199	THORNHILL, EDWIN HALE 720 W. JONES STREET RALEIGH 27603 DUKE	OTO /OPH L 38 41 42 919 834-7341	WARD, JOHN THOMAS 3100 BLUE RIDGE RD., STE. 200 RALEIGH 27612 U OF OKLAHOMA	OPH AC 81 83 86 919 787-2211
STAFFORD, STEVEN JAMES 3410 EXECUTIVE DR. STE. 201 RALEIGH 27609 U OF CHICAGO	U AC 76 76 83 919 966-2571	THORNHILL, GEORGE TUDOR 720 W. JONES STREET RALEIGH 27603 DUKE	OPH L 41 49 50 919 834-7341	WARE, JULIE LYNNE 4704 OAK PARK RD. RALEIGH 27612 BAYLOR	PD AC 81 82 88 919 786-4862
STEPHENSON, SHARON R. 101 S.W. CARY PKWY. #170 CARY 27511 U OF NC	OBG AC 84 86 88 919 467-5941	THULLEN, JAMES DONALD 2311 LAKE DRIVE RALEIGH 27609 DES MOINES OST	PD /NPM AC 70 70 82 919 755-8545	WARREN, JULIAN MARION BOX 1120, SPRING HOPE CLINIC SPRING HOPE 27882 U OF VIRGINIA	FP 56 57 58 919 478-4600
STILES, EDDIE PHILLIPS BOX A APEX 27502 U OF NC	FP AC 63 63 66 919 362-7353	THURBER, DAVID CUSHMAN, JR. MEDICAL DEP. DOROTHEA DIX HOSP RALEIGH 27611 U OF ROCHESTER	IM AC 77 79 85 919 733-5157	WARREN, LARRY E. 503 SUNNYBROOK ROAD RALEIGH 27610 U OF NC	IM AC 74 74 84 919 755-8394
STIRMAN, JERRY ARCHIBALD, JR. 1101 DRESSER COURT RALEIGH 27609 U OF TEXAS	GS /TS AC 74 74 80 919 876-2010	TILSON, HUGH H. 3030 CORNWALLIS RD. EIS DIV. BURROUGHS WELLCOME RESEARCH TRIANGLE PK 27709 WASHINGTON U	GPM /PH AC 64 64 79 919 248-4354	WATANABE, TSUNEO KENT 101 S. W. CARY PARKWAY CARY 27511 KEIO GIJUKU U	OTO /HNS AC 74 78 83 919 467-7380
STOCKS, LEWIS HENRY, III 1101 DRESSER CT. RALEIGH 27609 M C OF WISCONSIN	GS /TS AC 71 73 76 919 876-2010	TORTORA, FRANK L., JR. 101 S. W. CARY PARKWAY CARY 27511 EMORY U	U AC 77 79 87 919 467-3203	WEBB, ALEXANDER, JR. 2708 FAIRVIEW ROAD DECEASED--4-2-88 RALEIGH 27608 HARVARD	GS 37 40 41 919 781-3469
STOODT, GEORJEAN PO BOX 2091 NC DIV. OF HEALTH SERVICES RALEIGH 27602 U OF CINCINNATI	PH /GPM AC 79 79 88 919 733-7081	TOSKY, GEORGE MICHAEL 2800 BLUE RIDGE BLVD. #206 RALEIGH 27607 BOWMAN GRAY	OBG AC 81 82 86 919 781-7450	WEISLER, RICHARD HARRY 3320 EXECUTIVE DR. STE. 216 RALEIGH 27609 U OF NC	P AC 76 76 82 919 782-4672
STRADER, KYLE WOODROW 3831 MERTON DR. RALEIGH 27609 WEST VA U	RHU /A AC 81 81 86 919 781-9633	TOVE, NANCY LOUISE 101 S. W. CARY PKWY. CARY 27511 U OF NC	FP AC 82 83 86 919 469-5072	WHELISS, JOHN ANGUS 2800 BLUE RIDGE BLVD. STE. 407 RALEIGH 27607 COLUMBIA U	OPH AC 52 54 57 919 781-7402
STRATAS, NICHOLAS EMANUEL 3900 BROWNING PL. #201 RALEIGH 27609 U OF TORONTO	P /HYP AC 57 60 63 919 787-7125	TREMONT, STEPHEN J. PO BOX 30098 RALEIGH 27622 TUFTS U	ON AC 74 79 86 919 781-7070	WHICKER, JAMES HUBERT 3010 ANDERSON DRIVE P. O. BOX 18946 RALEIGH 27619 U OF NC	OTO AC 66 74 82 919 787-7171

92. WAKE COMPONENT SOCIETY (Continued)

WHITAKER, DONALD NASH 2016 CAMERON STREET RALEIGH 27605 TEMPLE U	FP L/RT 40 40 46 919 832-0343	WILSON, WILLIAM LENOIR WEDGEWOOD APT. #23 740 E. SMALLWOOD DR. RALEIGH 27605 BAYLOR	PH L/RT 26 59 60 919 828-2940	WYKER, ROBERT T. PO BOX 10707 RALEIGH 27605 U OF VIRGINIA	ORS AC 82 84 87 919 781-5600
WHITEHURST, LEE ALBERT 3515 GLENWOOD AVENUE P. O. BOX 10707 RALEIGH 27605 U OF NC	ORS AC 72 72 78 919 781-5600	WINSLOW, FRANCIS EDWARD, JR. 3001 ESSEX CIRCLE RALEIGH 27608 DUKE	PD AC 53 53 61 919 782-0021	WYNIA, VIRGIL HOWARD 3020 NEW BERN AVE. #420 RALEIGH 27610 HARVARD	CD /IM AC 72 74 81 919 781-7557
WHITNEY, PAMELA JOYCE 3320 EXECUTIVE DR., STE. 218 RALEIGH 27609 U OF OKLAHOMA	N AC 80 80 84 919 872-0940	WINSLOW, ROBERT BROWN 2501 NORTH ST., STE. 500 RALEIGH 27607 COLUMBIA U	PS /GS AC 62 62 72 919 782-7762	YARBOROUGH, MICHAEL F. 3400 EXECUTIVE DR. STE. 104 PO BOX 17200 RALEIGH 27619 U OF NC	GS /TS AC 72 72 81 919 876-2732
WIEGAND, STEVEN FREDERICK 10305 WHITESTONE ROAD RALEIGH 27609 HAHNEMANN	EM /FP AC 77 78 80 919 848-9471	WOLFE, ANN FIERRO 6912 HUNTERS WAY RALEIGH 27615 TEMPLE U	PD AC 61 61 83 919 733-3816	YELLIG, EDWARD BOOTH 2800 BLUE RIDGE BLVD. STE. 503 RALEIGH 27607 JEFFERSON	IM AC 69 75 78 919 782-7500
WILKERSON, ANNIE LOUISE 100 S. BOYLAN AVENUE RALEIGH 27603 MED COLL OF VA	OBG /GYN L 38 38 39 919 832-5529	WOODARD, PAUL RICHARD 1825 ST. MARY'S ST. RALEIGH 27608 U OF NC	AN AC 79 80 85 919 755-8000	YOFFE, MARK PO BOX 30098 RALEIGH HEM/ONCOLOGY CLI. RALEIGH 27622 U OF FLORIDA	ON /HEM AC 77 80 83 919 781-7070
WILKERSON, LOUIS REAMS 100 S. BOYLAN AVENUE RALEIGH 27603 MED COLL OF VA	OBG AC 52 52 56 919 832-5529	WOODARD, SABRA ALDERMAN 1825 ST. MARY'S STREET RALEIGH 27608 U OF NC	R /NM AC 76 76 84 919 755-3023	YOUNG, DAVID ALEXANDER 1546 IREDELL DR. RALEIGH 27608 HARVARD	P /PYA L 31 31 46 919 834-0821
WILKINS, STANLEY A., JR. 3100 BLUE RIDGE RD. RALEIGH 27607 U OF NC	OTO /HNS AC 82 83 88 919 787-1374	WOODRUFF, LEON FESTUS, JR. 2800 BLUE RIDGE, BLVD., STE. 502 RALEIGH 27607 BOWMAN GRAY	OBG AC 72 72 76 919 781-5510	ZARZAR, NAKHLEH PACIFICO 3153 GLENWOOD PROF. VILL. BLDG. H RALEIGH 27608 AMER. U OF BEIRUT	P AC 56 63 64 919 782-0166
WILKINSON, JAMES S., SR. 215 BRYAN BLDG. RALEIGH 27605 U OF PENN	D L 38 38 40 919 832-6044	WOOTEN, ELEANOR JANE H. 904 WILLIAMSON DRIVE RALEIGH 27608 DUKE	PD /PH AC 42 44 46 919 832-4097	ZELLER, DONALD JOHN 1210 LARKHALL CT. CARY 27511 JEFFERSON	FP AC 83 84 87 919 782-0146
WILLETT, ROBERT W. 2800 BLUE RIDGE BLVD. STE 503 RALEIGH 27607 DUKE	IM /N AC 48 53 55 919 782-7500	WORTH, THOMAS CLARKSON 500 LAKE BOONE TRAIL RALEIGH 27608 HARVARD	R L/RT 36 36 49 919 834-8251	ZELLINGER, MICHAEL JAY WAKE HEART ASSOCIATES PO BOX 14427 RALEIGH 27620 DUKE	CD /IM AC 73 75 81 919 832-9253
WILLIAMS, JOHN HOWARD 905 W. JOHNSON ST. RALEIGH 27605 U OF NC	IM AC 83 84 86	WRIGHT, JAMES RHODES 528 WADE AVENUE RALEIGH 27605 U OF MARYLAND	OTO /OPH L 40 40 40 919 834-8251	ZEOK, JOHN VICTOR 3400 EXECUTIVE DR. STE. 102 RALEIGH 27609 JEFFERSON	CDS /TS AC 67 81 82 919 872-8080
WILLIAMS, ROBERT 2305 HATHAWAY ROAD RALEIGH 27608 U OF PENN	DR L/RT 35 35 46 919 833-5645	WRIGHT, JOHN EVERETT PO BOX 338 FUQUAY-VARINA 27526 JEFFERSON	GP L/RT 37 37 38 919 552-2728	ZERBY, GLENN ALAN 143 NICKLAUS DR. GARNER 27529 JEFFERSON	EM /IM AC 80 80 87 919 783-3038

93. WARREN COMPONENT SOCIETY

HOLT, JAMES DAVID 308 WILCOX ST. WARRENTON 27589 U OF MARYLAND	FP AC 82 82 87 919 257-3141
--	--

95. WATAUGA COMPONENT SOCIETY

OFFICERS—President: James L. Hamby, M.D., Watauga Med. Arts Bldg., Boone 28607 (704 264-5150)
Secretary: Stephen G. Fleming, M.D., 30 Doctor's Park, Boone 28607 (704 264-1100)

ATKINS, WILLIAM SHAFFER 907 STATE FARM ROAD BOONE 28607 BOWMAN GRAY	OPH AC 71 71 78 704 262-1554	DAVIS, JOHN D., JR. P. O. BOX 8 BLOWING ROCK 28605 U OF NC	FP AC 78 79 75 704 295-3116	FLEMING, STEPHEN G. 30 DOCTORS PARK BOONE 28607 BOWMAN GRAY	ORS AC 80 81 86 704 264-1100
BRANDON, HENRY ALLEN, JR. 250 DOCTORS DRIVE BOONE 28607 BOWMAN GRAY	IM AC 70 70 80 704 264-6362	DEAN, CLAYTON CLEWIS 702 STATE FARM RD. BOONE 28607 TULANE U	GS /CDS AC 60 60 70 704 264-7650	FURMAN, LOWELL BENJAMIN STATE FARM ROAD BOONE 28607 U OF TENNESSEE	GS /CDS AC 55 63 63 704 264-2340
CZERMAK, CHARLES LOUIS, JR. P. O. BOX 1781 BOONE 28607 EMORY U	DR AC 66 66 75 704 264-6984	DERRICK, WILLIAM ADAM, JR. ASU HEALTH SERVICES BOONE 28608 MED U OF SC	ADL /GP AC 65 65 78 704 262-3100	FURMAN, RICHARD WARREN 702 STATE FARM ROAD BOONE 28607 MED COLL OF GA	TS /GS AC 66 66 74 704 264-2340
DAVANT, CHARLES, III RT. #2, BOX 5, CHESTNUT DR. BLOWING ROCK 28605 U OF NC	FP /GER AC 72 72 77 704 295-3116	DOUGLAS, MICHAEL ERIN 301 BIRCH STREET BOONE 28607 U. OF ARIZONA	AN AC 72 73 80 704 264-4691	GARNER, JO FRANCIS, II 204 DOCTOR'S DR. BOONE 28607 U OF SOU ALA	D AC 76 78 82 704 264-4553
DAVANT, CHARLES, JR. P. O. BOX 8 BLOWING ROCK 28605 MED U OF SC	FP /OPH AC 45 48 48 704 295-3116	FISHER, KYLE S. 301 BIRCH ST. BOONE 28607 U OF TENNESSEE	AN AC 83 85 87 704 264-4691	GEORGE, LYNN DARCY PO BOX 304 BLOWING ROCK 28605 GEO WASHINGTON U	AN /FP AC 56 59 64 704 295-3633

95. WATAUGA COMPONENT SOCIETY (Continued)

HAGAMAN, LEN DOUGHTON 300 CHERRY DR. BOONE 28607 U OF PENN	GP L/RT 36 36 38 704 264-3923	LIESEGANG, GLEN R. PO BOX 8 BLOWING ROCK 28605 U OF KENTUCKY	FP AC 83 83 88 704 295-3116	STANLEY, RONALD JAY 204 DOCTORS DRIVE BOONE 28607 U OF NC	D AC 72 72 81 704 264-4553
HAMBY, JAMES LAWRENCE WATAUGA MED. ARTS. BLDG. BOONE 28607 U OF MARYLAND	U AC 67 68 72 704 264-5150	MARCHESE, JOHN RICHARD 40 DOCTORS DR. BOONE 28607 GEORGETOWN U	OBG AC 61 61 71 704 264-9067	SYKES, CHARLIE LOUIS, JR. 250 DOCTORS DRIVE BOONE 28607 BOWMAN GRAY	IM AC 77 77 79 704 264-6362
HARMON, RAYMOND HARRIS 120 HIGHLAND AVENUE BOONE 28607 MED COLL OF VA	OPH L/RT 36 36 36 704 264-8669	MILLER, EDMUND EUGENE 200 DOCTORS DRIVE BOONE 28607 NORTHWESTERN U	OPH AC 74 74 77 704 264-0042	TAYLOR, RUSSELL CARL 250 DOCTORS DRIVE BOONE 28607 U OF NC	IM /NEP AC 64 64 70 704 264-6362
HAUPT, RONALD ANTHONY ROUTE #2, BOX 294 LANSING 28643 LOMA LINDA U	EM /FP AC 62 63 84 919 384-3708	NORDSTROM, CARL ROBERT 10 DOCTOR'S DR. BOONE 28607 BOWMAN GRAY	FP AC 76 79 87 704 264-3881	TRATHEN, WILLIAM THOMAS 20 DOCTORS PARK BOONE 28607 U OF TORONTO	OBG AC 64 64 70 704 264-9067
HERRING, WILLIAM ARTHUR, JR. 30 DOCTOR'S PARK BOONE 28607 MED U OF SC	ORS AC 65 65 73 704 264-1100	NORMAN, ANDY MURRAY 20 DOCTOR'S PARK BOONE 28607 MED COLL OF GA	OBG AC 76 77 82 704 264-1232	VANCE, THOMAS DOYLE 904 STATE FARM ROAD PO BOX 1097 BOONE 28607 DUKE	DR AC 56 56 71 704 264-6984
KADYK, JAN MARC 30 DOCTOR'S PARK BOONE 28607 U OF KANSAS	ORS AC 69 70 77 704 264-1100	SMITH, WILLIAM M. 815 E. KING STREET BOONE 28607 U OF MICHIGAN	AC 50 00 88	WALLER, TED JAMES 30 DOCTOR'S PARK BOONE 28607 NORTHWESTERN U	ORS AC 66 67 74 704 264-1100
KRONTZ, DANIEL PAUL 200 DOCTOR'S DR. BOONE 28607 U OF MISSOURI	OPH AC 83 83 88 704 264-0042				

96. WAYNE COMPONENT SOCIETY

OFFICERS—President: David A. Rockwell, M.D., 2701 Med. Office Pl., Goldsboro 27530 (919 736-2157)

Secretary: Terry Forrest, M.D., P.O. Box 10907 Goldsboro 27530 (919 734-8440)

Executive Secretary: Peggy G. Potter, Caller Box 8001, Goldsboro 27530 (919 731-6133)

ATKINS, JAMES NORMAN 201 COX BOULEVARD GOLDSBORO 27530 BOWMAN GRAY	ON /IM AC 76 77 85 919 734-9455	COMPTON, JOHN WALLACE 2700 MEDICAL OFFICE PLACE GOLDSBORO 27530 MED COLL OF VA	R AC 45 52 53 919 734-1866	GAGLIANO, LOUIS ANTHONY P. O. BOX 1975 GOLDSBORO 27530 U OF LOUVAIN	P /GER AC 71 72 77 919 734-8604
BATEMAN, WALLACE BRYSON, JR. 309 WALNUT CREEK DRIVE GOLDSBORO 27530 U OF NC	EM AC 76 76 79 919 778-6205	DALE, GROVER CLEVELAND 3293 RANDY ROAD LANCASTER, PA 17601 U OF PENN	GP L 25 25 27 717 898-8033	GARCIA, GILBERT JOSEPH, JR. 1008 E. ASH STREET GOLDSBORO 27530 U TX-SAN ANTONIO	GS /VS AC 78 78 85 919 734-6414
BENNETT, PAUL CLIFFORD, JR. 2400 WAYNE MEM. DR., STE. B GOLDSBORO 27530 DUKE	FP AC 55 55 59 919 735-1251	DANIELS, CHARLES A. DEPT. OF PATHOLOGY PO BOX 8001 GOLDSBORO 27533 VANDERBILT U	PTH AC 66 70 87 919 735-1530	GEER-BRENTON, LINDA LOU 2700 MEDICAL OFFICE PLACE GOLDSBORO 27530 OHIO STATE U	DR AC 81 82 85 919 734-1866
BERKELEY, SCOTT BRUCE, JR. 2400 WAYNE MEM. DR. STE. E GOLDSBORO 27530 U OF MARYLAND	GS AC 53 53 60 919 735-6021	DAVIS, DONALD FALES ROUTE #10, BOX 46 GOLDSBORO 27530 BOWMAN GRAY	P /N AC 55 55 64 919 778-3973	GOODEN, MICHAEL DEAN 2400 WAYNE MEM. DR., STE. K GOLDSBORO 27530 U OF NC	OBG AC 73 74 77 919 734-3344
BLACKMAN, JESSE AYCOCK 109 S. SYCAMORE STREET FREMONT 27830 U OF NC	GP AC 73 73 76 919 242-6171	DRUMMOND, JACK NEWTON GRANTHAM MEDICAL CLINIC RT. 1, BOX 100-C GOLDSBORO 27530 BOWMAN GRAY	FP AC 57 57 62 919 689-2222	GRANT, JOSEPH DURHAM 2701 MEDICAL OFFICE PLACE GOLDSBORO 27530 U OF TX-HOUSTON	ORS AC 79 79 85 919 736-2157
BLAND, RALPH WINGATE 2400 WAYNE MEM.DR.,STE.J GOLDSBORO 27530 BOWMAN GRAY	GS /TS AC 52 52 60 919 734-5010	EDWARDS, CHARLES DANIEL 202 CARSWELL LANE GOLDSBORO 27530 U OF WISCONSIN	GS AC 50 59 59 919 778-1205	GRIFFIN, ASHTON THOMAS, III 2400 WAYNE MEMORIAL DRIVE GOLDSBORO 27530 DUKE	FP AC 58 58 63 919 735-8601
BOMBATEPE, VAMIK 204 N. HERMAN STREET GOLDSBORO 27530 U OF ANKARA	FP AC 51 51 74 919 735-7580	EGUEZ, JORGE 108 S. ANDREWS AVE. GOLDSBORO 27530 U CENTRAL QUITO	FP AC 54 55 87 919 734-6992	GUPTA, GOOL KAPADIA 2704 MEDICAL OFFICE PLACE GOLDSBORO 27530 MAULANA AZAD	PUD /IM AC 66 75 76 919 736-4724
BRENTON, BRADLEY CLARK 2700 MEDICAL OFFICE PLACE GOLDSBORO 27530 U OF IOWA	DR AC 79 80 85 919 734-1866	ETHERINGTON, JOHN L. 2709 MEDICAL OFFICE PLACE GOLDSBORO 27530 QUEENS U	OPH /OTO L 36 36 47 919 735-3701	GUPTA, JAGMOHAN DASS 2704 MEDICAL OFFICE PLACE GOLDSBORO 27530 M C OF PUNJAB U	CD /IM AC 66 66 74 919 736-4724
BRUBECK, ELLEN TEMPLE 238 SMITH CHAPEL RD. MOUNT OLIVE 28365 OHIO STATE U	FP /GER AC 75 76 82 919 658-4954	FAUSCH, MARK DAVID 1201-C WAYNE MEMORIAL DR. GOLDSBORO 27530 U OF MINN	IM AC 79 81 83 919 734-7530	HARVIN, ALLAN BRABHAM 2701 MEDICAL OFFICE PLACE GOLDSBORO 27530 BOWMAN GRAY	ORS AC 68 68 76 919 736-2157
CAMPBELL, ROBERT RICHARD 2700 MEDICAL OFFICE PLACE GOLDSBORO 27530 MED COLL OF VA	R AC 66 66 73 919 734-1866	FISHER, JOHN APFEL DEPUTY DIRECTOR, MED. SERV. O'BERRY CENTER, BOX 247 GOLDSBORO 27530 HAHNEMANN	PD AC 52 57 85 919 731-3670	HAVERKAMP, JOHN 619 PARK AVE. GOLDSBORO 27530 U OF AMSTERDAM	D AC 71 77 81 919 734-0944
CAMPBELL, WALKER HAWES 2400 WAYNE MEMORIAL DRIVE GOLDSBORO 27530 MED COLL OF VA	OBG AC 63 63 73 919 734-3344	FORREST, TERRY LEE PO BOX 10907 GOLDSBORO 27532 U OF NC	OPH AC 82 84 80 919 734-8440	JENNINGS, JOHN LEE, JR. BOX 1399, 1100 E. ASH ST. GOLDSBORO 27533 EASTERN VA	D AC 78 83 85 919 734-0944
CECIL, STEPHEN GERARD 607 WOODBERRY DR. GOLDSBORO 27530 U OF KENTUCKY	AN AC 81 82 84 919 731-6089			JONNALAGADDA, M. RAO CHERRY HOSPITAL CALLER BOX 8000 GOLDSBORO 27530 GUNTUR MED COLL	P /PH AC 64 76 76 919 731-3206

96. WAYNE COMPONENT SOCIETY (Continued)

KNUTSON, THOMAS MARVIN P. O. BOX 10867 GOLDSBORO 27530 U OF MINN	EM /FP AC 79 80 85 919 731-6060	MORRIS, JAMES FRANCIS P. O. BOX 1153 GOLDSBORO 27530 U OF LOUISVILLE	PD AC 52 52 57 919 734-4014	SMITH, LLOYD HAMLIN ROUTE #9, BOX 241-F GOLDSBORO 27530 MED COLL OF VA	EM AC 75 78 87 919 736-1110
KOHLI, ASHA KIRAN 505 PARKWOOD LANE GOLDSBORO 27530 GSV MED COLLEGE	CHP /PD AC 72 78 86 919 731-3317	MOTAPARTHY, V. C. 2419-C E. ASH ST. GOLDSBORO 27530 KARNATAK U	GE AC 74 79 84 919 731-2526	STACKHOUSE, WILLIAM JAMES 201 COX BLVD. GOLDSBORO 27530 EMORY U	IM AC 76 77 81 919 734-9455
KOKIKO, GEORGE VICTOR WAYNE COUNTY HOSPITAL CALLER BOX 8001 GOLDSBORO 27530 BOWMAN GRAY	PTH /CLP AC 56 56 61 919 735-1530	NATION, ROY GLEN 407 N. HERMAN STREET GOLDSBORO 27530 LA STATE U	GP /IM AC 60 65 00 919 735-6261	STOCKDALE, WAYNE HARROP 2700 WAYNE MEM. DR. GOLDSBORO 27530 U OF LOUISVILLE	EM /GS AC 45 52 53 919 736-1110
KORNEGAY, HERVY BASIL, SR. 238 SMITH CHAPEL ROAD MOUNT OLIVE 28365 BOWMAN GRAY	FP AC 57 57 57 919 658-4954	NEWELL, HOWARD WILSON, JR. 2400 WAYNE MEM. DR. GOLDSBORO 27530 U OF NC	AC 84 00 82 919 734-4845	STRICKLAND, NIGEL JOHN 2700 MEDICAL OFFICE PLACE GOLDSBORO 27530 CAMBRIDGE U	DR AC 59 70 78 919 734-1866
LAMBERT, JAMES ROYALL 238 SMITH CHAPEL RD. MOUNT OLIVE 28365 BOWMAN GRAY	FP AC 78 78 78 919 658-4954	NICKENS, LARRY COBB 2706 MEDICAL OFFICE PLACE GOLDSBORO 27530 U OF NC	PD AC 81 84 84 919 734-4736	TAYLOE, DAVID THOMAS, JR. 2706 MEDICAL OFFICE PLACE GOLDSBORO 27530 U OF NC	PD AC 74 76 77 919 734-4736
LE, TIN TRONG 514 MILL RD. GOLDSBORO 27530 SAIGON U	GP AC 65 78 86 919 731-3550	PARKER, TALBOT FORT, JR. 2400 WAYNE MEM. DR. STE K GOLDSBORO 27530 JEFFERSON	OBG AC 51 51 57 919 734-3344	TEASLEY, BARRY HOYLE P. O. BOX 10907 103 COX BLVD. GOLDSBORO 27532 U OF NC	OPH AC 78 82 75 919 734-8440
LIES, STEPHEN CRAIG 2400 WAYNE MEM.DR.,STE.K GOLDSBORO 27530 DUKE	OBG AC 76 79 81 919 734-3344	PATE, WILLIAM HENRY P. O. BOX 129 PIKEVILLE 27863 MED COLL OF VA	GP AC 48 49 50 919 242-5271	THOMPSON, WINFIELD LYNN 216 S. HILLCREST DRIVE GOLDSBORO 27530 U OF MARYLAND	GS L/RT 38 38 46 919 734-2610
LONG, RONALD MORGAN 709 LIONEL ST. GOLDSBORO 27530 U OF TENNESSEE	AN AC 81 81 84	PONZI, JOSEPH WILLIAM 2706 MEDICAL OFFICE PLACE GOLDSBORO 27530 DOWNSTATE ME CTR	PD AC 73 74 81 919 734-4736	TOMASZEK, DAVID E. 238 RIDGEWOOD DR. GOLDSBORO 27530 U OF CONNECTICUT	NS AC 81 87 88 919 778-7093
LOWNES, MILTON MARKLEY, JR. 130 N. CENTER STREET MOUNT OLIVE 28365 U OF LOUISVILLE	GP AC 47 51 52 919 658-2505	POWELL, E. CHARLES 100 WOOTEN POINT ROAD GOLDSBORO 27530 U OF PENN	OBG L 35 35 37 919 778-2692	TRACHTENBERG, WILLIAM 239 S. HILLCREST DRIVE GOLDSBORO 27530 DUKE	GP L/RT 39 46 47 919 734-0956
MALEKPOUR, BAHMAN 2805 MCLAMB PL. PO BOX 1342 GOLDSBORO 27530 U OF HAMBURG	P AC 64 64 75 919 734-2222	ROCKWELL, DAVID ALLEN 2701 MEDICAL OFFICE PLACE GOLDSBORO 27530 U OF NC	ORS AC 74 74 80 919 736-2157	TURNER, WILLIAM BOMAR, III 2400 WAYNE MEM. DR. GOLDSBORO 27530 MED U OF SC	U AC 80 81 85 919 735-1635
MANESS, RUBIN FRANKLIN 2706 MEDICAL OFFICE PLACE GOLDSBORO 27530 U OF NC	PD /A AC 76 76 75 919 734-4736	RUSSELL, DOUGLAS MACARTHUR 304 GLEN OAK DRIVE GOLDSBORO 27530 U OF NC	GS AC 67 67 75 919 734-5010	TYNDALL, HUBERT DURWOOD 2400 WAYNE MEMORIAL DRIVE GOLDSBORO 27530 U OF NC	GP AC 54 54 56 919 734-4845
MAYS, OLIVER AIKEN 408 TAYLOR PLACE GOLDSBORO 27530 MED U OF SC	PH AC 45 45 70 919 731-1000	SANFORD, VIRGINIA OATES 811 SIMMONS ST. PO BOX 146 GOLDSBORO 27530 DUKE	GP /PD AC 56 56 63 919 734-8242	VARNEY, DAVID ALLEN 2400 WAYNE MEMORIAL DR. GOLDSBORO 27530 GEORGETOWN U	U /GS AC 68 69 76 919 778-6549
MCLAMB, JOSEPH TIMOTHY 2701 MEDICAL OFFICE PLACE GOLDSBORO 27530 U OF NC	ORS AC 67 67 76 919 736-2157	SASSER, PATRICK HENRY 100 E. LOCKHAVEN DRIVE GOLDSBORO 27530 BOWMAN GRAY	GP AC 55 55 59 919 734-2924	WILKINS, KENNETH WORTH P. O. BOX 1977 GOLDSBORO 27530 U OF MARYLAND	GYN AC 44 45 48 919 735-1253
MCLAMB, SAMUEL BAGGETT, JR. 201 COX BOULEVARD GOLDSBORO 27530 BOWMAN GRAY	IM AC 75 77 73 919 734-9455	SCHARF, FORREST LARRY PO BOX 22490 KING FAHAD NATIONAL HOSP. RIYADH 11426SAUDI ARABIA MCGILL U	CLP /HEM AC 56 65 78	WILSON, A. ROSS, JR. 401 N. HERMAN ST. GOLDSBORO 27530 TEMPLE U	OTO AC 74 75 79 919 735-9146
MEYER, ROBERT SWENSON 208 N. HERMAN ST. GOLDSBORO 27530 TEMPLE U	FP AC 74 75 79 919 734-5600	SHACKELFORD, ROBERT HILLIARD 238 SMITH CHAPEL ROAD MOUNT OLIVE 28365 BOWMAN GRAY	FP AC 47 48 50 919 658-4954	ZWERLING, CHARLES SAMUEL GOLDSBORO EYE CLINIC 2709 MEDICAL OFFICE PL. GOLDSBORO 27530 U OF BOLOGNA	OPH /A AC 77 81 82 919 778-2266
MILLER, WALTON H., JR. 1008 E. ASH STREET GOLDSBORO 27530 U OF CINCINNATI	GS /GYN L/RT 41 41 48 919 734-1141				

97. WILKES COMPONENT SOCIETY

OFFICERS—President: Robert B. Groves, M.D., Route 1, Box 275-B, Purlear 28665 (919 651-8100)
Secretary: Thomas S. Frazer, M.D., Wilkes General Hospital, N. Wilkesboro 28659 (919 651-8100)

BAUGHAM, ILA EVANS DOCTOR'S BLDG., 8TH ST. PO BOX 309 NORTH WILKESBORO 28659 BOWMAN GRAY	PD AC 79 82 79 919 838-7466	BENNETT, CRAIG RANDALL MEDICAL ARTS BLDG. NORTH WILKESBORO 28659 U OF NC	ORS AC 81 84 81 919 667-5039	BOND, JOHN LAWRENCE, JR. P. O. BOX 1128 N. WILKESBORO 28659 U OF TENNESSEE	GS /ORS AC 54 60 60 919 838-4789
BAUGHAM, LEONARD ANDREW P. O. BOX 1146 NORTH WILKESBORO 28659 MED COLL OF GA	GS AC 75 76 84 919 667-4718	BENNETT, JOHN NORTHWOOD ROUTE #1, BOX 96 MORAVIAN FALLS 28654 MCGILL U	R AC 47 51 53 919 838-3896	BRYAN, THOMAS RHUDY, JR. MEDICAL ARTS BUILDING P. O. BOX 1163 NORTH WILKESBORO 28659 BOWMAN GRAY	PD /OBS AC 54 54 56 919 838-2500

97. WILKES COMPONENT SOCIETY (Continued)

BUNDY, WILLIAM LUMSDEN DOCTORS BLDG. PO BOX 786 N. WILKESBORO 28659 VANDERBILT U	IM /GP L/RT 36 36 40	HAYES, WILLIAM CLAYTON P. O. BOX 540 WILKESBORO 28697 BOWMAN GRAY	GP AC 47 48 50	SMITH, DUANE HOWARD 112 BOONE TRAIL N. WILKESBORO 28697 U OF CINCINNATI	OBG AC 58 58 77
COMPEAU, PHILLIP E. C. 1710 PARKWOOD DR., SOUTH WILKESBORO 28697 HARVARD	919 838-2442 IM AC 71 72 78	KILBY, LARRY SHELTON 505 13TH ST. LOFLAND BLDG. NORTH WILKESBORO 28659 BOWMAN GRAY	919 667-6871 FP /GER AC 68 68 74	SONEK, MOJMIR JIRI C/O BRUSHY MOUNTAIN OB-GYN MEDICAL ARTS BLDG. NORTH WILKESBORO 28659 U OF OTTAWA	704 667-8241 OBG AC 79 83 85
FULLER, CORODON S., JR. RT. #1, BOX 61 MORAVIAN FALLS 28654 LA STATE U	PH /GP L/RT 49 50 56	LANDON, HENRY CLAYTON, III 501 TENTH STREET NORTH WILKESBORO 28659 U OF VIRGINIA	919 667-3922 FP /IM AC 47 49 50	WATSON, JERRY FRANKLIN EIGHTH ST. PO BOX 789 N. WILKESBORO 28659 U OF TENNESSEE	919 634-0051 GS AC 60 60 73
GROVES, ROBERT BLAINE RT. #1, BOX 275-B PURLEAR 28665 U OF LOUISVILLE	919 838-3334 R AC 64 64 86	MCMAHAN, THOMAS KEITH PO BOX 976 1710 PARKWOOD DR. NORTH WILKESBORO 28697 WASHINGTON U	919 838-5761 IM /FP AC 70 70 74	WHICKER, CHARLES FINCH BRUSHY MT. OB-GYN ASSOC. MEDICAL ARTS BLDG. N. WILKESBORO 28659 TEMPLE U	919 667-1183 OBG AC 51 58 59
HAWKINS, HAL BURGESS 11 GREEN WAY WILKESBORO 28697 CASE WESTERN RES	919 651-8100 FP AC 53 53 55	OLIVER, JOHN GLADSON 408 EIGHTH STREET NORTH WILKESBORO 28659 U OF MIAMI	919 667-2634 OPH AC 75 76 81		919 667-1156
	919 838-5459		919 838-5121		

98. WILSON COMPONENT SOCIETY

OFFICERS—**President:** Robert Stone, M.D., Wilson Clinic, Wilson 27893 (919 291-7001)**Secretary:** Roger Thurman, M.D., Carolina Clinic, Wilson 27893 (919 291-1300)

ADAMS, LEON ASHBY 1700 S. TARBORO ST. WILSON 27893 U OF VIRGINIA	OTO AC 46 52 74	BULLARD, HOKE VOGLER, JR. WILSON CLINIC WILSON 27893 HARVARD	IM AC 51 51 58	DEWALD, JONATHON GLEN 1700 S. TARBORO ST. WILSON 27893 MED COLL OF GA	IM AC 80 80 84
ANDERSON, DUDLEY BUIST 1700 S. TARBORO ST. WILSON 27893 U OF VIRGINIA	ON /HEM AC 64 64 73	BURBA, ALONZO RICHARD 1700 S. TARBORO ST. WILSON 27893 U OF OKLAHOMA	919 291-1300 FP AC 76 79 80	EASOM, HERMAN FRANKLIN P. O. BOX 1521 WILSON 27893 WASHINGTON U	919 291-1300 PUD L 27 27 29
ANDERSON, KENT THOMAS 1704 S. TARBORO ST. WILSON 27893 EAST CAROLINA U	919 291-1300 IM AC 82 83 81	BURDICK, RICHARD LAWRENCE 1704 S. TARBORO ST. WILSON 27893 U OF VIRGINIA	919 291-1300 IM AC 75 83 86	EASON, GEORGE WILLIAM 111 RIPLEY ROAD WILSON 27893 U OF ALABAMA	919 243-4752 DR AC 74 75 80
APPERT, ROBERT ALBERT 1700 S. TARBORO STREET WILSON 27893 ALBANY MED COLL	919 291-7001 ORS AC 71 72 78	BURNETTE, J. P. ENGLEWOOD DR., KENLY CLI. KENLY 27542 BOWMAN GRAY	919 291-7001 IM AC 75 75 80	FISHER, EARL ELLIOTT, JR. 1700 S. TARBORO STREET WILSON 27893 U OF NC	919 399-8112 PD AC 64 64 70
BELL, GEORGE ERICK, JR. WILSON CLINIC WILSON 27893 HARVARD	919 291-1300 ORS AC 48 48 57	BUSCH, JAMES R. 1700 S. TARBORO ST. WILSON 27893 MED COLL OF VA	919 284-5151 PD AC 72 75 84	FITCH, DUANE DOUGLAS 1704 S. TARBORO ST. WILSON 27893 U OF MICHIGAN	919 291-4370 GE /IM AC 79 80 85
BENTSEN, BIRGER STEVEN PO BOX 7193 WILSON 27895 U OF CINCINNATI	919 291-7001 P AC 83 84 86	CAMPBELL, JOSEPH LESTER 306 FOREST HILLS ROAD WILSON 27893 U OF PENN	919 291-4370 GPM /PH L 35 35 56	GLOVER, JAMES BUNYAN CAROLINA CLINIC WILSON 27893 U OF NC	919 291-7001 OBG AC 57 57 66
BERGERON, JOSEPH C., JR. 102 WILSHIRE BOULEVARD WILSON 27893 LA STATE U	919 942-8226 PTH AC 74 74 83	CLARK, LEE ANDREW, JR. WILSON CLINIC WILSON 27893 U OF NC	919 291-8523 OPH AC 56 56 63	GRAHAM, GLORIA FLIPPIN 702 BROAD STREET WILSON 27893 BOWMAN GRAY	919 291-9010 D AC 61 61 67
BOHNSACK, MICHAEL ROBERT 1803 WILDWOOD CT. WILSON 27893 M C OF WISCONSIN	919 399-8114 AN AC 81 82 85	COLLINSON, FRANK WILSON MEM. HOSP. X-RAY DEPT. WILSON 27893 U OF GLASGOW	919 291-7001 DR /NR AC 63 63 79	GRIFFIN, THOMAS LAFAYETTE 1700 S. TARBORO ST. WILSON 27893 MED COLL OF GA	919 291-5600 U AC 59 65 65
BOWEN, MICHAEL LYNN P. O. BOX 310 STANTONSBURG 27883 INDIANA U	919 291-1700 FP AC 77 77 81	CONNELL, GEORGE FREDERICK 1105 BROOKSIDE DRIVE WILSON 27893 U OF TORONTO	919 399-8112 AN AC 57 58 75	GRINE, WILLIAM BARK 1704 TARBORO STREET WILSON 27893 U OF VIRGINIA	919 299-2200 U AC 60 64 66
BOWERS, SCOTT P. #5 SILVER LAKE VILLAS WILSON 27893 INDIANA U	919 238-2101 OPH AC 79 79 83	COWAN, LEON KERR WILSON DERM. CLINIC, PA 702 BROAD ST. WILSON 27893 U OF NC	919 291-1700 D AC 54 54 81	GRODE, HARVEY E. WILSON CLINIC WILSON 27893 DUKE	919 291-7001 IM /ON AC 60 60 67
BOYD, DEBORAH DAETWYLER 1704 S. TARBORO ST. WILSON 27893 U OF NC	919 291-7001 GS /VS AC 77 77 77	CUBBERLEY, CHARLES LAMB, JR. P. O. BOX 95 WILSON 27894 JEFFERSON	919 291-5600 FP L/RT 40 47 47	HARDISON, MITCHELL DALE BRENTWOOD MEDICAL CENTER WILSON 27893 U OF NC	919 291-7001 IM AC 80 81 81
BREZINA, DAWN S. 1911 CANAL DR. WILSON 27893 U OF MIAMI	919 237-8604 EM AC 75 75 88	DAVIS, NELSON PARKE, II 1700 S. TARBORO STREET WILSON 27893 U OF NC	919 243-4638 GS /CDS AC 66 66 75	HERRING, T. TILGHMAN 1704 S. TARBORO ST. WILSON 27893 JOHNS HOPKINS	919 291-7001 OM /GP L/RT 38 38 41
BREZINA, EDWARD SHARP, JR. 1911 CANAL DRIVE WILSON 27893 U OF MIAMI	919 291-7001 OBG AC 75 77 82	DEGUEHERY, LINDSEY E. 1700 S. TARBORO ST. WILSON 27893 U OF SOU FLORIDA	919 399-2200 PUD AC 79 80 85	HOOPER, THOMAS EUGENE INTERNAL MEDICINE ASSOCIATES P. O. BOX 3188 WILSON 27893 U OF NC	919 243-5505 IM AC 73 73 77
BRINKMAN, DENNIS MICHAEL 1203 GREENBRIAR COURT WILSON 27893 U OF MICHIGAN	919 291-1700 AN AC 71 72 80				

98. WILSON COMPONENT SOCIETY (Continued)

JENNETTE, ALBERT TYSON 1700 S. TARBORO ST. WILSON 27893 U OF NC	ORS AC 59 59 65 919 291-1300	NEELAND, EUGENE CRAWFORD 1506 GROVE ST. WILSON 27893 U OF ALABAMA	FP L/RT 54 54 55 919 243-5530	SUNDERMAN, MICHAEL ROBERT P. O. BOX 310 STANTONSBURG 27883 INDIANA U	FP AC 77 77 81 919 238-2101
JONES, GREGORY LEE 2104 HERMITAGE RD. WILSON 27893 U OF NC	FP AC 77 79 85 919 238-2407	NEWELL, JOSEPHINE E. RALEIGH TOWNE, APT. #47 525 WADE AVENUE RALEIGH 27605 U OF MARYLAND	ADM/FP AC 49 49 51 919 733-7611	TAYLOR, JAMES VAN, III 1704 S. TARBORO STREET WILSON 27893 U OF NC	FP AC 80 81 83 919 291-7001
JONES, JEFFREY DAVID 1205 GREENBRIAR COURT WILSON 27893 U OF ROCHESTER	GE/IM AC 71 73 79 919 291-7001	POLLEY, DENNIS CHARLES 902 BROAD ST. WILSON 27893 DES MOINES OST	D AC 79 82 00 919 291-5600	TAYLOR, JEFFREY SCOTT 1704 S. TARBORO ST. WILSON 27893 U OF ILLINOIS	OPH AC 77 78 84 919 291-7001
KANG, JOON P. O. BOX 218, MAIN STREET BAILEY 27807 PUSAN NATL U	FP AC 60 77 78 919 235-4181	POPE, ROBERT CLYDE WILSON CLINIC WILSON 27893 BOWMAN GRAY	PD AC 45 45 51 919 291-7001	THORNE, EDWARD YOUNG COX 1700 S. TARBORO ST. WILSON 27893 GEO WASHINGTON U	PD AC 53 56 57 919 291-1300
KIRKLAND, JOHN ALVIN 1700 S. TARBORO ST. WILSON 27893 HARVARD	OBG AC 52 52 60 919 291-9010	PRICE, ANDREW RICHARD 1901 S. TARBORO ST. PO BOX 3188 WILSON 27893 DUKE	IM AC 65 65 73 919 243-5505	THURMAN, ROGER ZALON 1700 S. TARBORO ST. WILSON 27893 MED COLL OF VA	GS AC 65 65 73 919 291-1300
KRABILL, LAWRENCE DAVID 1700 S. TARBORO ST. WILSON 27893 OHIO STATE U	IM/RHU AC 71 71 78 919 291-1300	PUTNEY, ROBERT HUBBARD, JR. P. O. BOX 519 ELM CITY 27822 MED COLL OF VA	FP L 43 43 46 919 236-4341	TICKLE, DEWEY REID WILSON MEMORIAL HOSPITAL WILSON 27893 DUKE	R AC 54 54 63 919 399-8112
KUK, DENNIS STANLEY 1704 S. TARBORO STREET WILSON 27893 U OF VERMONT	OBG/GYN AC 69 69 79 919 291-7001	RAND, TOM SLADE 1704 S. TARBORO ST. WILSON 27893 U OF NC	ORS AC 63 63 72 919 291-7001	TOMLINSON, ROBERT LEE, JR. 1700 TARBORO STREET, EXT. WILSON 27893 U OF NC	OBG AC 54 54 59 919 291-9010
LADWIG, HAROLD ALLEN 1600 CANAL DRIVE WILSON 27893 U OF IOWA	N AC 47 48 84 919 237-5877	RASBERRY, EDWIN ALBERT, JR. WILSON CLINIC WILSON 27893 U OF PENN	IM L 41 41 48 919 291-7001	TORREY, RICHARD KENDRICK THE MIDDLESEX CLINIC P. O. BOX 100 MIDDLESEX 27557 LA STATE U	FP AC 80 80 84 919 235-4078
LAMANNA, ROGER WEED 1700 TARBORO STREET WILSON 27893 MED COLL OF VA	NEP/IM AC 74 74 79 919 291-1300	RHODES, CECIL DAVID, JR. P. O. BOX 27894-0309 WILSON 27894 BOWMAN GRAY	IM/A AC 56 56 64 919 291-7001	VANDENBOSCH, GERALD C. 1704 S. TARBORO ST. WILSON 27893 WAYNE STATE U	ORS AC 77 78 86 919 291-7001
LUND, JOHN JEFFERSON 1700 S. TARBORO ST. WILSON 27893 U OF VIRGINIA	CD/IM AC 57 64 65 919 291-1300	RICHARDS, ROBERT DAY ROUTE #2 WILSON 27893 MED COLL OF VA	FP AC 54 57 59 919 291-2215	WHITAKER, JAMES ALLEN, III 1700 S. TARBORO ST. WILSON 27893 U OF NC	CD/IM AC 68 68 78 919 291-1300
MALONEY, THOMAS RICHARD NC SPECIAL CARE CTR WARD BOULEVARD WILSON 27893 NEW YORK U	GER/IM AC 47 48 71 919 237-1121	RUSSELL, JOSEPH DWIGHT 1700 S. TARBORO ST. WILSON 27893 U OF NC	IM/NEP AC 69 69 76 919 291-1300	WOODALL, HAL BREEN BOX 878 KENLY 27542 BOWMAN GRAY	IM AC 75 75 79 919 284-5151
MATTOX, HUITT EVERETT 1700 S. TARBORO ST. WILSON 27893 DUKE	OBG AC 54 54 61 919 291-9010	RYBURN, SAMUEL BENJAMIN WILSON CLINIC WILSON 27893 MED COLL OF VA	PD AC 54 57 58 919 291-7001	WOODARD, JERRY CLEON 1700 S. TARBORO ST. WILSON 27893 U OF NC	GE/IM AC 68 68 73 919 291-1300
MCCAIN, JOHN LEWIS WILSON CLINIC WILSON 27893 U OF VIRGINIA	RHU/IM AC 52 56 57 919 291-7001	SATTERLY, ROBERT ALAN WILSON CLINIC WILSON 27893 GEORGETOWN U	OTO AC 72 75 78 919 291-7001	YOUNG, WILLIAM BEAUREGARD 1700 S. TARBORO ST. WILSON 27893 EMORY U	IM/CD AC 48 52 55 919 291-1300
MELCHIOR, JOSEPHINE T. 1124 NIBLICK DRIVE ROCKY MOUNT 27801 MED COLL OF VA	PD L/RT 42 48 49 919 442-8290	SLOOP, ROBERT F., JR. WILSON CLINIC WILSON 27893 U OF NC	OPH AC 60 65 68 919 291-7008	YOUNGBLOOD, ROBERT W. 1201 BROOKSIDE DRIVE WILSON 27893 JOHNS HOPKINS	GS/TS AC 55 63 64 919 291-7001
MICHALAK, DANIEL PETER 1700 S. TARBORO ST. WILSON 27893 HAHNEMANN	OBG AC 80 81 84 919 291-9010	STONE, ROBERT THOMAS 1704 S. TARBORO STREET WILSON 27893 U OF VIRGINIA	OTO AC 65 65 73 919 291-7001	YOUNGS, FRANKLIN JAY 113 RIPLEY RD. WILSON 27893 SUNY-SYRACUSE	R AC 45 59 60 919 399-2240

North Carolina Medical Journal

Subscribe for yourself or a friend

Name _____

Address _____

Zip _____

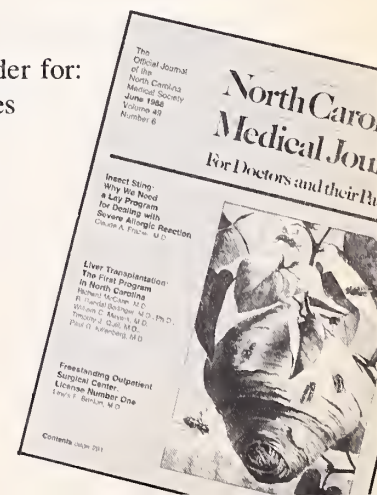
Please enclose a check or money order for:

☐ \$12.60 (NC Residents; this includes 5% sales tax)

☐ \$12.00 (out of state subscribers)

☐ New ☐ Renewal

Send to NCMJ, Box 3910 DUMC, Durham 27710. (919/684-5728)



Medical Specialty Societies and Other Health Care Organizations

1988 OFFICERS

North Carolina Society of Allergy and Clinical Immunology

President: Millie P. Hancock, M.D., 221 13th Avenue Place, N.W., Hickory 28601 (704) 322-1275
Vice President: Keith M. Phillips, M.D., 1401-A Old Mill Circle, Winston-Salem 27103, (919) 768-0914
Secretary/Treasurer: Craig LaForce, M.D., 3801 Computer Dr., Suite 203, Raleigh 27609 (919) 787-5995

North Carolina Society of Anesthesiology

President: D. Clark Bright, M.D., Pitt County Anesthesia Associates, 1705 W. 6th Street, Greenville 27834 (919) 752-2140
President-Elect: David R. Beckham, Jr., M.D., 314 Summertime Road, Fayetteville 28303 (919) 323-5491
Secretary-Treasurer: John E. Cook, M.D., P.O. Box 96, Camden 27921 (919) 338-1542
Executive Director: William N. Hilliard, P.O. Box 6524, Raleigh 27628 (919) 787-5859; (919) 247-2064 Morehead City
National Headquarters: American Society of Anesthesiologist, 515 Busse Highway, Park Ridge, IL 60068 (312) 825-5586

North Carolina Chapter, American College of Cardiology

Governor: Robert Nelson Headley, M.D., Bowman Gray School of Medicine, Section of Cardiology, 300 S. Hawthorne Rd., Winston-Salem 27103 (919) 748-4331
Executive Vice-President: William D. Nellijan, CAE (See Below)
National Headquarters: American College of Cardiology, 9111 Old Georgetown Road, Bethesda, MD (301) 897-5400; (800) 253-4636

North Carolina Council of Child Psychiatry

President: Frank B. Miller, M.D., 2609 North Duke Street, Suite 502, Durham 27704 (919) 479-0097
Secretary-Treasurer: William Shamblin, M.D., Highland Hospital, P.O. Box 1101, Asheville, NC 28802 (704) 254-3201
National Headquarters: American Academy of Child & Adolescent Psychiatry, 3615 Wisconsin Ave., N.W., Washington, DC 20016

North Carolina Dermatology Association

President: A. Elise Weinrich, M.D., 2609 North Duke Street, Suite 505, Durham 27704 (919) 477-2121
President-Elect: Manfred S. Rothstein, M.D., 1308 Medical Drive, Fayetteville 28304 (919) 323-2227
Secretary-Treasurer: William M. Hendricks, M.D., 407 South Cox Street, Asheboro 27203-5496 (919) 625-8410

American Diabetes Association — North Carolina Affiliate, Inc.

President: Paul Whitesides, Jr., M.D., 1515 Doctors Circle, Wilmington 28401 (919) 783-5182
President-Elect: John Lang, M.D., 615 St. Mary's Street, Raleigh 27605 (919) 828-7773
Executive Director: Bonnie Edwards, 2315-A Sunset Ave., Rocky Mount 27804 (919) 937-4121
National Headquarters: American Diabetes Association, 1660 Duke St., Alexandria, Virginia 22314 (703) 549-1500

North Carolina Chapter, American College of Emergency Physicians

President: Robert W. Schafermeyer, M.D., F.A.C.E.P., Charlotte Memorial Hospital, Dept. of Emergency Medicine, P.O. Box 32861, Charlotte 28232-2861 (704) 338-3181
Vice President: Samuel S. Spicer, M.D., F.A.C.E.P., New Hanover Memorial Hospital, Emergency Department, Wilmington 28401 (919) 343-7000
Secretary-Treasurer: Randall M. Best, M.D., F.A.C.E.P., Wake Medical Center, 3000 New Bern Avenue, Raleigh 27610 (919) 755-8000
Executive Director: Carol T. Russell, P.O. Box 27167, Raleigh 27611 (919) 833-3836

National Headquarters: American College of Emergency Physicians, P.O. Box 619911, Dallas, TX 75261-9911 (214) 550-0911

North Carolina Academy of Family Physicians

President: Douglas E. Henley, M.D., 183 Eilerslie Drive, Fayetteville 28303 (919) 424-0123
President-Elect: Frank W. Leak, M.D., Clinton Medical Clinic, Inc., Clinton 28328 (919) 592-6011
Vice-President: C. Christopher Bremer, M.D., East Carolina University, Department of Family Practice, Brody 4N78, Greenville 27858-4354 (919) 551-2601
Secretary-Treasurer: Johnny W. Bagwell, M.D., 1005 Vandora Springs Road, Garner 27529 (919) 779-1440
Executive Director: Sue Makey, P.O. Box 18469, Raleigh 27609 (919) 781-6467
National Headquarters: American Academy of Family Physicians, P.O. Box 8723, Kansas City, MO 64114-0723 (800) 274-2237

North Carolina Medical Genetics Association, Inc.

President:
Vice President: (None Reported)
Secretary-Treasurer:

North Carolina Society of Internal Medicine

President: Joseph D. Russell, M.D., Carolina Clinic, Wilson 27893 (919) 291-1300
President-Elect: Malcolm Fleishman, M.D., P.O. Box 35126, Fayetteville, 28303 (919) 484-0144
Vice-President: Robert W. Carter, M.D., Kernodle Clinic, Graham-Hopedale Road, Burlington 27215 (919) 227-3621
Secretary Treasurer: Ralph L. Greene, Jr., M.D., 3535 Randolph Road, Charlotte 28211 (704) 365-0760
Executive Director: Carol T. Russell, P.O. Box 27167, Raleigh 27611 (919) 833-3836
National Headquarters: American Society of Internal Medicine, 1101 Vermont Avenue, NW, Suite 500, Washington, DC 20005 (202) 289-1700

North Carolina Neurosurgical Society

President: J. M. McWorter, M.D., Dept. of Neurosurgery, Bowman Gray School of Medicine, Winston-Salem 27103 (919) 748-4020
President-Elect: James S. Fulgham, M.D., 3009 New Bern Ave., P.O. Box 14027, Raleigh 27610 (919) 832-4448
Secretary-Treasurer: F. Douglas Jones, 125 Moye Blvd., Greenville 27834 (919) 752-5156

North Carolina Obstetrical and Gynecological Society

President: Robert G. Deyton, Jr., M.D., 101 Bethesda Dr., Greenville 27834 (919) 758-4181
President-Elect: James H. M. Thorp, M.D., 200 Nash Medical Arts Mall, Rocky Mount 27801 (919) 443-5941
Secretary-Treasurer: A. Barry Campbell, M.D., 93 Victoria Road, Asheville 28801 (704) 253-4821
Executive Director: Carol T. Russell, P.O. Box 27167, Raleigh 27611 (919) 833-3836
National Headquarters: American College of OB & GYN, 409 12th Street, Washington, DC 20024 (202) 638-5577

North Carolina Society of Ophthalmology

President: William A. Shearin, M.D., Rex Medical Office Building, 2800 Blue Ridge Rd., Raleigh 27607 (919) 781-7373
President-Elect: James L. Kesler, M.D., 1120 Medical Center Drive, Wilmington 28401 (919) 763-7316
Vice-President: John W. Reed, M.D., Bowman Gray School of Medicine, Dept. of Ophthalmology, Winston-Salem 27103 (919) 748-4091

Secretary-Treasurer: Thomas L. Beardsley, M.D., 495 Biltmore Ave., Asheville 28801 (704) 253-9821
Executive Director: Carol T. Russell, P.O. Box 27167, Raleigh 27611 (919) 833-3836
National Headquarters: American Academy of Ophthalmology, P.O. Box 7424, San Francisco, CA 94120-7424 (415) 921-4700

North Carolina Orthopaedic Association

President: Robert E. Miller, M.D., 1822 Brunswick Ave., Charlotte 28207 (704) 373-0544
President-Elect: John M. Harrelson, M.D., Duke University Medical Center, Box 3023, Durham 27701 (919) 684-5304
Vice-President: Thomas L. Presson, M.D., 315 Wendover Ave., Greensboro 27408 (919) 275-0724
Secretary-Treasurer: W. Jason McDaniel, M.D., P.O. Box 10707, Raleigh 27605 (919) 781-5600
Executive Director: Carol T. Russell, P.O. Box 27167, Raleigh 27611 (919) 833-3836
National Headquarters: American Academy of Orthopaedic Surgeons, 222 South Prospect Avenue, Park Ridge, IL 60068 (312) 823-7186

North Carolina Society of Otolaryngology & Maxillofacial Surgery

President: Edgar C. Garrabrant, M.D., 3010 Anderson Dr., Raleigh 27609 (919) 787-7171
President-Elect: Terry Fry, M.D., University of North Carolina, 610 Clinical Sciences Bldg. 229H, Chapel Hill 27514 (919) 966-3341
Vice-President: Arthur Bolz, M.D., 1350 Kings Drive, Charlotte 28207 (704) 372-8750
Secretary-Treasurer: Hill Britton, M.D., Bowman Gray School of Medicine, 300 S. Hawthorne Rd., Winston-Salem 27103 (919) 748-4161

North Carolina Society of Pathology

President: R. Lee West, MD, R.R. 8, Box 769, Greenville 27834 (919) 551-4486
President-Elect: Thaddeus L. Jones, MD, 3333 Silas Creek Parkway, Winston-Salem 27103 (919) 773-3840
Vice President: D. Carl Biggers, MD, Dept. of Pathology, Memorial Mission Hospital, Asheville 28801 (704) 255-4270
Secretary-Treasurer: D. Emerson Scarborough, Dept. of Pathology, Wake Medical Center, Raleigh 27601 (919) 755-8260
National Headquarters: College of American Pathologists, 5202 Old Orchard Rd., Skokie, IL 60077-1034 (312) 966-5700

North Carolina Pediatric Society

President: Robert P. Schwartz, M/D., Charlotte Memorial Hospital, P.O. Box 32861, Charlotte 28232 (704) 338-3156
Vice-President: E. Stephen Edwards, M.D., 2800 Blue Ridge Road, Suite 501, Raleigh 27607 (919) 781-7490
Secretary: K. Michael Dennis, M.D., P.O. Box 658, Clyde 28721 (704) 627-9226
Treasurer: James D. Smithwick, M.D., 418 King Street, Laurinburg 28352 (919) 276-7570
Executive Director: Carol T. Russell, P.O. Box 27167, Raleigh 27611 (919) 833-3836
National Headquarters: American Academy of Pediatrics, 141 Northwest Point Blvd., P.O. Box 927, Elk Grove Village, IL 60007 (312) 228-5006

North Carolina Society of Plastic, Maxillofacial & Reconstructive Surgery

President: Noel B. McDevitt, MD, Div. of Plastic Surgery, Pinehurst Surgical Clinic, Pinehurst 28374 (919) 295-0271
President-Elect: John R. Krohn, MD, 2305 Canterwood Drive, Wilmington 28401 (919) 343-0119
Secretary: J. Robert Israel, MD, 5 Livingston and Victoria Road, Asheville 28801 (704) 253-7000
Treasurer: John A. Fagg, MD, 2901 Maplewood Avenue, Winston-Salem 27103 (919) 765-8620
National Headquarters: American Society of Plastic and Reconstructive Surgeons, 444 East Algonquin Road, Arlington Heights, Illinois 60005
(Continued on page 268)



**Most
patients
need
only one.**

K-DUR™ 20 Microburst Release System™
(potassium chloride) 20mEq Sustained Release Tablets

**A daily prophylactic dose
in a single tablet.**

Please see next page for brief summary of prescribing information.

KEY Key Pharmaceuticals, Inc.
Kenilworth, NJ 07033
World leader in drug delivery systems.

Copyright © 1987, Key Pharmaceuticals, Inc., Kenilworth, NJ 07033.
All rights reserved. KD-2055/14238603H 8/87

K-DUR™ Microburst Release System (potassium chloride) Sustained Release Tablets

INDICATIONS AND USAGE: BECAUSE OF REPORTS OF INTESTINAL AND GASTRIC ULCERATION AND BLEEDING WITH SLOW-RELEASE POTASSIUM CHLORIDE PREPARATIONS, THESE DRUGS SHOULD BE RESERVED FOR THOSE PATIENTS WHO CANNOT TOLERATE OR REFUSE TO TAKE LIQUID OR EFFERVESCENT POTASSIUM PREPARATIONS OR FOR PATIENTS IN WHOM THERE IS A PROBLEM OF COMPLIANCE WITH THESE PREPARATIONS.

1. For therapeutic use in patients with hypokalemia with or without metabolic alkalosis, in digitalis intoxication and in patients with hypokalemic familial periodic paralysis.

2. For the prevention of potassium depletion when the dietary intake is inadequate in the following conditions: Patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis with ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, and with certain diarrheal states.

3. The use of potassium salts in patients receiving diuretics for uncomplicated essential hypertension is often unnecessary when such patients have a normal dietary pattern. Serum potassium should be checked periodically, however, and if hypokalemia occurs, dietary supplementation with potassium-containing foods may be adequate to control milder cases. In more severe cases supplementation with potassium salts may be indicated.

CONTRAINDICATIONS: Potassium supplements are contraindicated in patients with hyperkalemia since a further increase in serum potassium concentration in such patients can produce cardiac arrest. Hyperkalemia may complicate any of the following conditions: Chronic renal failure, systemic acidosis such as diabetic acidosis, acute dehydration, extensive tissue breakdown as in severe burns, adrenal insufficiency, or the administration of a potassium-sparing diuretic (e.g., spironolactone, triamterene).

Wax-matrix potassium chloride preparations have produced esophageal ulceration in certain cardiac patients with esophageal compression due to enlarged left atrium.

All solid dosage forms of potassium chloride supplements are contraindicated in any patient in whom there is cause for arrest or delay in tablet passage through the gastrointestinal tract. In these instances, potassium supplementation should be with a liquid preparation.

WARNINGS: Hyperkalemia—In patients with impaired mechanisms for excreting potassium, the administration of potassium salts can produce hyperkalemia and cardiac arrest. This occurs most commonly in patients given potassium by the intravenous route but may also occur in patients given potassium orally. Potentially fatal hyperkalemia can develop rapidly and be asymptomatic. The use of potassium salts in patients with chronic renal disease, or any other condition which impairs potassium excretion, requires particularly careful monitoring of the serum potassium concentration and appropriate dosage adjustment.

Interaction with Potassium-Sparing Diuretics—Hypokalemia should not be treated by the concomitant administration of potassium salts and a potassium-sparing diuretic (e.g., spironolactone or triamterene) since the simultaneous administration of these agents can produce severe hyperkalemia.

Gastrointestinal Lesions—Potassium chloride tablets have produced stenotic and/or ulcerative lesions of the small bowel and deaths. These lesions are caused by a high localized concentration of potassium ion in the region of a rapidly dissolving tablet, which injures the bowel wall and thereby produces obstruction, hemorrhage or perforation.

K-DUR tablets contain micro-crystalloids which disperse upon disintegration of the tablet. These micro-crystalloids are formulated to provide a controlled release of potassium chloride. The dispersibility of the micro-crystalloids and the controlled release of ions from them are intended to minimize the possibility of a high local concentration near the gastrointestinal mucosa and the ability of the KCl to cause stenosis or ulceration. Other means of accomplishing this (e.g., incorporation of potassium chloride into a wax matrix) have reduced the frequency of such lesions to less than one per 100,000 patient years (compared to 40–50 per 100,000 patient years with enteric-coated potassium chloride) but have not eliminated them. The frequency of GI lesions with K-OUR tablets is, at present, unknown. K-OUR tablets should be discontinued immediately and the possibility of bowel obstruction or perforation considered if severe vomiting, abdominal pain, distention, or gastrointestinal bleeding occurs.

Metabolic Acidosis—Hypokalemia in patients with metabolic acidosis should be treated with an alkalinizing potassium salt such as potassium bicarbonate, potassium citrate, potassium acetate, or potassium gluconate.

PRECAUTIONS: The diagnosis of potassium depletion is ordinarily made by demonstrating hypokalemia in a patient with a clinical history suggesting some cause for potassium depletion. In interpreting the serum potassium level, the physician should bear in mind that acute alkalosis per se can produce hypokalemia in the absence of a deficit in total body potassium while acute acidosis per se can increase the serum potassium concentration into the normal range even in the presence of a reduced total body potassium. The treatment of potassium depletion, particularly in the presence of cardiac disease, renal disease, or acidosis requires careful attention to acid-base balance and appropriate monitoring of serum electrolytes, the electrocardiogram, and the clinical status of the patient.

Laboratory Tests: Regular serum potassium determinations are recommended. In addition, during the treatment of potassium depletion, careful attention should be paid to acid-base balance, other serum electrolyte levels, the electrocardiogram, and the clinical status of the patient, particularly in the presence of cardiac disease, renal disease, or acidosis.

Drug Interactions: Potassium-sparing diuretics; see **WARNINGS**.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term carcinogenicity studies in animals have not been performed.

Pregnancy Category C: Animal reproduction studies have not been conducted with K-OUR. It is also not known whether K-DUR can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. K-OUR should be given to a pregnant woman only if clearly needed.

Nursing Mothers: The normal potassium ion content of human milk is about 13 mEq per liter. Since oral potassium becomes part of the body potassium pool, so long as body potassium is not excessive, the contribution of potassium chloride supplementation should have little or no effect on the level in human milk.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: One of the most severe adverse effects is hyperkalemia (see **CONTRAINDICATIONS, WARNINGS, and OVERDOSAGE**). There have also been reports of upper and lower gastrointestinal conditions including obstruction, bleeding, ulceration, and perforation (see **CONTRAINDICATIONS and WARNINGS**); other factors known to be associated with such conditions were present in many of these patients.

The most common adverse reactions to oral potassium salts are nausea, vomiting, abdominal discomfort, and diarrhea. These symptoms are due to irritation of the gastrointestinal tract and are best managed by taking the dose with meals or reducing the dose.

Skin rash has been reported rarely.

OVERDOSAGE: The administration of oral potassium salts to persons with normal excretory mechanisms for potassium rarely causes serious hyperkalemia. However, if excretory mechanisms are impaired or if potassium is administered too rapidly intravenously, potentially fatal hyperkalemia can result (see **CONTRAINDICATIONS and WARNINGS**). It is important to recognize that hyperkalemia is usually asymptomatic and may be manifested only by an increased serum potassium concentration and characteristic electrocardiographic changes (peaking of T-waves, loss of P-waves, depression of S-T segment, and prolongation of the QT-interval). Late manifestations include muscle-paralysis and cardiovascular collapse from cardiac arrest.

Treatment measures for hyperkalemia include the following:

1. Elimination of foods and medications containing potassium and of potassium-sparing diuretics.
2. Intravenous administration of 300 to 500 ml/hr of 10% dextrose solution containing 10–20 units of insulin per 1,000 ml.

3. Correction of acidosis, if present, with intravenous sodium bicarbonate.

4. Use of exchange resins, hemodialysis, or peritoneal dialysis.

In treating hyperkalemia, it should be recalled that in patients who have been stabilized on digitalis, too rapid a lowering of the serum potassium concentration can produce digitalis toxicity.

1002004

KEV Key Pharmaceuticals, Inc.
Kenilworth, NJ 07033 (USA)
World leader in drug delivery systems.

13944326

Rev. 4/87

North Carolina Chapter, American College of Physicians

President: John A. Lusk, III, M.D., 1007 Professional Village, Greensboro 27401 (919) 272-2141

Vice-President: Thomas Massey, Jr., M.D., 217 Travis Ave., Charlotte 28204 (704) 372-3350

Secretary: Eugene M. Bozmyski, M.D., N. C. Memorial Hospital, Div. of Gastroenterology, Chapel Hill 27514 (919) 966-2511

Governor and Treasurer: William W. Fore, M.D., ECU School of Medicine, Dept. of Medicine/Endocrinology, Greenville 27834 (919) 511-2571

Executive Director: Carol T. Russell, P.O. Box 27167, Raleigh 27611 (919) 833-3836

National Headquarters: American College of Physicians, 4200 Pine Street, Philadelphia, PA 19104 (215) 243-1500

North Carolina Academy of Preventive Medicine

President:

Secretary-Treasurer: (None Reported)

Delegate:

North Carolina Psychiatric Association

President: Roger F. Spencer, M.D., UNC Medical School, Dept. of Psychiatry, C. B. #7160, Chapel Hill 27599 (919) 966-4622

President-Elect: Cheryl F. McCartney, M.D., UNC Medical School, Dept. of Psychiatry, C. B. #7160, Chapel Hill 27599 (919) 966-4551

Vice-President: Richard D. Selman, M.D., Highland Hospital, P.O. Box 1101, Asheville 28802 (704) 254-3201

Secretary: Margaret J. Dorfman, M.D., 402 Ray Road, Chapel Hill 27514 (919) 733-9917

Treasurer: Donna E. Frick, M.D., 109 Conner Drive, #203 Bldg. 3, Chapel Hill 27514 (919) 933-5600

Executive Director: Katherine P. Hux, 4917 Waters Edge Drive, Suite 250, Raleigh 27606 (919) 859-3370

National Headquarters: American Psychiatric Association, 1400 K Street, N.W., Washington, DC 20005 (202) 682-6000

North Carolina Chapter, American College of Radiology

President: Michael D. Weaver, M.D., Eastern Radiologists, Inc., 1711 West Sixth Street, Greenville 27834 (919) 757-4430

President-Elect: F. Randolph Jackson, M.D., Wesley Long Community Hospital, 501 N. Elm Avenue, Greensboro 27402 (919) 854-6547

Secretary-Treasurer: Thomas H. Hunt, M.D., Forsyth Radiological Assoc. Inc., 3155 Maplewood Avenue, Winston-Salem, NC 27103 (919) 760-5874

National Headquarters: American College of Radiology, 1891 Preston White Drive, Reston, VA 22091 (703) 648-8900

North Carolina Chapter, American College of Surgeons

President: Timothy C. Pennell, M.D., Bowman Gray School of Medicine, Dept. of Surgery, Winston-Salem 27103 (919) 748-4671

President-Elect: James W. Carter, M.D., 10 Doctors Park, Statonsburg Road, Greenville 27834 (919) 758-1747

Vice-President: Michael C. Rowland, M.D., One Memorial Drive, Pinehurst Surgical Clinic, Pinehurst 28374 (919) 295-2232

Secretary-Treasurer: W. Frederick McGuirt, M.D., 300 S. Hawthorne Rd., Bowman Gray School of Medicine, Winston-Salem 27103 (919) 748-3889

Executive Director: Carol T. Russell, P.O. Box 27167, Raleigh 27611 (919) 833-3836

National Headquarters: American College of Surgeons, 55 East Erie Street, Chicago, IL 60611 (312) 664-4050

North Carolina Surgical Association

President: Ralph W. Bland, M.D., 2400 Wayne Memorial Drive, Suite J, Goldsboro 27530 (919) 734-5010

President-Elect: Lowell B. Furman, M.D., 702 State Farm Road, Watauga Surgical Group, Boone 28607 (704) 264-2340

Vice-President: Chandler W. Thompson, Jr., MD, 3535 Randolph Road, 201 Wendover Building, Charlotte 28211 (704) 364-8100

Secretary-Treasurer: Frank Sabiston, Jr., MD, P.O. Box 1316, Kinston 28501 (919) 522-1626

North Carolina Thoracic Society

President: Neil R. MacIntyre, M.D., Duke University Medical Center, Box 3911, Durham 27710 (919) 681-2720
President-Elect: Robert A. Heyer, M.D., 2711 Randolph Rd., Suite 100, Charlotte 28207 (704) 373-0700
ATS Representative Councilor: William B. Hunt, Jr., M.D., P.O. Box 2157, New Bern 28560 (919) 633-8608
Secretary-Treasurer: Albert G. Driver, Jr., M.D., ECU School of Medicine, Brody Bldg., Room 340, Greenville 27858 (919) 757-4653
Immediate Past-President: Robert A. Shaw, M.D., 1705 W. Sixth Street, Greenville 27834 (919) 752-6101
Administrative Assistant: Scott Venable, P.O. Box 27985, Raleigh 27611 (919) 832-8326
National Headquarters: American Thoracic Society, 1740 Broadway, New York, NY 10019

North Carolina Urological Association

President: Joseph McK. Jenkins, M.D., 604 E. 12th Street, Washington 27889 (919) 946-0136
President-Elect: John Cashman, M.D., 1905 Glen Meade Road, Wilmington 28403 (919) 763-6251
Secretary: Raymond J. Fencil, M.D., 180-O Parkwood Drive, Elkin 28621 (919) 526-2000
Treasurer: Paul W. F. Coughlin, M.D., 624 Quaker Lane, D-100, High Point 27262 (919) 886-5151
Executive Director: Carol T. Russell, P.O. Box 27167, Raleigh 27611 (919) 833-3836

Old North State Medical Society

President: Jesse F. Williams, M.D., 2402 Rollinghill Rd., Fayetteville 28304 (919) 483-9046
President-Elect: Fred D. McQueen, Jr., M.D., P.O. Drawer 1257, Hamlet 28345 (919) 582-4004
Vice-President: James R. O'Rourke, Jr., M.D., 3012 Falstaff Road, Raleigh 27610 (919) 834-2040
Secretary: Dwight D. Perry, M.D., 512 Simmons Street, Durham 27701 (919) 682-7175
Treasurer & Executive Director: John T. Daniel, Jr., M.D., 415 Dunstan St., Durham 27707 (919) 682-7378
National Headquarters: National Medical Association, 1012 Tenth Street, N.W., Washington, DC 20001 (202) 347-1895

North Carolina Nurses Association

President: Jo Franklin, Rt. 8, Box 376B, Salisbury 28144 (704) 636-2117
President-Elect: Gale Johnston, 3109-D Aileen Dr., Raleigh 27606 (919) 851-7077
Vice-President: Wanda Boyette, Rt. 6, Box 552, Clinton 28328 (919) 592-7771
Secretary: Marlene Howlett, P.O. Box 9000, Wilmington 28402-9000 (919) 458-3540
Treasurer: Patti Fralix, 4420 Lake Boone Trail, Raleigh 27607 (919) 847-2890
Executive Director: Clare LeBar, P.O. Box 12025, Raleigh 27605 (919) 821-4250
National Headquarters: American Nurses Assoc. 2420 Pershing Rd., Kansas City, MO 64108 (816) 474-5720

North Carolina Society of Physicians Assistants

President: Bud Shelton, PAC, Route 1, Box 249-C, Elfland, NC 27243 (919) 684-8111
President-Elect: David M. Coniglio, PAC, 4435B American Drive, Durham 27705-6411 (919) 684-8111
Vice-President: Jerry A. Heath, PAC, 2303 10th Avenue Court, NE, Hickory 28601 (704) 324-9900
Secretary: Rebecca Lovell Scott, PAC, Route 1, Box 290C, Vilas 28692 (704) 264-6635
Treasurer: Jeffery A. Katz, PAC, 18 Cherry Grove Drive, Hickory 28602-9785 (704) 322-4340

NC Health Care Facilities Association

Executive Vice-President: Craig Souza, 5109 Bur Oak Circle, Raleigh 27612 (919) 782-3824
 No other officers

North Carolina Medical Group Managers

President: John Rhoades, Charlotte Eye, Ear, Nose Assoc., 1600 E. Third Street, Charlotte 28204 (704) 372-3300
President-Elect: Sylvia P. Icenhour, Thompson Medical Specialists, PA, 322 Mulberry Street, S.W., P.O. Box 1020, Lenoir 28645 (704) 758-5544
Vice-President: James L. Mount, F.A.C.M.G.A., Sylva Medical Center, PA, 48 Hospital Road, Sylva 28779 (704) 586-8971
Secretary: Cameron M. Cox, Jr., Medical Faculty Practice Plan, ECU School of Medicine, P.O. Box 8168, Greenville 27834 (919) 551-2322
Treasurer: Karen C. Young, Union Orthopaedic, PA, 701 Roosevelt Blvd., Suite 600, Monroe 28110 (704) 289-4595
 Terms expire August/September 1988

North Carolina Hospital Association

President: C. Edward McCauley, NC Hospital Association, P.O. Box 10937, Raleigh 27605 (919) 832-9550
Chairman: Grady H. Stokes, Vice-President of Development, Catawba Memorial Hospital, 810 Fairgrove Church Road, S.E., Hickory 28601 (704) 322-0540
Chairman-Elect: Wayne F. Shovelin, President, Gaston Memorial Hospital, P.O. Box 1747, Gastonia 28053-1747 (704) 866-2000
Past Chairman: John R. Willis, President, Rex Hospital, 4420 Lake Boone Trail, Raleigh 27607 (919) 755-3100
Secretary: G. Michael Girone, Administrator, Raleigh Community Hospital, P.O. Box 28280, Raleigh 27611 (919) 872-4800
Treasurer: Marvin A. Bryan, Administrator, Chowan Hospital, P.O. Box 629, Edenton 27932 (919) 482-8451
 Officers change with calendar year.

North Carolina Society of Medical Assistants

President: Nina Bagley, C.M.A., 1629 Owen Dr., Fayetteville 28304 (919) 323-1850
President-Elect: Pat Thompson, H.T., C.M.A., 9915 Cherokee Tr., Waxhaw 28173 (704) 843-3081
1st Vice President: Nancy Peedin, L.P.N., C.M.A., 1030 Professional Vill., Greensboro 27401 (919) 643-5241
2nd Vice President: Jackie Albritton, C.M.A., Rt. 1, Box 276, Hookerton 28538 (919) 523-2548
Recording Secretary: Jan Renee Collins, 224 Triplette St., #88, Jonesville 28642 (704) 835-7994
Treasurer: Diane Carriker, C.M.A.-A., Rt. 1, Box 357A, Harrisburg 28075 (704) 782-2074

IN MEMORIAM

Deaths reported to the NCMS office as of
July 1, 1988

Abernethy, Lee D., Jr., Charlotte — 4-23-88
Aderhold, Richard Millikan, Wilson — 11-19-87
Adkins, Trogler Francis, Newport — 9-20-87
Arney, William Charles, Morganton — 1987
Atkins, Stanley Sisco, Boone — 12-24-87
Austin, Andrew Campbell, Asheville — 10-14-87
Barnes, Robert Stephen, Durham — 9-7-87
Biggs, John Irvin, Lumberton — 11-1-87
Black, John Riley, Jr., Whiteville — 2-87
Brooks, James Taylor, Greensboro — 2-21-88
Bulla, Robert Chapman, Concord — 5-8-87
Byrd, Charles William, Dunn — 11-30-87
Coffey, James Cecil, Salisbury — 6-18-87
Cowling, George Frederick, Sr., New Bern — 4-25-88
Croutcher, Donald Lewis, Clinton — 1987
Cuttino, John Tindal, Matthews — 1-7-88
DiNapoli, Raphael Joseph, Sr., Durham — 12-28-87
Donnelly, William Augustus, Pinehurst — 5-25-87
Fitzgerald, Charles Edmond, Sr., Farmville — 9-20-87
Forsyth, Henry Frank, Winston-Salem — 5-14-88
Fort, Lynn, Jr., Charlotte — 4-10-88
Gaddy, George Douglas, Burlington — 2-15-88
Hamer, Eugene Floyd, Monroe — 7-26-87
Hardman, Edward Francis, Charlotte — 4-15-88
Harrill, Henry Clay, Greensboro — 9-30-87
Harris, Charles Isaac, Jr., Washington — 5-13-88
Hedgpeth, Edward McGowan, Chapel Hill — 7-22-87
Henderson-Smathers, Irma C., Asheville — 1987
Hiatt, Joseph Spurgeon, Jr., Southern Pines — 3-19-88
Hicks, Alfred Marx, Durham — 6-3-87
Highsmith, William Cochran, Clemmons — 1-18-88
Howard, Corbett Etheridge, Goldsboro — 10-2-87
Hutaff, Lucile West, Fayetteville — 7-12-87
Jacobs, Julian E., Charlotte — 9-3-87
Jordan, Charles Daniel, Bethel — 12-5-87
Justa, Samuel Harry, Palm Beach, FL — 3-10-87
Kendall, Benjamin Horton, Shelby — 11-16-87
Kerby, Grace Partridge, Miami, FL — 1987
King, Duncan Ingraham C., Hendersonville — 11-11-87
Kurten, Louis John, Fayetteville — 6-11-87
Lacy, George Rufus, Jr., Asheville — 9-10-87
Lake, Ralph Callihan, Washington — 11-11-87
Lang, Andrew Martin, Morganton — 2-4-88
Lee, Ying Huey, Lincolnton — 12-16-87
Lindsay, Robert Boyd, Chapel Hill — 12-2-87

Lutterloh, Isaac Hayden, Sr., Sanford — 2-29-88
Macatee, George, Jr., Asheville — 8-15-87
Martin, Thomas Lewis, Asheville — 10-5-87
McElwee, Ross Simonton, Jr., Charlotte — 1-6-88
Mock, Charles Glenn, Emerald Isle — 2-10-88
Morgan, Richard Young, Lexington — 12-15-87
Morrow, Rufus Clegg, Banner Elk — 9-8-87
Mullins, Patrick Stephen, Morehead City — 12-18-87
Newsome, James Frederick, Chapel Hill — 1-29-88
Nicholson, Neil Graham, Jr., Lilesville — 5-20-87
Offutt, Vernon Delmas, Kinston — 4-10-88
Paden, Paul Alexander, Charlotte — 8-26-87
Pittman, George Leon, Burlington — 6-21-87
Poole, Gordon Joseph, Greensboro — 5-5-88
Portela, Angel Ismael, Roanoke Rapids — 1-2-88
Price, H. Preston, Asheville — 7-15-87
Purnell, William David, Raleigh — 10-22-87
Rapp, Ira Hammes, Charlotte — 1987
Reibold, Robert John, Hendersonville — 9-26-87
Rhodes, John Sloan, Raleigh — 1-13-88
Rice, John Sidney, Hickory — 9-27-87
Roberson, Edward Leon, Tarboro — 10-25-87
Robertson, John Newton, Fayetteville — 8-1-87
Sayers, Audrey Jongbloed, Raleigh — 12-13-87
Schurter, Lonis Leon, Garner — 6-6-88
Shaw, Lloyd Roosevelt, Statesville — 3-3-88
Singletary, William Vance, Durham — 7-29-87
Sloan, Allen Barry, Charlotte — 7-5-87
Smith, Charles Gordon, III, Wilmington — 5-26-88
Smith, Milton Thomas, Southern Pines — 11-11-87
Smith, Roy Meadows, Greensboro — 1-5-88
Stewart, Daniel Niven, Jr., Hickory — 2-29-88
Story, Stratton Rowland, Smithfield — 12-6-87
Sullivan, Daniel James, Greensboro — 8-10-87
Todd, James Gordon, Jr., Asheville — 3-30-88
Vollmer, Donald Henry, Andrews — 10-10-87
Walker, Louis Augustine, Hampstead — 10-1-87
Webb, Alexander, Jr., Raleigh — 4-2-88
Wiggins, John Carroll, Jr., Winston-Salem — 6-27-87
Wilson, Julius Lane, Tryon — 11-6-87
Wilson, Thomas Barnett, Raleigh — 10-8-87
Woodson, William Haller, Winston-Salem — 10-16-87
Wright, Robert L., Sanford — 5-15-88
Young, John Clingman, Asheville — 1987

Index to Advertisers

Baron Financial Services, Inc.	16
B & B X-Ray, Inc.	29
Burroughs Wellcome Co.	5-8
Carolina Consultation Center	13
CompuMed, Inc.	33
Computerland	16
Crumpton Company	10
Duke Physician's Referral Service	1
Eli Lilly	8b
Golden-Brabham Insurance Agency, Inc.	32
Key Pharmaceuticals	267, 268
Mary Frances Center	14

Med-Care	138
Medical Mutual Insurance Company of N.C.	C2
Medical Protective Company	4
Miles Pharmaceuticals	32a-b
MONY Financial Services	9
North Carolina Practice Management Association	C4
Roche Laboratories	271-272
Saint Albans Psychiatric Hospital	2
U.S. Army Reserve	8a, 34
U.S. Navy	126
U.S. Navy Reserve	137
Winchester Surgical Supply Co.	32

Official Journal
of the
North Carolina
Medical Society
September 1988
Volume 49
Number 9

CURRENT
JNLS
W1
NO
407

North Carolina Medical Journal

For Doctors and their Patients

**Inaugural Address
of the President
of the American
Medical Association**
James E. Davis, M.D.

**Address of the President-
elect of the North Carolina
Medical Society**
Ernest B. Spangler, M.D.

**Doctor Interviews the
Candidates for Governor**
Edward C. Halperin, M.D.

**George Bush,
Michael Dukakis,
and Health Policy Issues
in the 1988 Presidential
Campaign**
Edward C. Halperin, M.D.

North Carolina Medical
Journal
UCSF LIBRARY
Received on: 09-29-88



The Direct Line To Security And Peace of Mind



CRUMPTON COMPANY

Many N.C. Physicians participate in the
**Crumpton Plan of Disability Income
Protection —**

a plan that provides income when you cannot!

Take a few minutes to call us today for
information on our expanded products and
services.

You will be glad you did!

Because **we care** we have

- Benefits designed to meet today's needs
- Personalized claim service
- New broadened portfolio of insurance products



NOT PROMISES BUT PERFORMANCE

from the Disability Income Specialists who
have served N.C. Professionals for nearly
50 years!

CRUMPTON COMPANY

PROFESSIONAL INSURANCE ADMINISTRATORS
POST OFFICE BOX 51939, DURHAM, NC 27717-1939
919/493-2441 800/672-1674 (NC) 919/489-7380 (FAX)

NORTH CAROLINA MEDICAL JOURNAL

For Doctors and their Patients

Published Monthly as the Official Organ of the North Carolina Medical Society

September 1988, Volume 49, Number 9

(ISSN 0029-2559)

STAFF

Eugene A. Stead, Jr., M.D.
Rt. 1, Box 194, Bullock
EDITOR
919/693-4531

Francis A. Neelon, M.D.
Durham
ASSOCIATE EDITOR

F. Maxton Mauney, Jr., M.D.
Asheville
ASSOCIATE EDITOR

Eben Alexander, Jr., M.D.
Winston-Salem
ASSOCIATE EDITOR

William B. Blythe, M.D.
Chapel Hill
ASSOCIATE EDITOR

William W. Fore, M.D.
Greenville
ASSOCIATE EDITOR

Edward C. Halperin, M.D.
Durham
ASSOCIATE EDITOR

Laurel Ferejohn
Durham

MANAGING EDITOR
919/684-5728

Jane Whalen
Durham
EDITORIAL ASSISTANT

George E. Moore
Raleigh
BUSINESS MANAGER

EDITORIAL BOARD

Charles W. Styron, M.D.
Raleigh
CHAIRMAN

Edwin W. Monroe, M.D.
Greenville

Robert W. Prichard, M.D.
Winston-Salem

Louis deS. Shaffner, M.D.
Winston-Salem

Jay Arena, M.D.
Durham

Jack Hughes, M.D.
Durham

William B. Blythe, M.D.
Chapel Hill

Margaret N. Harker, M.D.
Morehead City

The appearance of an advertisement in this publication does not constitute any endorsement of the subject or claims of the advertisement.

The Society is not to be considered as endorsing the views and opinions advanced by authors of papers delivered at the Annual Meeting or published in the official publication of the Society. — *Constitution and Bylaws of the North Carolina Medical Society*, Chapter IV, Section 3, page 4.

NORTH CAROLINA MEDICAL JOURNAL

Box 3910, Duke University Medical Center, Durham, NC 27710 (919/684-5728), is owned and published by The North Carolina Medical Society under the direction of its Editorial Board. Copyright © The North Carolina Medical Society 1988. Address manuscripts and communications regarding editorial matters, advertising, subscription rates, etc., to the Managing Editor at the Durham address. All advertisements are accepted subject to the approval of a screening committee of the State Medical Journal Advertising Bureau, 711 South Blvd., Oak Park, Illinois 60302 and/or by a Committee of the Editorial Board of the North Carolina Medical Journal in respect to strictly local advertising. Instructions to authors appear in each issue (see table of contents). Annual Subscription, \$12.00 (+ tax in NC). Single copies, \$2.00. Publication office: The Ovid Bell Press, Inc., 1201-05 Bluff St., Fulton, MO 65251. *Second-class postage paid at Raleigh, North Carolina 27611 and additional mailing offices.* Postmaster: Send address changes to North Carolina Medical Society, 222 N. Person St., Raleigh, NC 27611.

YOU CAN KEEP THEM IN BALANCE— YOUR FAMILY LIFE AND YOUR MEDICAL PRACTICE.

We'd like to help you spend more time with your family yet receive professional satisfaction from your medical practice. As a member of the Air Force health care team, you'll be able to participate in our group practice concept which will free you of most administrative duties.

Air Force benefits are also very attractive. You and your family will enjoy 30 days of vacation with pay each year plus many more Air Force advantages. Call

CAPT CHUCK HELVEY

919-850-9549

STATION-TO-STATION COLLECT



THE SECRET IS OUT



“I became aware of the Southern Medical Association through the insurance program. My father has worked in insurance nearly all of his life and was interested in me getting a good policy and he said SMA had some of the best policies around.”

**James F. Beattie, M.D.
Pathology
Chattanooga, TN**

Since 1906, the Southern Medical Association has been the best kept secret in the South. No longer! The word is out and everybody's talking.

They're talking about the educational benefits of belonging to the largest regional multi-specialty association in the U.S. and the diversity of the Annual Scientific Assembly.

They're talking about a non-political association whose only mission is to provide the best educational and financial benefits available anywhere.

They're also talking about unrivaled member benefits including the SMA Insurance Program, the Physicians' Purchasing Program, the SMA Retirement Program, SMA Travel Services, Dial Access, the *Southern Medical Journal* and many, many more.

But most of all, they're talking about how SMA can offer so much at such a low cost.

Call the SMA for more information and a membership application. Find out why more and more physicians are joining the SMA every day.

Join the SMA today . . . You'll be talking about us too!

Post Office Box 190088
Birmingham, Alabama 35219



1-800-423-4992
(205) 945-1840

North Carolina Medical Journal

FOR DOCTORS AND THEIR PATIENTS

Contents / September 1988, Volume 49, Number 9

CAROLINA HISTORY

- 413 Inaugural Address of the President of the AMA *James E. Davis*

ANNUAL SESSION

- 418 Address of the President-Elect of the North Carolina Medical Society *Ernest B. Spangler*

POLITICS AND MEDICINE

- 423 A Doctor Interviews the Candidates for Governor *Edward C. Halperin*
433 George Bush, Michael Dukakis, and Health Policy Issues in the 1988 Presidential Campaign *Edward C. Halperin*

FOR PATIENTS

- 441 Heart Attack *Margaret Munster and Robert M. Califf*

TOXIC ENCOUNTERS

- 451 Return with Us Now to Those Thrilling Days of Yesteryear: Argyrol and Argyria *Ronald B. Mack*

BOARD OF MEDICAL EXAMINERS

- 455 Drug Enforcement Administration: Renewal of Physician Registration *Eben Alexander*

SOCIETY AND MEDICINE

- 457 American Medical Student Activism: 1964-1968 *Donald L. Madison*

PUBLIC HEALTH

- 467 Conjoint Report to the North Carolina Medical Society and the North Carolina Commission for Health Services *Ronald H. Levine*

LETTERS TO THE EDITOR

BULLETIN BOARD

- 475 New Members
475 Continuing Medical Education
478 Classified Advertisements
480 Index to Advertisers

For professionals, a major disability or illness can be financial disaster.

A disability income protection plan from Connecticut Mutual replaces earnings lost because of disability.

Our plan includes:

—high benefit limits that replace more of your income;

—special reduced rates for non-smokers;

—proportionate benefits when you can only work part-time but still

need a full-time income;

—the ability to increase your basic policy benefit as your income increases, regardless of your health;

—reimbursement for vocational and educational expenses during rehabilitation;

—an "Own Occupation" rider that pays full benefits if you are unable to perform the main duties of your own occupation, even if you earn income from a different job or business;

—we can also pay dividends that

reduce the cost of your coverage.

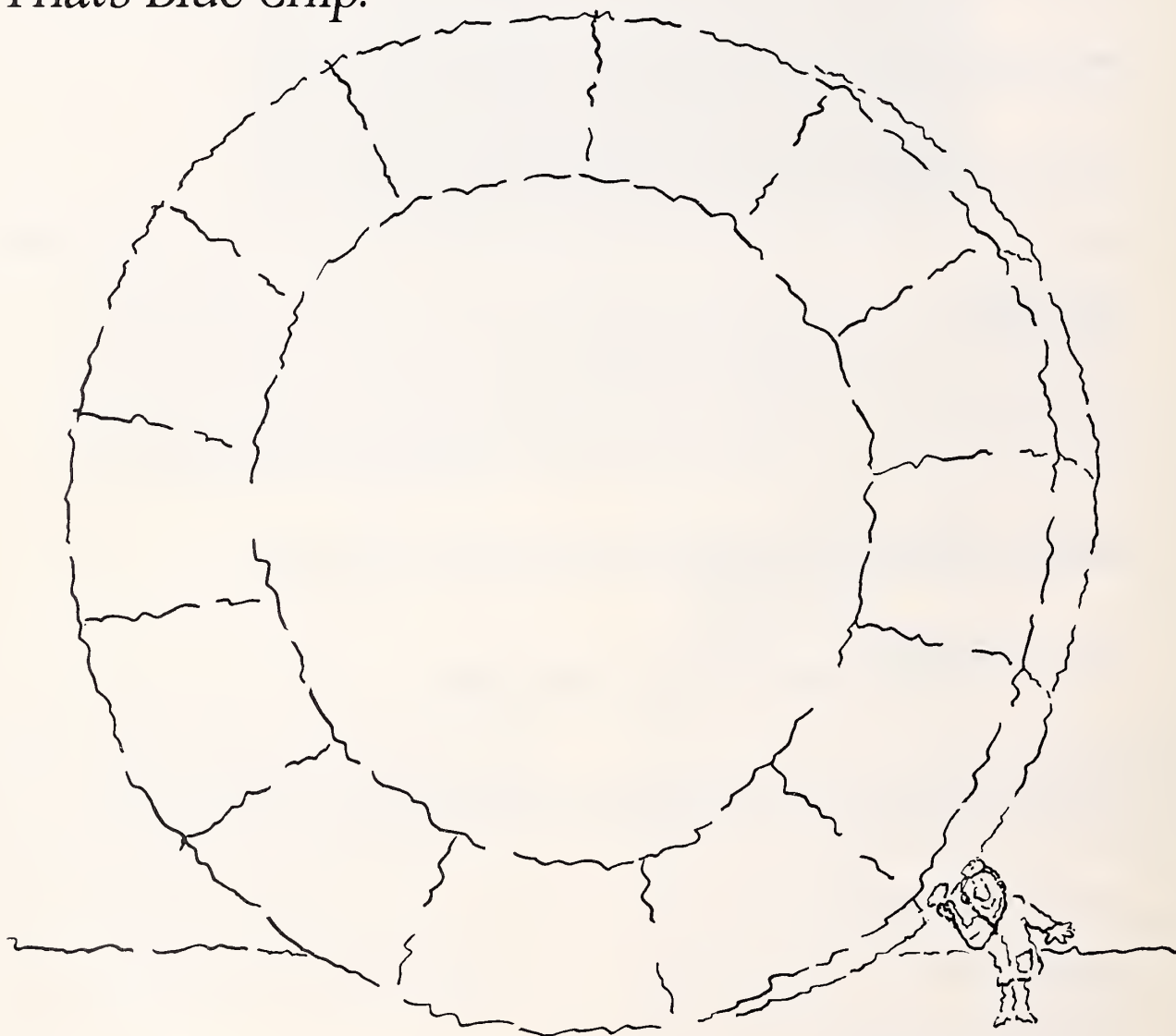
Call today to find out how we can custom design a Blue Chip protection plan to keep your income healthy.

The Hinrichs Financial Group

1600 Charlotte Plaza
Charlotte, NC 28244
(704) 371-8600

An affiliate of the  Alliance

*Disability insurance that keeps your income healthy.
That's Blue Chip.*



Connecticut Mutual Life Insurance Company (Hartford CT)

Inaugural Address of the President of the AMA

James E. Davis, M.D.

Dr. James Davis is the first North Carolinian to have the honor of serving as President of the American Medical Association. We publish his installation address in full because of its excellent content and because it signifies an important event in the history of North Carolina medicine. The comments of Dr. Louis Shaffner follow the address, and allow the reader to share in the good fellowship created by the installation of Dr. Davis.

Mr. Speaker, officers and members of the Board of Trustees, delegates and alternates to the House of Delegates, presidents of state associations, auxiliary officials and distinguished guests.

I feel privileged to join the ranks of 142 predecessors who have had the opportunity to serve as President of the American Medical Association. As I stand here — humbly, respectfully and enthusiastically accepting the challenges of this office — I am honored to be in the presence of this audience, the leaders of American medicine.

This opportunity is especially meaningful to me because it comes at a time when our profession is at a zenith of unprecedented accomplishments. Working with the people of this country, we have achieved so much. Life expectancy continues to lengthen. The quality of life continues to improve. And the public now exhibits a widespread and impressive commitment to self-care and the prevention of illness. The advances of many decades are manifest in the decline in the incidence of heart attacks and strokes, in the long and productive lives many people lead for years after a cancer diagnosis, and in the fact that infections — except for AIDS — are better controlled than ever before. And yet, there is

much that both the medical profession and the American people still need to do.

We must get a handle on the high cost of health care. We must find solutions to the drug crisis and other frightening conditions that plague so many American adolescents. We must develop ways to reach out and care for the medically indigent. We must solve the problems of providing adequate physical and mental health services and long-term out-of-hospital care for the elderly. Indeed, we must strive to assure that every single American has access to proper and affordable care whenever and wherever it is needed!

This is a serious agenda of serious problems. And if we are serious about attacking them, all Americans must give not only attention but also active participation to this agenda.

This evening, I want to speak directly to this distinguished audience assembled here, and also to reach out beyond this room to every physician in this country, and to the American public as well. I want to get my message across to both physicians and the general public because I believe this is a pivotal time — a pivotal time in the relationship between doctors and the people we serve.

It used to be that everybody understood medicine was the doctor and the patient. Artists have depicted the doctor-patient relationship beautifully over the years. I remember, and I'm sure many of you remember, that Norman Rockwell in the 1950s had a cover on the *Saturday Evening Post* that shows the doctor and the patient in the examining room,

Delivered at the American Medical Association Annual Meeting, Chicago Hilton and Towers Grand Ballroom, June 29, 1988.

scales in the corner and diplomas on the wall. A middle-aged physician is fixing a hypodermic for his young patient, a small boy standing on a chair with his rear end exposed, waiting for the shot he knows he has to have. Everyone who has ever seen that picture can relate to the way the little boy's apprehensive scowl is tempered by an admiring look of great trust and faith, because this young man knows that there is a bond between him and his doctor.

A lot has changed since Norman Rockwell painted this picture, and if Mr. Rockwell were alive and painting today — if he were painting the canvas of medicine in the 1980s and 1990s — he would have to divide the doctor and the little boy by hospital administrators, insurance company executives, federal regulators, state and national legislators, and even the doctor's own peers looking over his shoulder. Like it or not, it is clear that all of these are going to remain in the picture in one form or another. We cannot return to a bygone era, and we certainly would not want to give up modern medical advances, even though we might sometimes wish for a simpler world. Yet we must preserve the special doctor-patient bond — that special trust and faith. We must connect physicians with patients in the public's mind just as closely, just as indelibly as Norman Rockwell did. I believe the key to doing this is service.

Service has always been one of the hallmarks of our profession. Throughout history, physicians have been known for service to patients, service to the institutions of medicine and of healing, service to the community — service to mankind. Physicians are still the most dedicated, the most serving, of all people. Our willingness to endure long, arduous periods of education and training, our role as the patient's advocate, our on-call and on-demand lifestyle, our charity — these all bespeak our service. Recent data show that doctors are donating increasing amounts of care. In fact, in a recent survey of primary care physicians, 68% had volunteered their time at a free clinic, nursing home or other social service health care facility. One-third of all care given by emergency physicians in this country is donated.

Often, organized medicine is the mechanism for contributed services. Already, two specialty societies and eleven state medical associations have instituted voluntary Medicare assignment programs. An equal number of state associations are considering such programs. As an example of another way we can serve those at, or below, the poverty level, a Kentucky Medical Association program that provides free care for the medically indigent has tapped more than half of the physicians involved in active patient care.

So there is extensive evidence that physicians do serve and serve generously. But the public does not always perceive us as being charitable.

Yes, they respect us for our learning. Yes, they appreciate our long hours of work. Yes, they regard with awe our ability to apply highly technical scientific information for their individual benefit. And yes, as a result of this perception of what doctors do for them, they have afforded us a special status in society, and they still rank us at the highest levels of

trust and confidence.

Yet they are not sure why we serve. They wonder, are we altruistic for their benefit? Or hard-working primarily for our own?

For physicians, who have always held service as our highest goal, it is something of a shock that our motives are questioned. But it is a sign of the times. So we must accept it, and take it as a mandate to show clearly to the American people that our primary motive is, as it has always been, to serve them.

Service starts with our patient contact. Some four million patient interactions every day give American doctors the opportunity to demonstrate not only our competence, but also our genuine compassion — our caring and our devotion to each individual patient we serve.

Service continues with our teaching. At least a third of us are already involved in medical education full-time or part-time, paid or volunteer. But all of us must extend our teaching to our patients and to the public.

We also serve through involvement. Physicians' talents, and those of our spouses, may lead to involvement in many areas. For instance, you may choose to lead a church youth group, work with scouts, or give time in the school library. You may decide to coach a Little League team or drive the elderly to the grocery store. You may want to initiate a recreational program in a nursing home, volunteer with Meals on Wheels, or visit shut-ins. You may want to be a museum docent, sing in a choral group, or play in your local symphony. Or you may choose to run for public office. For certainly there are opportunities at all levels of government.

Throughout the United States, physicians and their spouses are serving their communities in the ways I've described and more. The point is we all must give of ourselves. We all must get out into the community. We all must let the public know we care!

In my home town, patients are always telling me what a wonderful thing it is for the medical profession that one of us — a local physician — is on the bench at every major athletic event where our high schools compete, that a physician's spouse serves as county commissioner, and another is a member of the school board. I'm proud to say that my wife Margaret has also served Durham and its people in many ways, not as an elected official, but in activities ranging from teaching Sunday School, to setting up day care centers, to serving on the Durham Housing Authority. And she has been involved all the while with the Medical Auxiliary. Our Auxiliaries do so much for our profession that we cannot do for ourselves and I thank you all. Let me assure you that in addition to enhancing our professional image and helping others, service truly is its own reward.

In the years to come, the big issues — issues like Medicare, substance abuse, professional liability, AIDS, and rationing health care — are ultimately going to be decided in the public forum. When we have convinced the public that our mission in life truly is to serve them, we will have their support as these issues come up.

Dr. Edmund Pellegrino, who directs the Kennedy Institute of Ethics, recently observed, "How physicians resolve the inherent tensions between self-interest and altruism has always been a surer test of moral quality than the oaths they utter." Doctor Pellegrino is quite right.

But often, all it takes to resolve the tension between self-interest and altruism is a little peer pressure carefully applied. So if your colleagues back home say they're too busy to volunteer, take the time to ask them personally to get involved in your community. Most of us do what we do not because we see an opening and move for it, or plan 10 years ahead, but because somebody says, "Will you do this?"

That's how I got into organized medicine. When a surgeon friend of mine called up and said, "I want you to be my vice-speaker in the North Carolina Medical Society House of Delegates," I took the job. I did this with some fondness for the activity, but mostly for love of the man, and the opportunity to work with him. My life, and I guess most everybody's life, has been that sort of thing. We get involved in service because somebody asks us. We model ourselves after those we respect. And before we know it service is a way of life.

As I go around the country and talk with the people of America during the coming year, I will be sharing with them the service ethic in which medicine has always been quietly, and nobly, rooted. I will be reminding them that the American medical system is truly one of our country's greatest treasures. I will be urging them: concerning health, beware, be informed, be involved.

Beware of changes that make it difficult, even impossible, to protect the high quality care you expect and deserve. Be informed about what constitutes good health, and do what you can to help yourself and others to have good health. And be involved in insuring that collectively we make the right political decisions now, and in the future.

For example, today's House of Delegates' action on Medicaid reform makes a solid statement of physicians' concern for the good of those least able to fight for their own medical needs. We have pledged our power and our prestige to help these needy people. But we also need the power of the American people to urge Congress to move quickly to enact Medicaid reform. And we need the people's involvement to keep working with us in the same cooperative spirit as we address other needs on the health care agenda.

Finally, I make three challenges this evening. First, I challenge every physician in America, whether in practice, education, research, administration, or in any other endeavor — I ask every physician to tithe of your time for the benefit of the American people. Just one-tenth of the normal work

week — four hours a week serving the public in the way you think is most helpful. Second, I challenge each American citizen to learn more about and work for even better health care in America. I am asking the public to help create a strong, informed constituency for health.

To catalyze both the physician and the public efforts, as my third challenge, I am asking every physician's organization in this country, at every level — county, state, and specialty — to organize and staff ombudsman offices. These offices will encourage every physician member to fulfill the service tithe. They will assist physicians in identifying work which is individually most meaningful. They will provide health care information to the public and referrals to physicians. They will receive the public's questions, concerns, suggestions, and recommendations about health matters, and follow through on consumer complaints. In order for these ombudsman offices truly to become a two-way liaison between physicians and the public, medical organizations can tap the growing ranks of retired or semi-retired physicians. This is a group of highly qualified, highly competent, dedicated individuals who know how to get things done. Such ombudsman offices, staffed by retired physicians, will surely show our patients, our neighbors, and our community leadership that their health is our number one concern!

To demonstrate the significance of this proposal, I'm pleased to announce this evening that the Board of Trustees of the American Medical Association has established a special award, the President's citation for Service to the Public, to honor medical associations and societies that excel in service. And I look forward to presenting the first award in December.

So this evening I urge the physicians of America: make service an avocation, as well as a vocation. Because service is something we must do, so that America's patients know in no uncertain terms that doctors are men and women whose first motivation is public service. The days portrayed by Norman Rockwell may be gone forever. But if all of America's physicians will rededicate ourselves to serve each of our communities, we will bring into sharp focus a clear picture of why and how doctors serve each of our patients.

Last week just before I came to Chicago, an elderly patient of mine said, "Doctor Davis, I'm glad you're going to lead the AMA. You'll travel the country, you'll travel the world. But always let your office here know where you are, for there may be something I'll want to ask you."

This evening, there is something I want to ask you — the physicians and the people of this country. I ask you: Let's work together so quality health care will not only continue in America but will continue to improve.

Dr. Schaffner's comments follow.

James Evans Davis, President of the American Medical Association

Louis deS. Shaffner, M.D.

Dr. James Evans Davis of Durham was installed as the one hundred forty-third President of the American Medical Association on June 29, 1988. For North Carolinians the installation was much more than an oath of office and an inaugural address.

During the five-day meeting of the House of Delegates in Chicago there were many tributes to Dr. Davis for his contributions and leadership in organized medicine. There were also, however, many humble expressions of gratitude and recognition from Jim and his wife Margaret for the support given them by the North Carolina Medical Society and its AMA Delegation, from his first appointment as an alternate delegate in 1971 through his election as President-Elect in 1987.

On Sunday night the North Carolina Delegation hosted a reception honoring Dr. Davis. On Tuesday the AMA with Mrs. William Hotchkiss as hostess gave a luncheon for Mrs. Davis and her guests at the Park Hyatt Hotel. That night Dr. and Mrs. Davis hosted an elegant reception and dinner party on the 95th floor of the John Hancock Center. Among the hundred guests, all from North Carolina, were members of the Davis family, his office staff, his surgical associate Dr. Walter Loehr, representatives from the North Carolina Blue Cross & Blue Shield and the North Carolina Medical Mutual Insurance Companies, the Medical Auxiliary, and all North Carolina doctors at the meeting from Dr. John Robert Kernodle, "the oldest rat in the barn," to Dr. Ernest Spangler, current President of the North Carolina Medical Society. Many paid glowing tribute to Jim and Margaret for their service to North Carolina.

The Presidential Inaugural Ceremony on Wednesday was a dignified and august occasion. A large stage at one end of the gold refurbished Grand Ballroom of the Chicago Hilton Hotel was filled with some 50 presidents of state and territorial medical associations and some 15 gold-medal-bedecked past presidents of the American Medical Association, as well as the Board of Trustees and current officers, all filing in in formal attire to the tune of Pomp and Circumstance.

The flavor of North Carolina was first apparent when the

invocation was given by a former classmate of Dr. Davis at the University of North Carolina, The Right. Reverend William J. Gordon, Jr., now Third Bishop of Alaska. After President William Hotchkiss's farewell remarks there followed introduction of the entertainment. This was by Warren Covington and the Pied Pipers, a group selected by Dr. Davis for their Glenn Miller style of music. Some of the pieces had been selected by Mrs. Davis, and the whole program was reminiscent of the era of big band music in the Tin Can at Chapel Hill.

Dr. Davis's inaugural address was masterfully given and enthusiastically received. He admonished us "to show clearly to the American people that our primary motive is, as it has always been, to serve them."

The program ended with a surprise North Carolina coup that only the likes of Dr. Davis could have arranged. Dr. John Budd of Cleveland, Ohio, a past president of the AMA, and Dr. David Welton of Charlotte, our North Carolina past president and chairman of our AMA Delegation during Dr. Davis's early AMA years, teamed up to show their other talents. Each at a grand piano, they rendered a duet of special Carolina tunes: "Carolina in the Morning," "Carolina Moon," "Sleepy Time Down South," "Is It True What They Say About Dixie," and "Hark the Sound of Tar Heel Voices." You can be sure the North Carolina contingent was standing at the end.

The reception and buffet following allowed opportunity for socializing and dancing, and on the last morning the North Carolina Medical Society with Mrs. Henry Carr acting as hostess held a breakfast honoring Margaret Davis.

During these days House of Delegates reference committee hearings and business sessions were held at which 101 reports and 213 resolutions were considered in establishing AMA policy.

So it was a busy week for all. At the beginning North Carolina had Dr. Harvey Estes of Durham as a member of the Council on Scientific Affairs, Dr. Reginald Harris of Shelby as a member of the Council on Medical Service, and Dr. Davis as President-Elect. One of his last acts in that capacity was to nominate Dr. John Glasson of Durham for the Council on Ethical and Judicial Affairs. The election of Dr. Glasson to this Council and the installation of Dr. Davis allowed North Carolina at the end of the meeting to proudly claim not only Dr. Davis, its first son to become President of the American Medical Association, but also concurrent representation on three separate councils. 'Tis not a bad showing for a state group with only 12 possible votes (eight state plus four specialty organizations) out of 420 in the House of Delegates. Credit goes both to the individuals and to the group.

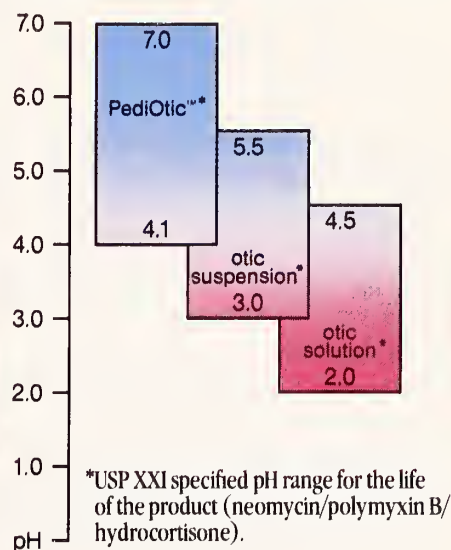


NEW

PediOticTM suspension sterile

Formulated to be less acidic to help minimize irritation.

A more normal pH range means less potential for painful irritation.



Formulated to help take the sting out of otitis externa therapy



New PediOticTM suspension is specially formulated to have a higher pH range than conventional otics.

Children may be less likely to resist its instillation, and their parents will appreciate the ease of compliance.

And you can prescribe new PediOtic

suspension with confidence, knowing it contains the same proven antibiotic/anti-inflammatory combination physicians have trusted for years.

Now there's a gentle effective treatment for "swimmer's ear" to please patient, parent, and physician.

PediOticTM suspension sterile

(polymyxin B sulfate-neomycin sulfate-hydrocortisone)



NEW PediOticTM suspension sterile (polymyxin B sulfate-neomycin sulfate-hydrocortisone)

brief summary

DESCRIPTION: PediOtic suspension (polymyxin B sulfate-neomycin sulfate-hydrocortisone) is a sterile antibacterial and anti-inflammatory suspension for otic use. Each ml contains: Aerosporin[®] (polymyxin B sulfate) 10,000 units, neomycin sulfate equivalent to 3.5 mg neomycin base, and hydrocortisone 10 mg (1%). The vehicle contains thimerosal 0.001% (added as a preservative) and the inactive ingredients cetyl alcohol, glyceryl monostearate, mineral oil, polyoxy 40 stearate, propylene glycol, and Water for Injection. Sulfuric acid may be added to adjust pH. PediOtic suspension has a minimum pH of 4.1, which is less acidic than the minimum pH of 3.0 for Cortisporin[®] Otic Suspension. **INDICATIONS AND USAGE:** For the treatment of superficial bacterial infections of the external auditory canal caused by organisms susceptible to the action of the antibiotics, and for the treatment of infections of mastoidectomy and fenestration cavities caused by organisms susceptible to the antibiotics. **CONTRAINDICATIONS:** This product is contraindicated in those individuals who have shown hypersensitivity to any of its components, and in herpes simplex, vaccinia, and varicella infections. **WARNINGS:** This product should be used with care in cases of perforated eardrum and in longstanding cases of chronic otitis media because of the possibility of ototoxicity. Neomycin sulfate may cause cutaneous sensitization. A precise incidence of hypersensitivity reactions (primarily skin rash) due to topical neomycin is not known. When using neomycin-containing products to control secondary infection in the chronic dermatoses, such as chronic otitis externa or stasis dermatitis, it should be borne in mind that the skin in these conditions is more liable than is normal skin to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low-grade reddening with swelling, dry scaling and itching; it may be manifest simply

as a failure to heal. Periodic examination for such signs is advisable, and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for the patient thereafter. **PRECAUTIONS:** As with other antibacterial preparations, prolonged use may result in overgrowth of non-susceptible organisms, including fungi. If the infection is not improved after one week, cultures and susceptibility tests should be repeated to verify the identity of the organism and to determine whether therapy should be changed. Treatment should not be continued for longer than ten days. Allergic cross-reactions may occur which could prevent the use of any or all of the following antibiotics for the treatment of future infections: kanamycin, paromomycin, streptomycin, and possibly gentamicin. **ADVERSE REACTIONS:** Neomycin occasionally causes skin sensitization. Ototoxicity and nephrotoxicity have also been reported (see WARNINGS section). Adverse reactions have occurred with topical use of antibiotic combinations including neomycin and polymyxin B. Exact incidence figures are not available since no denominator of treated patients is available. The reaction occurring most often is allergic sensitization. In one clinical study, using a 20% neomycin patch, neomycin-induced allergic skin reactions occurred in two of 2,175 (0.09%) individuals in the general population.¹ In another study, the incidence was found to be approximately 1%.² The following local adverse reactions have been reported with topical corticosteroids, especially under occlusive dressings: burning, itching, irritation, dryness, folliculitis, hypertrichosis, acneiform eruptions, hypopigmentation, perioral dermatitis, allergic contact dermatitis, maceration of the skin, secondary infection, skin atrophy, striae, and miliaria. Stinging and burning have been reported rarely when this drug gained access to the middle ear. **HOW SUPPLIED:** Bottle of 7.5 ml with sterilized dropper. NDC 0081-0910-02. Store at 15° to 25°C (59° to 77°F).

REFERENCES: 1. Leyden JJ, Kligman AM: Contact dermatitis to neomycin sulfate. *JAMA* 1979;242:1276-1278. 2. Prystowsky SD, Allen AM, Smith RW, et al: Allergic contact hypersensitivity to nickel, neomycin, ethylenediamine, and benzocaine. *Arch Dermatol* 1979;115:959-962.

BURROUGHS WELLCOME CO., Research Triangle Park, NC 27709
Copr. © 1988 Burroughs Wellcome Co. All rights reserved.

Address of the President-Elect of the North Carolina Medical Society

Ernest B. Spangler, M.D.

Let me first express my deep appreciation for the confidence that this body has shown and has placed in me for the coming year.

I'll have to take a little time to get used to the fact that the change in our governance system and also the date change of our Annual Meeting means that I will be in office not one year but eighteen months.

I can assure you that my efforts will be untiring as I carry out the tasks of President of this fine organization.

I will try to live up to that Air Force motto: "The difficult we do immediately, the impossible will take a little longer."

With John Dees, Tom O'Brien, Liz Kanof, Reggie Harris, John Fagg and Al Ferguson at my side, I can promise almost anything.

My main objective this year will be to work harmoniously with the Executive Council, the Executive Committee, the Committee Chairmen and their Committees and to use the expertise, the knowledge and proven ability of our committees and of our headquarters staff, and of our Executive Vice-President to translate the will and the directives of this House of Delegates into a well-structured and functional program of works.

This program of works will develop specific steps, objectives and goals that can be carried out through the unified efforts of our membership and staff to ensure optimal membership benefits as well as the best medical care for the citizens of North Carolina.

The coming eighteen months will be a time of change.

Your Task force on Society Governance, which was headed by Gene Mayer, Chapel Hill, did a thorough job in the evaluation of our Society's structure in terms of its effectiveness in representing the membership.

The report to last year's House of Delegates recommended changes in District makeup by increasing our Districts from ten to eighteen.

We see, then, that the Executive Council, which is that

body responsible for overall implementation of the policies set by this House of Delegates, the body that has the full power and authority of the Society between House of Delegates meetings, will be made up of 26 voting members, all of whom will be elected by the membership.

The position of Secretary has been eliminated and the position of Secretary-Treasurer has been created. This person will also Chair the Committee on Finance.

The composition of the Executive Committee, which minds the store between meetings of the Executive Council, but does not have the policy-making decision authority, was also changed.

In addition to the Officers and Speaker, who are now members of this Committee, two representatives of the Executive Council will serve one-year terms and they will be elected annually at a caucus of the Councilors for the Districts which they represent.

The rules of election have also been changed in that the North Carolina Medical Society members may now submit their name for consideration to the Nominating Committee for any elected position within the organization, aside from the position of Councilor, Vice-Councilor or Nominating Committee member.

If members wish to indicate their interest for these three slots, they may submit their names to the North Carolina Medical Society Councilor in their district for consideration prior to the Annual District Meeting.

The President-Elect will serve on this Committee as a non-voting member.

The term for regular members of this committee will be three years.

The AMA Delegation has been changed in that delegates may not be elected or re-elected after fully retiring.

District activities will be strengthened and the District Councilors shall call an Annual District Meeting for all component society delegates to the North Carolina Medical Society House of Delegates and all component society officers in the District not later than 15 days prior to the Annual Meeting.

Councilors, Vice-Councilors and Nominating Committee members will be nominated in the appropriate years and

From President-Elect, North Carolina Medical Society. Delivered at the Society's 1988 Annual Session, May 3, Pinehurst.

such nominations will be forwarded to the Speaker of the House 14 days prior to the Annual Meeting.

Reports will be given at this meeting on matters pertinent to the membership and to organized medicine.

I feel that this strengthening in the number of Districts and in the requirement of an Annual District Meeting will go a long way toward bringing the Society closer together.

I feel that we will be able to better communicate and be able to better identify and nominate leaders and potential leaders to Society positions.

These Annual Meetings will also allow for better cooperation between the Districts and Headquarters staff, allow better coverage by staff and also visitations.

One of my goals is to visit, or have a staff person visit, at an official meeting of as many Districts as possible throughout the eighteen months ahead.

Please invite us.

We welcome your invitations.

This visit would be in addition to the requirement that each councilor visits all component societies within their District at least once a year.

The change of the Annual Meeting from May to November and the Annual Committee Conclave from September to March or April will cause favorable impact upon the Society.

The change of meeting will allow improvement in our budgetary process. It will enable us to strengthen our legislative initiatives.

It will also allow our Officers and our appointed leaders to take office the day following their election at the Annual Meeting.

There are other ramifications, all of which I feel are positive, that will come from the adoption of the recommendations of this Task Force on Society Governance.

Although they presented the report at the last meeting, it has taken one full year to make all the necessary changes in the Constitution and Bylaws and other things before we can make a move on these recommendations.

The new Councilors will be functional following their election in the fall of 1989.

Our fall of 1989 Annual Meeting will be held at The Grove Park Inn in Asheville.

I would like for this body to officially recognize the members of this Task force and those of you who are in the room today, if you will please stand when I call your name and remain standing so that we can give you your due: First, Gene Mayer, the Chairman; Ken Cosgrove, Member; William Fore, Member; Jack Hughes, Member; Charles Garrett, Member; Ex officio members of this Task Force: John Foust; Henry Carr; Reggie Harris; and George Moore.

I introduce them because I do feel that their work will go down as a turning point for better representation and membership satisfaction within the Society.

Now let me highlight some of the selected activities that will be an important part of our Society's endeavors in the upcoming months.

You will hear in Report "U" the recommendations for a

fully operational Physicians Health & Effectiveness Program. This program, fondly known as PHEP, has evolved through the long, hard work of the PHEP Committee, which is now headed by Wilmer Betts of Raleigh.

Ted Clark of Pinehurst carried the Society's obligation in this area for years and to him, we owe a debt of gratitude and he was honored at the previous session.

The formation of a union between the Society and The Board of Medical Examiners with its Past President, Charles Duckett of Greenville and the present President, Eben Alexander of Winston-Salem, has allowed the formation of a strong financial base which should ensure the continued success of this most needed and necessary Society function.

Additionally, each component society will be called upon to help ensure the success of this Committee.

Component societies will be asked to designate a physician contact or to establish a committee to work with their District Councilors and to establish a liaison with the Medical director of the Statewide PHEP program.

Another area deserving your attention at this time is the area of AIDS.

Jared Schwartz of Charlotte has done an outstanding job as Chairman of our Task Force on Sexually Transmitted diseases and AIDS.

Report "B" which you will consider shortly, among other things, will request the president of each component medical society to establish an AIDS Task Force which will have as its focus education, coordination and consultation.

Another area deserving note is the work of the Task Force on Indigent Care. This Task Force was co-chaired by John McCain of Wilson and Kenneth Chambers of Charlotte.

Their position paper which included 25 recommendations, covers a large area which spills over into the uninsured, the underinsured, the elderly and long-term care.

These are areas in which the society and its individual members can work toward common goals with our state and federal governments.

No short-term immediate solution to this multifaceted problem is apparent. It will probably require a mixture of both public and private endeavors to secure any significant result over the long term.

At the time of the writing of this speech, I don't know whether the Society will approve, but I would hope among other things, we will go on record as favoring some voluntary plan of accepting assignment based on patients' income at or below 150% to 200% of federal poverty level.

Also, our members might consider appointing one member of their office force to serve as an ombudsman for your elderly patients.

This person could keep abreast of insurance and other aspects of elder care and would be able to give these folks, who are often bewildered by the immense amount of red tape and forms, that type of quality help and advice which they need.

This would be an admirable service that your office could offer and if you're not already doing so, I would suggest you look into this.

Another area of concern and activity is that of legislation and tort reform.

Resolution No. 17 speaks of securing the passage of meaningful tort reform.

Key Society members and staff have been quite active in this area over the past year.

David Bruton of Southern Pines, who heads our Legislative Committee, has had national experts attending weekend seminars to focus and direct our activities regarding legislation on tort reform.

Three Senate bills are eligible to be brought up in the short legislative session this year and we will go all the way out to secure their passage.

Also, Dave has been working with the Duke Law School in the Area of Alternative Dispute Resolution.

You will be hearing more about this as the AMA Specialty Society Fault Based Claims Resolution System.

Our Society has also endorsed the actions of the North Carolina Academy of Family Practice in their effort to secure state funding for liability insurance for physicians doing obstetrics in medically underserved areas or to indigent patients.

We will do everything possible to help secure passage of legislation in this important area.

1988 promises to be an active and exciting legislative year for our Society.

Dave Bruton told me what to say when I was asked about any specific issue. I am to say: "Some of my colleagues are for it and some of my colleagues are against it, and I am for my colleagues!"

The nursing shortage is another area that I'd like to speak to briefly.

It's not only a shortage of nurses, but also a shortage of technologists in various fields and this has commanded a great deal of attention of late.

Long-term solutions to the problem require an in-depth look at salary, job demands, job satisfaction, peer and employer recognition, working conditions and the public's image of nurses and other health professionals and workers.

There are some simple things that we could do right away which would help our health care workers better adjust to the present shortage of staff.

Appreciation and recognition are invaluable and create loyalty from employees that will surmount and survive the short staffing.

Two words - THANK YOU - go a long way.

Recognition of a job well done, recognition of good attendance at work, or a willingness to do a job and to stay overtime means so much to your staff.

Have we become too busy, too demanding?

Have we lost sight of the pressures that affect our co-workers as they attend to the care of our patients?

Maybe we should all pause each day, look into the mirror and look into our own actions and ask ourselves, "Am I treating others the way that I would like to be treated?"

Not needed, you say?

I can tell you that as a radiologist, very few weeks go by without the occurrence of some documented event dealing with some degree of abuse or some thoughtless act which reflects on our radiological technologists or staff workers in our department.

Yes, it is needed!

Never become too busy or too involved that you cannot be courteous to your staff and fellow workers.

All too often, we go about the business of the day thinking that things just happen.

I can assure you that at the North Carolina Medical Society Headquarters at 222 North Person this is not the case.

Things are made to happen.

Made to happen through the evaluation and decision-making efforts of the 21 members of the North Carolina Medical Society staff headed by our Executive Vice-President, George Moore; Don Wall in Business Affairs; Margaret Woodcock in Administrative Affairs; Penny Hodgson in Communications; Ann Sawyer in Government Affairs.

These, along with Katherine Moore, Linda Carter, Deanna Godwin, Bob Burns, Bud Cowen and many others make things happen.

They do a superior job.

I would like especially to recognize Alan Skipper, whose responsibilities include the staging of this wonderful meeting.

Would all the members of the headquarters staff please stand for a thank-you and a round of applause.

Two other people I think deserve special attention and they're not very often called upon.

I'd like, and hold your applause please, Mona Sauls who's Executive Administrator for the Auxiliary - is Mona here? And, Edna Pollock, who records and transcribes all the minutes of our meetings here and elsewhere across the State.

They do a wonderful job.

There are many important areas of future activity that time does not permit me to mention.

As you have noted throughout this talk, tasks are assigned to people.

It is people who must carry out the will and directives of this House of Delegates.

It is people who must chair and staff the 42 Committees that you now have in place within this Society.

People - you and I - must furnish the brains, the brawn and the sweat that will allow this organization to do the work that is set before it.

We must be willing, as dedicated physicians, to give of our time, talents and energy to see that our profession and our patients are not run over by the locomotion of legislation and regulations levied upon us by the bureaucracy of federal, state and local governments.

We must work hard and with our elected representatives.

We must work as elected representatives.

We must work for and with our State and County Agencies.

We must work for and with those who are instrumental in shaping the future role that medicine is to play in the United

States.

We should feel honored by our strong representation in the AMA and the fact that one of our own has been selected to lead this powerful and important Association, a federation of all State Societies such as our own, that speaks loud and clear to those who would lead us down paths that are untried, unmarked and uncharted - paths that could lead us to decisions and policies that may inflict serious harm upon our health care system and upon our profession.

We should feel honored by the fact that four of our members decided to do more than just talk about it. They chose to run as candidates for the State House.

We pledged them our support.

Some may fail this time, but will try again.

Others of you should search your convictions and your conscience to determine if you are fitted to try for service at this level of intensity - service as an elected representative of the people.

What am I telling you?

What am I saying?

I'm saying that we're all in this profession of service and

health care together.

A boat is made up of many parts - the wheel, the rudder, the engine and so on.

Most of these parts will not function or float alone, but when brought together properly, they will function in an efficient and effective manner.

One person cannot whistle a symphony. It takes an orchestra to play it.

Please continue your active part in this orchestra and recruit other talented players to help us create an outstanding performance.

William Osler said: "Live neither in the past, nor in the future, but let each day's work absorb all of your interest, energy and enthusiasm. The best preparation for tomorrow is to do today's work superbly well."

We have work to do which we shall start after a five-minute recess.

I want to thank you and tell you how much I appreciate your friendship, your fellowship, your interest, your wisdom and your involvement.

Thank you, very much.

BARON CREATES TAX LEVERAGE.

Fund Your Retirement Plans At Up To 25% Of Payroll
For Key Employees At A Cost For Staff Of Only 11%—

THAT'S LEVERAGE!

For More Information Call:

Baron Benefits Management, Inc.

A BARON FINANCIAL COMPANY

Executive Compensation and Employee Benefit Specialists

4110 Wake Forest Road, Suite 211
Raleigh, N.C. 27609
(919) 790-9904/(800) 222-8783

300 Wendover Avenue East, Suite 202
Greensboro, N.C. 27401
(919) 379-8207/(800) 822-1086

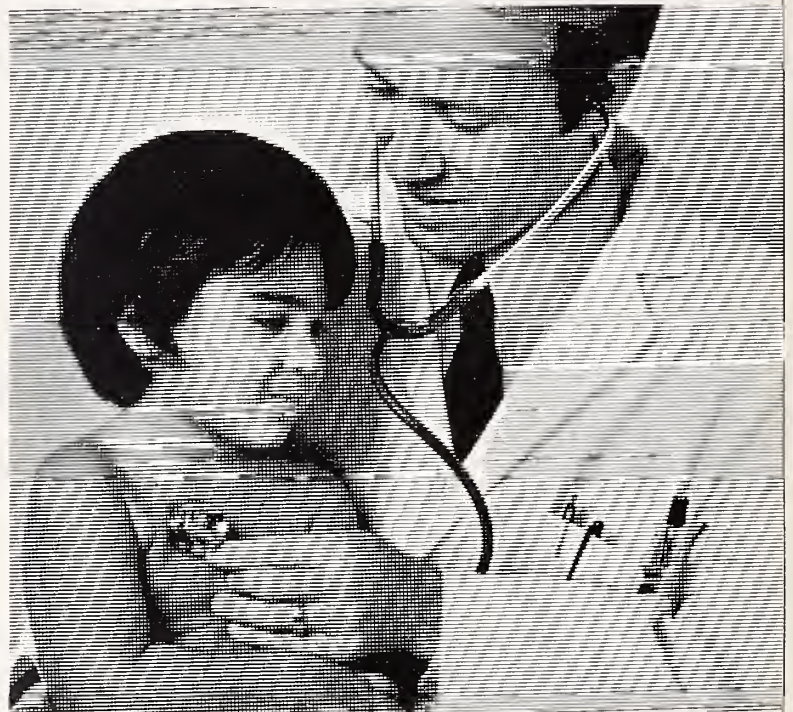
FAMILY PRACTICE. A REWARDING EXPERIENCE IN ARMY MEDICINE.

The Army has more soldiers with families than ever before. So when you join the Army Medical Team as a Family Practitioner, expect to spend most of your time serving not only soldiers, but their spouses and children, too. What's more, you won't have to worry about the paperwork, malpractice insurance premiums, or the costs incurred in running a private practice.

Expect to work in a highly challenging and varied environment. Working with a team of highly trained professionals, you can receive assignments almost anywhere in the United States; the Army offers the largest system of comprehensive health care in the nation. Family Practice positions are also available overseas, in Germany and Korea.

The benefits package available to Army Family Practitioners is quite attractive. You'll receive 30 days paid vacation, opportunities to continue education and conduct research, a chance to travel, and reasonable work hours.

All in all, your Army Family Practice will be a rewarding experience. Not only for you, but for Army families, too. Talk to your Army Medical Department Counselor for more information.



**Army Health Care Team
Federal Office Bld.
400 North 8th St.
P.O. Box 10167
Richmond, VA 23240-0167
(804) 771-2354**

ARMY MEDICINE. BE ALL YOU CAN BE.

A Doctor Interviews the Candidates for Governor

Edward C. Halperin, M.D.

North Carolina voters will elect a Governor this November. The candidates include the current Lt. Governor, Robert B. Jordan III, Democrat of Montgomery County, and the incumbent, James Martin, Republican of Mecklenburg County. The general news media have given limited attention to health and medical issues in the campaign. To fill this void the *North Carolina Medical Journal* requested half-hour interviews with the candidates. Both candidates received the proposed questions in writing.

Lt. Governor Jordan was interviewed at his Raleigh office. His tape-recorded answers were then transcribed by the Journal. Because the interview with Jordan was conducted live, we had the opportunity to ask follow-up questions on the issues of tobacco and parental consent for a minor's abortion. Governor Martin's staff politely declined our request for a personal interview on the grounds of scheduling difficulties and previous time commitments. Martin responded to our questions in writing. There were, therefore, no immediate follow-up questions. Both candidates were given the opportunity to review their answers prior to publication and, in Governor Martin's case, respond to the follow-up questions at that time. Neither candidate was shown his opponent's answers.

EH: Thank you for agreeing to participate in this interview. Let's begin with a general question concerning your view of government and health policy. What, in your opinion, is the responsibility of state government in health maintenance and health care? Does the state government play a major role in these areas, is the responsibility for health care and policy best kept at the level of local government, or is it really more a matter for federal policy?

Jordan: The state government is, in the field of health

From the Division of Radiation Oncology, Box 3085, Duke University Medical Center, Durham 27710.

The Cub Reporter

The last time I interviewed a political candidate was in the eleventh grade—the candidate was running for student council president. In spite of my minimal experience, however, I found interviews with Lt. Governor Jordan and Governor Martin surprisingly easy to arrange.

I began by phoning the press secretaries of the two candidates and asking for interviews on behalf of the *North Carolina Medical Journal*. Both press secretaries were quite receptive but indicated that a final decision on an interview would be determined by the "scheduling staff of the candidate." I was assured that I would be contacted after a decision was made.

Several weeks elapsed and I heard nothing from either camp. I followed up with phone calls and letters. After making a nuisance of myself, Lt. Governor Jordan's campaign agreed to an in-person interview.

I drove to Raleigh, found a parking space, and located the appropriate government office building. After riding the elevator to the designated floor, I stepped off and found an area labeled "Office of the Lt. Governor." I was met by a polite receptionist/secretary. While waiting for my appointment I chatted in the waiting room with a gentleman obviously seeking to beg a few moments of the Lt. Governor's time to ask for some sort of favor. I enjoyed watching the receptionist patiently listen to the man's pitch before sending him on his way.

I was taken into my appointment with Lt. Governor Jordan at the agreed upon time. I was surprised to find no police, no guards, no metal detectors, and no detectable security measures of any sort. The Lt. Governor's office is rather simply furnished—and certainly less plush than many medical school department chairmen's offices. The interview took 30 minutes. I recorded it on my portable office dictaphone. One of Lt. Governor Jordan's staff members sat in on the interview but interjected very little.

Governor Martin's interview was conducted in writing. While the Governor's press secretary seemed quite anxious to arrange a one-on-one interview, the "scheduling staff" declined my request for a personal interview. They indicated that the Governor's schedule was too heavy to allow a 30-minute interview and that the Governor only gave interviews "on the run between appointments." I sent my questions to the Governor's press office. Within two weeks I was in-

formed that the Governor had answered my questions in longhand. The press secretary had the answers typed and returned to me.

Because I had interviewed Lt. Governor Jordan in person, I had the opportunity to engage in a few small interchanges and ask follow-up questions on tobacco and parental consent for abortion. Obviously, similar opportunity did not exist with Governor Martin. Therefore, before the interviews were published each candidate received a copy of his responses and, in the case of Governor Martin, an offer was made to respond to the same follow-up questions asked of Lt. Governor Jordan. Neither candidate had the opportunity to review the answers of his opponent. I'm sorry that I didn't have the opportunity to ask Governor Martin follow-up questions. His lengthy answer to the question on parental consent to abortion ignores some of the very serious objections to House Bill 1068.

The answers differ significantly in style. In the case of Lt. Governor Jordan you are reading a transcript of the candidate speaking. Governor Martin's answers appear to be more carefully crafted—as one would expect of someone who had the opportunity to answer in writing.

—ECH

policy, often a reactive agency. The federal government moves in and out of different areas. The primary health program in the nation is pretty well established on a national level. The state ends up carrying out, in a lot of instances, programs that the federal government establishes. If you follow the state budget, what has happened is that the Department of Human Resources has grown quickly and dramatically. It became a big part of the budget almost overnight. In fact, I think right now that the budget of the Department of Human Resources is larger than the total state budget was in 1977 when I came into state government. This gives you some feeling for what is happening. The state's role has dramatically increased primarily because of what is happening on the national level. A big portion of the expenditures has been because of the state's responsibility to pay its share of the national programs.

On the other hand, the state does have programs it should foster. In this coming session I am going to try and push for a four- to five-million-dollar appropriation on AIDS prevention. I supported the Family Support Act which is an effort to get the use of federal programs and federal dollars in ways to respond to North Carolina's particular needs. We need to try and see that health care gets to those people that are not getting it. I think one of the roles of state government is to help see that local government has the resources to do its job in the public health area and yet, at the same time, not step in and take over the responsibility of local government. I think that local government has a role to play and that they have responsibilities. The state has an overview responsibility.

The state is the parent and the county is the child. We have a parent-child relationship to be sure that the child is doing well not only from the standpoint of how it does and what it is supposed to do, but also whether it has the money to do things.

Because of the changes that we have in the federal level right now, because of their backing away from certain areas and withdrawing funds, the state government must see that the citizens of North Carolina get the care that they need. We must analyze what the federal government is doing, what local government is doing, and reach out to those areas where we don't have proper health care. For example, in my own county, Montgomery County, the hospital may not survive. It is because of the combination of factors. First, there is specialization in medicine. Fewer doctors are coming out and going into family practice. People who practice medicine want to be close to the research centers of excellence that we have in the state. In Montgomery County that used to be Chapel Hill or Charlotte. Now it's Moore County right next door. That's a different competitive force now. Second, the hospital in Montgomery County ends up getting less funds for the same services in the rural county than a hospital can charge for the same service in an urban county. Federal payment practices almost drive these small county hospitals out of business by their determination of what level you are going to pay one hospital vs. another. Those hospitals that are getting hurt the most are the same ones that are having to pick up the highest percentage of the non-paying public. The state has a role. We have a responsibility to see that those people in Montgomery County and around the state have adequate health care. The federal government is not doing it. Their policies are driving health care away from the local situation. The state government is going to have to look at rural North Carolina hospitals in a way that it has not before. So I don't see that North Carolina can assume the federal role. But I do see that North Carolina has an ever-expanding need to fill the gaps. This means that we are going to spend more and more money in health care, particularly with those more indigent cases, the people who fall through the cracks. We also have a role and responsibility to try and help the Medical Society to perform, operate and survive and thrive in North Carolina through the laws we have here in the state.

Martin: State government has a responsibility for seeing that all North Carolinians have equal access to health care, particularly those who are unable to pay. The rising cost of health care is an increasing concern for individuals, businesses, and federal and state governments that administer the Medicaid and Medicare programs. Of equal concern is the growing problem of equal access to quality health care as the economics of the issue become increasingly troublesome. State government has the responsibility for monitoring the health providers to ensure that health costs are kept down as low as possible in this era of rapidly rising health care costs. We have a responsibility to the elderly, to help prevent the loss of their life savings and their personal belongings which

are quickly exhausted by nursing home bills. We must maintain a consistent approach to the needs of the elderly and disabled so that we can make sure that no one is placed in any kind of an institution unless they absolutely have to be there.

State government should help to protect consumers from unwarranted increases in health care costs but should not impose costly regulations that discourage free market competition from providing quality health care at the lowest possible cost. My role as governor has been and should be to foster cooperation between the state government, private business, and North Carolina hospitals to provide voluntary agreements on new hospital construction and hospital service rates; to encourage statewide health care planning to avoid costly duplication of services; and to urge the state medical community to adopt, when appropriate, voluntary cost-containment practices regarding fees for services.

The state can provide programs, such as the Wellness Program, the Child Vaccination Program, the AIDS curriculum in the public schools, as among many important preventive health procedures. The administration of programs such as Medicare is, of course, legislated for and administered by the federal government. State government administers the Medicaid program. The administration of social service programs should remain at the state and local levels where they can best address individual problems. Federal law may mandate major health programs, but state government should be capable and accountable for the administration of those programs. Services like health, environmental regulation, schools, prisons, roads, land-use controls—the Federal government should not take responsibility for these and try to manage them from Washington. That's been a consistent basis for my entire political career. But as the federal government scales back, state and local governments must step forward and fill the gaps. They have to do their job to justify local authority. Authority and responsibility go together.

My proposal for one agency to oversee environmental concerns, including the health agencies, is but one facet of my plan to restructure state agencies to facilitate and simplify accessibility to service for North Carolinians.

As North Carolinians live longer and our state population increases, a plethora of changes must occur in our human services system as well as in the health care system. I am proud of the programs that have been initiated during my administration and I feel it is important to North Carolina that I continue that involvement in the next four years. I have devoted attention and resources to promoting wellness, preventive care, and early diagnosis and intervention. My administration's programs dealing with prenatal care, teenage pregnancy, sexually transmitted diseases, and substance abuse are viable and ongoing. The AIDS curriculum for example, which was instituted in our schools, was one of the first in the country. I have proclaimed 1988 to be the "Year of the Older Adult" and have proposed \$53 million over the next three fiscal years for the purpose of expanding services for older citizens. To alleviate a nursing shortage that began

in the 70s, I have appointed a nursing task force to come up with viable proposals. As governor I shall plan for further streamlining of and more efficiency in state government. The proposed new environmental health agency is an example. We involved county commissioners, public health people, and many other professionals to arrive at a more efficient administration of health and environmental services.

In the past three years of my administration, North Carolina has had a strengthened economy, lowered taxes, a more open government, better roads, effective environmental leadership, a step toward more quality education, and attention to the well-being and health of all our citizens. I pledge my continued leadership as governor to continue implementing programs and policies that impact the health and well-being of all North Carolinians.

Charles B. Aycock best expressed my views on health care when he said, "It undoubtedly appears cheaper to neglect the aged, the feeble, the infirm, the defective, to forget the children of this generation, but the man who does it is cursed by God, and the State that permits it is certain of destruction."

EH: And what should the state's policy be concerning the health threat of tobacco?

Jordan: I think tobacco and health policy are national issues. National growth and national policy will more or less set the stage as to what happens in North Carolina. Tobacco is more than one issue in North Carolina. It is an economic issue. I think you are going to see the people themselves respond to those things that ought to be responded to. I don't think you are going to see state government in North Carolina take a lead in the nation in establishing a tobacco policy which, on one hand, deals with health policy and, on the other hand, doesn't deal with the economic issue. No, you won't see me go out and change the direction that North Carolina is going. You will see me certainly say that if there are groups of people that say "I don't want smoking to go on in my area" and if it's their decision, then I think certainly that that is their right. They ought to be able to exercise it. But, I am not going to be promoting a policy that says that you don't have any smoking anywhere. My father died of emphysema. I don't smoke and none of my children smoke. I certainly encourage my children not to smoke. But, when you get into public policy in North Carolina it is an economic issue. It is still a major part of the state's income. I sense that we are moving in the right direction. I don't know how much a policy by the state of North Carolina would change or speed up what is going to happen in this national issue.

Martin: Government cannot relieve the responsibility of its citizens to choose between what is right and wrong with regard to smoking. We must be fully responsible for our own actions and for the consequences of those actions. The freedom of the right to choose and the responsibility one must

bear for his choices are inseparable. The only thing that the state can do or should do is assure that the public is informed. Let's be honest with one another. If North Carolina did not grow one leaf of tobacco, those who wished to smoke would buy tobacco from another state or from overseas. People must accept responsibility for their actions for if government relieves all of the responsibility of its citizens, we will no longer have a free society.

EH: Thank you. Let us now consider some other specific issues. Abortion is an issue of great concern to health care professionals. It is also an issue which brings out considerable response from the general public. It is not particularly meaningful to report one's position on abortion as simply being "pro-choice" or "pro-life"—one would like to think that most well-intentioned individuals are, to some extent, both. Can you specifically state your position on state funding for abortion? In which situations do you feel that it is appropriate for the state to financially support abortion? In which situations do you think it is not appropriate? To what extent do you think it is appropriate for the state government to place legal limitations on abortion?

Jordan: Abortion really is a question of access as far as the state is concerned. The United States Supreme Court has made its decision. As long as that remains where it is, my position is clear. I will abide by the Court's decision. I think the changes in the 1985 session of the legislature, where it limited the areas of access to abortion, seem to have worked in North Carolina. There were also some changes made in the 1987 session. The North Carolina legislature's position, as to having access to abortion and making sure that that is equally applied across the state, seems to be fair.

Martin: I favor state funding of abortion only in cases of rape and incest, promptly reported, or where there is a serious threat to the physical life of the mother. I do not favor state tax funding of abortion on demand.

State government should place legal limitations on abortion as it deems to be within Constitutional boundaries and as it deems necessary.

EH: Should the laws on parental approval of a minor's abortion be changed?

Jordan: Parental consent to a minor's abortion is another question. The legislature has made its decision. That's a tough issue. It really gets into the child abuse area. If you go back and analyze child abuse in North Carolina it is a real problem. I don't know to what degree the problems of child abuse become admixed with parental consent for abortion. As a father of two girls, I know what I would want to happen,

as far as knowing myself and being involved in the decision. On the other side, because of the child abuse cases resulting in pregnancies, we need to be careful about parental consent issues as they pertain to teenage pregnancies. It seems to me that the present state law is working and ought to be left alone.

Martin: We live in an age of family upheavals—of weakened families, fractured families, divided families. There have been times, too, when government, in its quest to help families, has instead injured them, intensifying problems, rather than offering a cure for existing ones.

I believe that the area of adolescent pregnancy is one example of misdirected good intentions. I do support H 1068, Parental Consent for Minor's Abortion.

Children should be encouraged to share with their parents the knowledge of an unplanned pregnancy. Parents not only deserve to know; but in most cases, parents will be supportive of the child. Since I am a realist, I do recognize that there are some parents who are not supportive. H 1068 allows for minors faced with incestuous situations or abusive, non-supportive parents, to avoid parental consent. Minors in

these situations may request an abortion through judicial consent.

Surely, if a young girl claims to be mature enough to decide to terminate her pregnancy, then she is mature enough to petition the court. This bill provides a reasonable loophole for any young girl who feels it would not be in her best interest to seek parental consent for an abortion. At the same time, it supports the family, undergirding family interaction and promoting family participation when one of its members undergoes one of life's greatest traumas. Furthermore, it makes good "family sense"—even good "medical sense"—for

minor pregnant girls to turn to their parents when faced with adolescent pregnancy. Surely, if a young girl must get permission to go on a school field trip, to be treated for an injury in an emergency room, or to have her ears pierced, then it is not medically unreasonable to require by law that minors seek parental consent for an operation containing far greater health hazards than other situations and procedures requiring parental consent.

Twenty-two states now have parental consent laws. Some of those laws have been declared unconstitutional, but North Carolina's proposed parental consent law is within Constitutional boundaries. What's more, in my opinion, it is in the best interest of the minor pregnant adolescent, the affected parent(s), the family unit, and society as a whole for a parental consent law to pass in North Carolina.

EH: Thank you. Let us now consider another specific problem. The medical community of North Carolina is quite concerned about rising malpractice insurance rates—an issue which is closely tied to the question of tort reform. As I



Lt. Governor Robert B. Jordan III

am sure you are aware, there are many counties in North Carolina where no licensed physician will deliver babies because of the prohibitive cost of malpractice insurance. The press has been filled with distressing reports of the malpractice insurance crisis in Florida. In recent months, both the American Medical Association as well as the Federal Department of Health and Human Services have offered model malpractice laws which place great reliance on arbitration procedures rather than jury trials. We have also heard, from many prominent individuals, that the current litigation system is not in need of major overhaul. What is your position on the current tort system? Do you feel that there is a need for a major change in malpractice litigation procedures? Would you favor any specific changes in North Carolina statutes in this area? How would you propose addressing the problem of diminished health care in certain areas of the state which arise as a result of difficulty in obtaining adequate liability coverage?

Jordan: Family practitioners are not delivering babies in Montgomery County anymore—if they are they are fixing to quit. That is because of the cost of insurance for the family practitioner. The insurance companies seem to want to drive the family practitioner out of obstetrics. I know the feeling. I am an airplane pilot and three or four years ago the insurance companies decided that corporate executives ought not to be flying their own airplanes, particularly turbo props. They increased my insurance from \$4,000 to effectively \$25,000 a year. They got me out of a turbo prop. Insurance companies have made a similar arbitrary decision that they don't want family practitioners to do obstetrics. The state needs to analyze that issue. If the state agrees with the insurance companies then they should leave them alone. I happen to think that prohibitive malpractice insurance premiums for family practitioners doing obstetrics is a bad policy.

I want to work with the Medical Society to try and look at ways of having an insurance pool for rural physicians. I know that that is being considered and I would be very supportive of that. We need to look at ways we could establish a separate insurance pool for those people in the rural counties delivering medical services. I think we also need a cap on liability. I am not sure that you can get it through the legislature. I supported it before and will support it again.

Medicine is doing a lot as to policing itself in a way that it did not in the past. That is important. I think it gets to be a matter of credibility. The public puts pressure on the legislature and the legislature responds. If the profession itself has a bad image, because it's not doing a good job of policing itself, you lose the base from which you try and build a legislative agenda.

I supported legislation in 1987 to try and deal with frivolous law suits. I would support a movement to step further. My feeling is that it would be proper for us to have legislation which would give total protection to those people who serve on medical discipline boards and commissions. This protection would certainly see that they would not be devastated or unfairly hurt by law suits brought by those people who might be reprimanded.

Martin: In 1986, I called the special one-day session of the General Assembly to address the problem of insurance availability and giving the Insurance Commissioner additional powers to obtain information to evaluate the cost problem. Tort reform issues were the subject of extensive debate in the 1986 short session, and further legislative study followed.

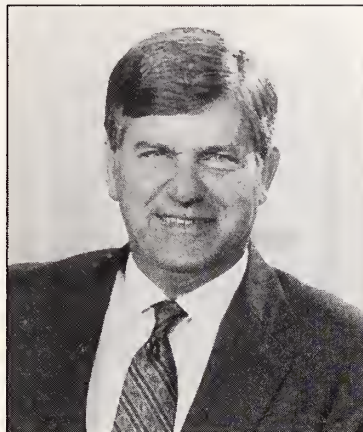
In 1987, having reviewed the reports of the Property Insurance Markets Commission and the Medical Malpractice Study Commission, I advocated action to restructure the tort system as follows: (1) The proposal for the \$250,000 cap on non-economic losses needed to be enacted; (2) joint and

several liability should be abolished; (3) punitive damages should be limited to damages which are the result of intentional, willful, or wanton acts with the requiring of a portion of punitive damage awards going to the State General Fund to discourage exorbitant awards; and (4) the collateral source rule should be modified to make full information available concerning payments from collateral sources.

Although the 1987 General Assembly did attempt to address tort reform by passing limited legislation many of the important proposed changes made little progress.

Late this past year, I directed the State

Goals and Policy Board to take up the question of tort reform and do an in-depth study to recommend workable solutions for my consideration and possible presentation to the 1989 General Assembly. The North Carolina Medical Society has been asked to participate. At this point we will wait to see what direction is recommended by the State Goals and Policy Board. I will continue to support the right of an injured person to recover actual damages, medical expenses, and lost wages, but recognize the abuses of these rights which have proved costly to everyone and the economy.



Governor James Martin

EH: Let's consider the AIDS problem. It is clear that almost "everybody" is in favor of more research as well as efforts to stem the spread of the epidemic. Differences arise, however, when we get down to concrete proposals. Where do you stand on the issue of mandatory reporting of AIDS cases? Should the state maintain lists of affected individuals—if you do favor such a proposal, who should have access to the lists? Do you favor or oppose premarital testing for the AIDS virus? Do you favor legally mandated specific testing of any

specific population group?

Jordan: Professionals themselves are mixed as to what they ought to do. I am no expert as to what we ought to do. I want to control the epidemic. I want to control it not only by furnishing financial support but also by having the kind of laws that we are interested in. I don't know what the answer is. I am going to have to make those decisions as I go along as to what is the best way. It is very difficult now to know what is right. You've got a professional relationship between the patient and the doctor that has to be respected on one hand. But if the information comes out that the public itself is at risk then I think it takes on a different character. I am not sure that I know, and I'm not sure that there is information out there right now as to what we ought to best do. I am going to be looking for experts to give me advice as to what we should do.

Martin: The question of what to do about AIDS testing is a controversial one. Admittedly, much of what we know today about AIDS is due to required military testing and also voluntary testing; therefore, testing, both mandatory and voluntary, have played a significant role in researching this dreadful killer.

Experts at the recent Fourth International AIDS Meeting, in Stockholm, Sweden, predicted a bleak outlook for the world in regard to the epidemic. Today, there are 1 1/2 million people in America potentially infected with the HIV. The experts admit that there will be no cure in the near future.

According to an international Gallup survey, statistics within the United States indicate that 11% of those surveyed said they had changed their behavior; 3% were seriously considering it; 15% had not changed their behavior; and 68% said there was no need for change.

And herein lies our major problem—there is a “universal” knowledge about AIDS, but there is little recognition of how crucial it is to take precautions against it. Last year, I offered and pressed for immediate installation of a comprehensive AIDS education program for our schools. Education is our greatest weapon against AIDS at present. North Carolina is a leader in AIDS education—one of the first states to set in place a hard-hitting, educational program. The curriculum's focus is two-fold—to educate young people to the threat of the disease to discourage them from engaging in high-risk sexual and drug-related behaviors.

Testing, in my opinion, is needed, but I support voluntary, not mandatory, testing. My studies on AIDS have led me to conclude that AIDS testing results are so scientifically unstable that mandatory testing at this time would be unwise. Some people test positive for HIV who are negative and vice-versa; some antibodies form slowly. A person infected with the HIV can be tested as negative one day and actually be positive the next. Newly released findings indicate that 40% of the people infected with the virus will develop AIDS within nine years after becoming infected.

Furthermore, scientists have found cases in which the AIDS virus remained hidden in one type of body cell (macro-

phages), undetectable by commonly used screening methods. It is suspected that this accounts for some patients who develop AIDS who have had “no detectable antibodies.” It may also explain cases where virus carriers have not formulated antibodies for years. More troubling to me however, is the possibility that some people, labeled “free” of the virus by our present commonly used test, may be transmitting the virus to others out of a false sense of confidence. Also, there is now a question as to whether contaminated blood might be slipping through screening procedures designed to protect the supply of transfusion blood—even though scientists are saying that risk would still be slight. Studies are presently now being conducted to determine just how prevalent this condition is. New tests to answer these questions are unavailable now, but desperately needed. These things bear heavily on my conclusion that mandatory testing—at this point in time—is not feasible.

Voluntary testing should allow for strict confidentiality—a protection for the HIV-infected person. Voluntary testing also alleviates fear and encourages those with AIDS, or those potentially at risk, to step forward for testing. Although strict confidentiality should be extended to the HIV infected person, it should extend only until that strict confidentiality interferes with informing/protecting others who have been exposed to the virus. In other words, potentially infected persons, though not informed specifically as to who may have infected them, are entitled to know that they are at risk for contracting the virus. Strict confidentiality does not carry with it the right to neglect the life and health of others. That is why reporting of HIV infection should be mandatory.

All information and records that identify a person who has the AIDS virus, whether public or private, should be held in strictest confidence. In most cases, other than for research and public health purposes, and when information is released by the proper designees and under the proper legal authority, the person with AIDS should decide when and if information about him or his condition should be released to any person, institution, etc.

On the whole, I would say that I am in agreement with reporting and confidentiality guidelines as set forth in the 1987 amending of the Communicable Diseases Law.

Because the results of testing are so unstable, I oppose at this time premarital testing for AIDS. I do favor encouraging voluntary AIDS testing in prisons, since those persons live in “confined” environments. I also favor encouraging voluntary testing for anyone in the populace at large who suspects he/she may have been exposed to the disease for any reason.

Ultimately, I favor education, voluntary testing, and continued research as the three components needed to impede the spread of the AIDS virus.

EH: Thank you. The NCMJ thanks you for taking time from your busy schedule to answer our questions. We are sure that our readers will find your comments of considerable interest. We hope these interviews will help voters formulate their choices for election day. □

HOW TO ADD CONSULTING STAFF AND NOT SPEND ONE THIN DIME.



The Carolina Consultation Center at the University of North Carolina medical center provides reliable help, fast and free.

The Carolina Consultation Center provides rapid access to top specialists and advanced clinical information in virtually all fields. We put 530 specialists—the entire staff of the UNC medical center—at your fingertips.

Over the past 20 months more than 5,000 physicians—one of every two practicing in North Carolina—have used the center for information, requests for support and contacts to expedite transfers of patients.

The center is staffed by trained information specialists who have only one job—to put

you in touch with the resources you need. With our computerized registry, we can make your connection quickly and see that your questions are answered in minutes.

For a free copy of the Carolina Consultation Center's Directory of Consultants, call 1-800-UNC-NCMH. This up-to-date listing of the medical staff, complete with biographies and areas of expertise, is an invaluable tool to help you determine the consultant you need, before you place your call.

The call, the directory, and the service are all free.



1-800-862-6264

WANTED!!

*Your
Creativity*



ADVANCED
HEALTH
TECHNOLOGY
INC.

"TURN TO US" 

ADVANCED HEALTH TECHNOLOGY, INC.

If you have a bright, innovative idea about a medical or medically related product and don't know where to turn:

"TURN TO US"

ADVANCED HEALTH TECHNOLOGY, INC.

At no initial cost and minimal time to you, AHT will:

- ☞ Evaluate and research your innovative idea through a board of medical specialists.
- ☞ Have our lawyers file the applications and conduct the patent search process.
- ☞ Negotiate the marketing, manufacturing, and/or distribution of your product after patent search.

ADVANCED HEALTH TECHNOLOGY, INC.

FOR MORE INFORMATION AND A FREE COMPANY PACKET

MAIL THIS PORTION TODAY!!

OR CALL: 1-800-541-6098 OR (919) 768-7719

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

HOME PHONE _____ BUSINESS PHONE _____

Now America's oldest professional liability insurer has come to North Carolina.

The newest professional liability insurer in North Carolina is the oldest in the nation. The Medical Protective Company pioneered the concept of professional protection before the turn of the century and has been serving doctors exclusively ever since. Through good times and bad.

With the current liability crisis escalating, you need to take a close look at your coverage and the company that stands behind it. Then take a close look at us. You'll see we carry the highest

rating from A.M. Best, the firm that tracks the financial stability of insurance companies nationwide. Beyond that, you'll find complete protection at premium rates that are likely lower than you're currently paying. Plus the personal attention and claims prevention assistance you deserve.

Contact Stu Mitchelson today at 704/541-8020. He's the oldest company's representative in its newest state. And he's here to serve you.

**THE
MEDICAL PROTECTIVE COMPANY**

FORT WAYNE, INDIANA

Stuart Mitchelson, P.O. Box 13489
Charlotte, North Carolina 28211, (704) 541-8020

George Bush, Michael Dukakis, and Health Policy Issues in the 1988 Presidential Campaign

Edward C. Halperin, M.D.

George Bush and Michael Dukakis have taken distinctly different views on health policy issues. To explore these views, the North Carolina Medical Journal requested health policy position papers from both campaigns. Prompt responses were received from both the Bush and Dukakis press staffs.^{6-8,20} We have also reviewed research material made available to us by the American Medical Association,^{2,3} the Massachusetts Medical Society,¹⁶⁻¹⁹ as well as reports in the lay press.^{4,9-15,21,22} What follows is our summary of the presidential candidates' views on health policy issues. To the extent possible, we have used the candidates' own words.

Bush

Vice President Bush is "committed to insuring that our country has an effective health care system and, as President, I will continue the federal government's vital role in providing care for the truly needy ... we must mount a comprehensive effort to reduce the cost and improve the quality of, and access to, health care in America."⁸ A Bush administration would address America's health care problems based on three principles.

First, according to Bush, "the less that government is involved in the day to day administration of health care, the more efficiently it will run—which, of course, means that we should shun the various Democrat health care proposals

The NCMJ and Presidential Politics

How could the North Carolina Medical Journal possibly obtain direct interviews with the candidates for President? The answer was simple—we couldn't.

We acquired the material for this article by placing phone calls to the Presidential candidates' press offices. In the case of George Bush, we began by phoning Washington, DC, telephone information, asking for the phone number of the "George Bush for President" committee, and then placing the call. We went through several switchboards until we reached the press office. We stated our business and, within three days, received a package of press releases on health care policy issues.

With the Dukakis campaign it was more difficult to identify the proper contact person. A few phone calls, and a long time spent on "hold," eventually resulted in a press packet on health policy issues similar to the Bush campaign's.

A helpful and surprising discovery were the AMA questionnaires. It is the practice of the AMA to send questionnaires on health care policy issues to all candidates for president. The candidates' responses to the questionnaires were made available to us through the courtesy of Mr. Lee Stillwell, Vice-President of the AMA.

Another excellent source of material was the Massachusetts Medical Society. They have worked with the Dukakis administration (and sometimes against) for many years. The clipping service of the Massachusetts Medical Society provided a host of newspaper articles and the Society's legal staff was quite helpful in explaining the intricacies of the Commonwealth's laws.

—E.C.H.

which would involve government bureaucrats in peoples' personal health care decisions." Bush does, however, support the current effort to slow the increase in hospital cost through the Prospective Payment System. He also indicates that he believes that prospective payments should be applied to physician office and out-patient services. He favors promoting the options of enrolling in health maintenance organizations (HMO) and preferred provider organizations (PPO) to induce competition among health care providers.

From the Division of Radiation Oncology, Box 3085, Duke University Medical Center, Durham 27710.

Second, Bush favors the promotion of "more efficient administration of health care ... government health programs such as Medicaid and Medicare should not fund waste and inefficiency."

Third, Bush favors efforts to "limit the incentives and ability for patients to file frivolous malpractice suits which drive health care costs up for all Americans."⁸

Catastrophic and Long-Term Care

"One of our most pressing issues," according to Vice-President Bush, "is the cost of catastrophic and long-term care. Our seniors must be free from financial ruin because of catastrophic illness, and we must look for innovative solutions to the problem of long-term care."⁸ Bush has proposed a program which would change the tax codes to provide incentives for the purchase of private insurance for long-term care. He also favors allowing conversion of IRAs, savings accounts, and life insurance so that people could pay for long-term health care. For those senior citizens who cannot afford private long-term care insurance, he favors changing Medicaid requirements that force people to "spend down their life savings before being eligible for assistance." This particular concern has already been partially addressed by the new Catastrophic Health Care Bill which Congress is about to pass and which President Reagan is expected to sign.^{9,10} Bush has proposed funding "at adequate levels" for research on diseases such as Alzheimer's and stroke, in order to eliminate some of the causes of long-term chronic disability.

AIDS

Bush feels that "continued research on the virus combined with public education and testing are the best paths to curb the spread of AIDS." He speaks favorably of the Reagan administration's expenditures for AIDS research but cautions that "money alone won't stop AIDS."^{7,8}

Bush states that "the most important thing we can do is to tell our people the facts about AIDS and what they can do to protect themselves. We have to put into the hands of parents and students and people throughout America essential facts about AIDS in a thoughtful, sensitive manner."

On the issue of compulsory testing for AIDS, Bush feels that the matter "raises some difficult and troublesome questions for me. It puts into conflict the need for more information and knowledge to benefit the majority versus our basic constitutional right to privacy and it is the responsibility of the political leadership of the country to decide among these competing principles. Ultimately, we must protect those who do not have the disease. Thus, we have made the decision that there must be more testing. We are encouraging the states to offer routine testing for those who seek marriage licences and for those who visit sexually transmitted disease or drug abuse clinics. We are also encouraging states to require routine testing in state and local prisons."

Bush is quick to point out that any mention of testing

must be followed by appropriate controls for confidentiality. "If society feels compelled, in some circumstances, to test its citizens then it is absolutely imperative that those records are kept appropriately confidential. It is also imperative that help be available to those who test positive. We need testing, but only accompanied by guarantees that everyone is treated fairly."

Bush states that he understands "the concerns of parents for allowing school-age children who either test positive for AIDS virus or who have AIDS to stay in the classroom." He feels, however, that these decisions must be based on current evidence that the medical profession has to offer and "based on what the doctors tell us, I believe that these children should be allowed to stay in the classroom, on the condition that proper safeguards are taken."

Professional Liability Reform

Vice-President Bush feels that "medical care and the availability of necessary pharmaceuticals are threatened by the litigation explosion, particularly in areas such as obstetrics and neurosurgery." He favors several specific tort reforms including: "Restoration of fault as the standard for recovery of damages, since liability in the absence of wrongdoing directly contributes to the excessive chilling effect of the current tort law; elimination of the joint and several liability rule under which minimally involved defendants can be forced to pay 100% of a plaintiff's claim; an expanded use of alternative dispute mechanisms such as binding arbitration and mediation to encourage early resolution of disputes without burdening the court system."

Animals in Biomedical Research

Bush generally supports the use of animals in biomedical research. He states that "over the decades, the use of animals in biomedical research had lead to the eradication of many diseases, the alleviation of human suffering, and the general improvement of the health of mankind. Although biomedical research techniques today have become more technologically advanced and sophisticated, the use of animals continues to be necessary. We should not, however, allow animals to suffer unnecessarily. There is no reason why research animals should not be properly cared for."³

Abortion

Bush is firmly opposed to abortion except in cases of incest, rape, or to save the life of the mother. He supports "a constitutional amendment that would overturn *Roe vs. Wade*. I oppose federal funding of abortion. First and foremost, I strongly support alternatives to abortion—especially adoption. There are millions of couples in America who want to have children, but cannot. Think of the joy and fulfillment that an adopted child can bring to a family. We should streamline the adoption process and make adoption a better

alternative to abortion.”⁷

Birth Control In Minors

Bush is opposed to supplying birth control aids to minors without parental consent.⁷

Universal Health Care

Vice-President Bush sees a need for some small modifications of the Medicaid program to deal with the issue of uncompensated care/uninsured persons. He states that all but “17% of Americans have public or private health insurance to provide for their health care cost. They tend to be employees of small business where the added cost of providing an employee health plan might ruin the business—costing the employee his job as well. We are looking at measures to resolve this problem.”

Balance Billing

Vice-President Bush feels that we need to “encourage physicians to participate in Medicare. I am, however, against mandating assignment. I am skeptical of regulatory schemes that could have the unintended effect of lowering the quality of health care.”³

Dukakis

Michael Dukakis has, during his tenure as Governor of Massachusetts, taken an activist view on health care policy. He has favored government intervention with new programs as well as changes in existing programs to fulfill his health care policy goals.

Catastrophic and Long-Term Care

Governor Dukakis offers a “prescription for affordable, quality long-term care.”²⁰ The Dukakis program is based on six campaign promises: (1) Passage of catastrophic health care legislation to “cap the amount Medicare patients would pay out of pocket for long-term catastrophic illness, expand home health care, respite care, and prescription medication benefits, and prevent elders from having to bankrupt themselves to become eligible for Medicaid.” The Catastrophic Health Care Bill, which has bipartisan support and is expected to become law this year, already addresses many of these concerns.^{9,10} (2) “Require Medicare to pay for home health care services that are already guaranteed by law, but which this administration has unfairly—and in my view illegally—refused to pay.” (3) The federal government should “outline minimum standards for long-term insurance

coverage and inform employers and individuals of those private policies that meet or exceed those standards. The federal government has done this for years with respect to HMOs. State governments would be free to directly regulate such plans in whatever way they see fit, just as they now do with health and life insurance. For those states who do not choose this route, the federal government would provide an informational safety net.” (4) “Work with Congress to expand Medicaid eligibility for those with private long-term insurance. One option I would explore would be to make Medicaid coverage available for those whose federally-certified long-term health care insurance is exhausted. This will provide an incentive for the purchase of long-term insurance, and it will remove the arbitrary income limits now imposed by Medicaid—limits that virtually require bankruptcy as a precondition to care.” (5) Create “partnerships to develop new methods for providing long-term care by creating incentives for the states—either by using funding through Medicare programs or other federal funding—to provide a full range of services ranging from traditional nursing home and health care to innovative models of independent living” such as conjugate living, community care programs, and prepaid HMOs. (6) Dukakis favors the passage of Congressman Claude Pepper’s long-term home care family protection act. This bill would provide home health care services to the disabled and chronically ill of all ages. It was estimated that the legislation would cost \$28 billion. The bill was defeated in the House of Representatives in June 1988.⁵

Governor Dukakis acknowledges that his policies for catastrophic and long-term care may be expensive and that “with a 150 billion dollar budget deficit, we will not realize this goal overnight.”

AIDS

Dukakis opposes mandatory general population testing for AIDS. He favors voluntary testing for those in “high risk groups” and mandatory testing in two cases: “in the military, and in keeping with the traditional authority of the Immigration and Naturalization service to test immigrants coming from areas of the world with high incidences of communicable disease.”

Dukakis does “not believe that the interest of the general population and the interest of persons with AIDS are mutually exclusive. It is in everyone’s interest that we maintain our constitutional rights by keeping AIDS testing confidential. As our nation’s most serious public health threat, it is in all of our interests to prevent its further spread, find a cure, develop a vaccine, and provide compassionate care for people with AIDS.”²

Professional Liability Reform

Dukakis reports that he favors “creation of a national model of liability reform which states should be encouraged to

follow. Uniformity and predictability in these matters will do much to ease many of the problems associated with professional liability. As Governor, I supported the Massachusetts Medical Malpractice Reform Act of 1986 which set a \$500,000 limit on the amount which a jury can award for noneconomic damages, i.e. pain and suffering ... and provide graduated limits on attorneys contingency fees at 40% of judgements up to \$150,000 and 25% of judgements over \$500,000. These reforms have contributed substantially to stabilizing malpractice insurance premiums, while at the same time, insuring reasonable compensation to victims and preserving access to our legal system and competent attorneys."²

The Massachusetts legislation has not yet significantly affected malpractice rates. An interstate comparison of 1987-1988 malpractice premium rates for selected specialties (table 1) shows that Massachusetts professional liability premium rates are comparable to those in adjacent states.¹⁸

Animals in Biomedical Research

Dukakis supports the use of animals in biomedical research.²

Universal Health Plan

The "Universal Health Care Bill" was enacted into law in Massachusetts in April 1988. The bill is designed to provide health insurance for an estimated 600,000 Massachusetts workers who do not currently have coverage. The key elements of the act include the operation of a state pool to make private health insurance more affordable to businesses and offer tax incentives to encourage firms to buy coverage. Beginning in January 1992, employers failing to offer insurance must pay a surcharge in unemployment insurance. Those companies which choose to provide their employees

Table 1.
Inter-State Comparison of 1987-1988 Malpractice Premium Rates for Selected Specialties¹

Non-Massachusetts rates are those in effect as of February, 1987. Several states noted that rate increases are pending or planned.

	<u>Medical Professional Liability Premium Rates</u>		
	General Practice	Obstetrics	Neurosurgery
Massachusetts			
—Regular Annual Premium	\$ 4,600	\$ 33,200	\$ 38,000
—Total Cost ²	8,000	57,800	65,400
New York ³			
Long Island	11,607	84,645	103,647
Up-state	5,252	38,298	46,895
New Jersey	5,316	23,889	35,442
Maine	4,542	36,778	46,530
Connecticut	6,780	63,152	63,152
Rhode Island	4,704	23,521	23,521

The premium comparisons are based on occurrence policies at \$1 million/\$3 million coverage limits for general practitioners, obstetricians and neurosurgeons. For states with more than one malpractice insurer, a lower or mid-range rate is cited, not the highest.

Some states use "territorial rating" which involves charging different rates by geographic area. New York uses four territories, three of which cover New York City and surrounding counties, including Long Island. A fourth covers 25 up-state counties.

¹ Source: Reference 17.

² Total cost equals regular annual premium plus additional 1986 premium plus deferred premium.

³ Physicians in New York paying for \$1 million/\$3 million coverage are generally able to receive excess coverage such that total coverage is \$2 million/\$6 million at no additional charge. The cost of the excess is paid by the hospital at which the physician has staff privileges.

with medical insurance will be able to deduct the premiums from their tax liability. Companies that offer broad coverage will, therefore, typically owe the state, on net, nothing.

Under the bill, firms employing five or fewer employees are exempt from the surcharge. These employees may buy health coverage from a tax subsidized pool. A hardship fund will be set up to assist firms with high insurance costs. Individuals receiving unemployment compensation will be covered by a state pool funded by the employers surcharge. Hard to insure disabled children and adults will be able to "buy into" Medicaid. In return, the business share of the state-wide uncompensated care pool, which covers hospital costs of the uninsured, will be capped and phased down. The state will pick up the cost of an increasing share of the pool. The estimated cost to Massachusetts for the four year phase into the Universal Health Bill is \$550 million to \$1.2 billion.^{4,11,17,22} If elected President, Dukakis promises to enact similar legislation at the national level.⁶

Balance Billing

Dukakis points with pride to the fact that "we have approved the only state law in the nation that requires doctors to treat Medicare patients. Massachusetts is the only state which prohibits balanced billing, protecting elders against higher doctor bills."²⁰ The Governor is referring to chapter 475 of the Massachusetts Acts of 1985.¹ This bill, passed by the Massachusetts State Legislature and signed into law by Dukakis, requires that the medical licensure board shall "require as a condition of granting or renewing the physicians certificate of registration, that the physician, who if he agrees to treat a beneficiary of health insurance under Title 18 of the Social Security Act, shall also agree not to charge or collect from such beneficiary any amount in excess of the reasonable charge for that service as determined by the United States Secretary of Health in Human Services." The law says, in effect, that physicians treating Medicare patients cannot charge them more than what the government will pay for the services. Acceptance of this billing provision is a requirement for holding a physician's license. Many Massachusetts physicians have protested that the state has made an issue unrelated to competence a condition for getting a license.^{14,16,19,21} Chapter 475 has withstood several legal challenges. The result of the law, most agree, is to restrict Massachusetts physicians' income. The average Massachusetts practitioner now makes less than the national norm.¹⁰

Whether this restriction of physicians' income is completely attributable to Chapter 475 is debatable. Massachusetts has a significant amount of physician competition, a large number of hospitals and medical schools, and other pressures restricting physician compensation.

The Alleged Massachusetts Doctor Drain

A recent article in *Massachusetts Medicine* reported that "medical folklore has long held that the hospital practice

environment in Massachusetts is driving physicians from the state. Certainly most of the state's physicians can site a litany of grievances, headed by the retroactive insurance hikes and balanced billing, that makes rumors of an exodus seem plausible. And, in fact, there is anecdotal evidence that some doctors are packing up—everyone knows someone who knows someone who is fed up enough to close down and ship out. But statistics backing the lore are hard to come by."²¹

Statistics compiled by the Massachusetts Medical Society show that between 1981 and 1986, Massachusetts lost 748 more physicians than it gained. It has been asserted that there are particular shortages of orthopedic surgeons, emergency room specialists, and obstetricians-gynecologists.^{15,16,19} The evidence that Massachusetts is losing doctors is not, however, conclusive. There has been a steady increase in the number of physicians holding a license to practice medicine in Massachusetts. The relatively poor records available to trace physician movement will make this issue hard to clarify.¹⁰

Conclusion

George Bush and Michael Dukakis have distinctly different views on health care policy. Vice President Bush does not have an extensive record in the health care field. The Office of the Vice-President does not, of course, have major responsibility for health care policy. Bush has, however, shared to some extent in the formulation and implementation of the Reagan administration health care policies. Governor Dukakis, on the other hand, has a detailed record of health care initiatives during his tenure as Governor of Massachusetts. Some of these initiatives have had mixed reviews from physicians.

North Carolina's physicians will, no doubt, wish to carefully consider the candidates' views on health care policy when they step into the voting booth in November.□

Acknowledgment

Ms. Donna Stephenson typed the manuscript for this paper and for the interviews with the gubernatorial candidates.

References

- 1 Acts of Massachusetts, 1985, Chapter 475, p. 722.
- 2 American Medical Association. Presidential Candidate Questionnaire. Michael Dukakis, 2/13/88.
- 3 American Medical Association. Presidential Candidate-Questionnaire. George Bush, 1988.

- 4 Associated Press. Health Bill Highlights. The Middlesex News, 4/13/88.
- 5 Associated Press. House blocks long-term health care bill. The News and Observer (Raleigh), 6/9/88, p.7a.
- 6 Dobson SR. Issues Staff. Mike Dukakis for President. Letter to author, 5/19/88.
- 7 George Bush for President. Statement of Vice-President George Bush. Social Issues. 733 15th St NW, Suite 800, Washington, DC 20005, undated.
- 8 George Bush for President. Statement of Vice-President George Bush. Health Care. 733 15th St NW, Suite 800, Washington, DC 20005, undated.
- 9 Bianelli DM. Congress OKs catastrophic bill; biggest Medicare change ever. American Medical News, 6/17/88, pp.1,30.
- 10 Gold AR. Massachusetts doctors embittered by Dukakis. NY Times, 5/18/88.
- 11 Greene T. State makes a universal health pledge. The Middlesex News, 4/13/88, pp. 1a, 18a.
- 12 Knox RA. Mass. enacts health bill. Boston Globe, 4/14/88, pp. 1-2.
- 13 Los Angeles Times Service. Senate OKs catastrophic health bill. The News and Observer (Raleigh), 6/9/88, pp. 1a, 7a.
- 14 McDermott WM Jr. Mandatory assignment. Mass Med 1987;2:49-52.
- 15 McGrath K. Insurance costs drive obstetricians from Mass., study funds. Boston Globe, 1/4/88, p. 18.
- 16 Massachusetts Medical Society. Press release: surveys indicate fewer new physicians plan to practice in Massachusetts. 11/30/87.
- 17 Massachusetts Medical Society. Universal health insurance: its impact on Massachusetts physicians, undated.
- 18 Massachusetts Medical Society. Memos, 4/8/87, 7/9/87. Re: professional liability insurance.
- 19 Massachusetts Orthopaedic Association. Press release: Massachusetts loses 20% of orthopaedic surgeons since 1983. 8/13/87.
- 20 Mike Dukakis on the issues. A prescription for affordable, quality long-term care. Mike Dukakis for President. 105 Chauncy St., Boston, MA 02111.
- 21 Morse G. Should I stay or should I go? Mass Med 1987;2:19-35.
- 22 Passell P. Economic sense. NY Times, 5/18/88, p. 26.

YOCON[®]

YOHIMBINE HCl

Description: Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalamic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon[®] is indicated as a sympatholytic and mydriatic. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the CNS and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.^{1,2} Also dizziness, headache, skin flushing reported when used orally.^{1,3}

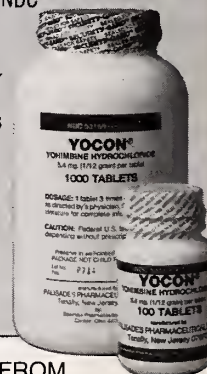
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.^{1,3,4} 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to 1/2 tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.³

How Supplied: Oral tablets of Yocon[®] 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

Rev. 1/85



AVAILABLE EXCLUSIVELY FROM
**PALISADES
 PHARMACEUTICALS, INC.**
 219 County Road
 Tenafly, New Jersey 07670
 (201) 569-8502
 Outside NJ 1-800-237-9083

**"I've gone
through a bypass,
6 months of
physical therapy
and now
I'm supposed
to come up
with a \$150,000
malpractice
tail premium."**



This could be a real situation. Worse, it could happen to you because of a "loop-hole" in your malpractice coverage.

Even though Claims Made malpractice insurance extends protection if you face a lawsuit after retirement or death, most policies provide no protection if you return to work during a disability, even if you return to your occupational specialty.

So you may be forced to pay a whopping premium — the tail premium — in order to maintain your malpractice tail coverage.

If your malpractice insurance company doesn't waive this tail premium, there's only one policy in the marketplace designed to cover it: MONY's new Distinction Disability Insurance Series.

DISTINCTION™

The Intelligent Choice In Disability Income

MONY
FINANCIAL SERVICES

Sue Anne Schoonderwoerd
P.O. Box 95161, Raleigh 27625
(919) 872-8666

The Mutual Life Insurance Company of New York, NY, NY.

Malpractice protection is only part of the story.

Malpractice Tail Premium Coverage is only one of the reasons MONY's Distinction is a different approach to disability insurance. It meets your needs.

- ☐ Your coverage cannot be canceled. No restrictions can ever be added.
- ☐ We're a mutual company and any dividends we pay can actually reduce the cost of your policy.

Please send me more information on MONY's Malpractice Tail Rider.

Name: _____

Address: _____

Phone: () - Age: Tail Amount: _____

Sue Anne Schoonderwoerd
(919/872-8666)

MONY
FINANCIAL SERVICES

P.O. Box 95161
Raleigh, North Carolina 27625

The Number Of Blue Cross and Blue Shield Subscribers Is Reaching Epidemic Proportions.

More and more people are signing up for Blue Cross and Blue Shield coverage at a faster and faster rate. Today we have over a million subscribers in North Carolina. And when you include subscribers' family members, the number is closer to two million. There are a lot of reasons for that success. But a large part of it is attributable to the variety of plans we offer. We provide a greater choice of group plans than any other carrier in the state. And we're giving

employers the opportunity to let each employee pick a plan that suits him or her best. We also offer coverage to people who don't qualify for group.

So next time you peek into your waiting room, chances are you'll be looking at a room full of our subscribers. Subscribers who have come to us for quality coverage and to you for quality care.



**Blue Cross.
Blue Shield.**
of North Carolina

The Choice Of Nearly
Two Million North Carolinians.
©1988 Blue Cross and Blue Shield of North Carolina





DALE L. TIPTON, M.D.

Associate Clinical Professor, Department of Otolaryngology, Head and Neck Surgery, University of California School of Medicine, San Francisco, California.
Chairman, Division of Otolaryngology, Franklin Hospital, San Francisco, California.
Lieutenant Colonel, U.S. Army Reserve.

EDUCATION University of California at Berkeley, A.B. Physiology; University of California School of Medicine, San Francisco, M.D. and Master of Science, Pharmacology.

RESIDENCY University of California School of Medicine, San Francisco: General Surgery — 2 years; Otolaryngology — 3 years.

FELLOWSHIPS National Institute of Health Fellow; Cancer Research Institute, University of California, San Francisco.

OUTSTANDING ACHIEVEMENTS Freshman Medical Student Research Award; Class President — 2nd year medical school; Student Body President — senior year medical school; Special Award by National Institute of Health to attend and present paper at International Congress of Otolaryngology in Tokyo, Japan; Chairman, Department of Otolaryngology, San Francisco General Hospital 1970-76; Chief of Medical Staff, Franklin Hospital 1982-84.



Dr. Tipton and residents examining post-operative patient in recovery room.

“I joined the Army Reserve shortly after completing my responsibilities as Chief of Staff of Franklin Hospital in San Francisco. I was intrigued with the idea of trying something different, such as Army Medicine.

“I find that the challenges and rewards of serving as an Army Reserve physician complement my civilian practice. For a number of years, I’ve been teaching as a member of the Clinical Faculty at the University of California School of Medicine, and I thoroughly enjoy the many teaching opportunities available to me in the Reserve. It is a rewarding experience to be involved in the training of Army medical students, interns, and residents. I also enjoy interacting and exchanging information with full-time Army physicians and seeing a wide variety of interesting clinical cases.

“After 18 years of private practice, I find it stimulating to be able to use my experience and expertise in a totally different medical setting. I highly recommend Army Medicine to any interested physician.”

Find out more about the medical opportunities in the Army Reserve. Call toll free 1-800-USA ARMY.

**ARMY RESERVE MEDICINE.
BE ALL YOU CAN BE.**

A NEW H₂ Antagonist

AXID[®] 300mg

nizatidine

Effective once-nightly
duodenal ulcer therapy available in a
Unique Convenience Pak
for better patient compliance



AXID[®] nizatidine capsules

Brief Summary. Consult the package insert for prescribing information.

Indications and Usage: Axid is indicated for up to eight weeks for the treatment of active duodenal ulcer. In most patients, the ulcer will heal within four weeks.

Axid is indicated for maintenance therapy for duodenal ulcer patients, at a reduced dosage of 150 mg h.s. after healing of an active duodenal ulcer. The consequences of continuous therapy with Axid for longer than one year are not known.

Contraindication: Axid is contraindicated in patients with known hypersensitivity to the drug and should be used with caution in patients with hypersensitivity to other H₂-receptor antagonists.

Precautions: General—1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Because nizatidine is excreted primarily by the kidney, dosage should be reduced in patients with moderate to severe renal insufficiency.

3. Pharmacokinetic studies in patients with hepatorenal syndrome have not been done. Part of the dose of nizatidine is metabolized in the liver. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

Laboratory Tests: False-positive tests for urobilinogen with Multistix[®] may occur during therapy with nizatidine.

Drug Interactions: No interactions have been observed between Axid and theophylline, chloridazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

Carcinogenesis, Mutagenesis, Impairment of Fertility: A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice; although hyperplastic nodules of the liver were increased in the high dose males compared to placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement

compared to concurrent controls, and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive, and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose) and a negative mutagenicity battery is not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, and the mouse lymphoma assay.

In a two-generation, perinatal and postnatal, fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy—Teratogenic Effects—Pregnancy Category C—Oral reproduction studies in rats at doses up to 300 times the human dose, and in Dutch Belted rabbits at doses up to 55 times the human dose, revealed no evidence of impaired fertility or teratogenic effect; but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: Nizatidine is secreted and concentrated in the milk of lactating rats. Pups reared by treated lactating rats had depressed growth rates. Although no studies have been conducted in lactating women, nizatidine is assumed to be secreted in human milk, and caution should be exercised when nizatidine is administered to nursing mothers.

Pediatric Use: Safety and effectiveness in children have not been established. **Use in Elderly Patients:** Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations. Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo. Among the more common adverse events in the domestic placebo-controlled trials, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common in the nizatidine group. A variety of less common events was also reported; it was not possible to

determine whether these were caused by nizatidine.

Hepatic: Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients possibly or probably related to nizatidine. In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L), and in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients. All abnormalities were reversible after discontinuation of Axid.

Cardiovascular: In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

Endocrine: Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo. Rare reports of gynecomastia occurred.

Hematologic: Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H₂-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs.

Integumental: Sweating and urticaria were reported significantly more frequently in nizatidine than in placebo patients. Rash and exfoliative dermatitis were also reported.

Other: Hyperuricemia unassociated with gout or nephrolithiasis was reported.

Overdose: There is little clinical experience with overdose of Axid in humans. If overdose occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance by approximately 84%.

Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal. Intravenous LD₅₀ values in the rat and mouse were 301 mg/kg and 232 mg/kg respectively. PV 2091 AMP [041288]

Axid[®] (nizatidine, Lilly)



Eli Lilly and Company
Indianapolis, Indiana
46285

NZ-2903-B-849356 © 1988, ELI LILLY AND COMPANY

Axid[®] (nizatidine, Lilly)

NORTH CAROLINA MEDICAL JOURNAL

For Patients

VOLUME 49 / NUMBER 9 / SEPTEMBER 1988

Heart Attack

MARGARET MUNSTER, R.N., AND ROBERT M. CALIFF, M.D.

Although dramatic progress has been made in understanding the causes of heart attack, this problem still remains the single most important cause of death in the United States, far exceeding any other type of illness. In 1985 North Carolina ranked third in the nation for death rates from ischemic heart disease in males aged 35 to 64. Hundreds of thousands of American families each year must deal with the crisis of this traumatic medical event.

Now that many of the specific factors contributing to the risk of heart attack are well understood and new treatments are available, renewed efforts in public education are needed to hasten the decline in the death rate from this problem. In this brief report we will review the causes of heart attack as they are currently understood, discuss methods of reducing the risk of having a heart attack, review currently available treatments, and discuss the substantially better outlook for patients with heart disease.

Causes of Heart Attack

The term heart attack refers to the irreversible damage that occurs to heart muscle when it is deprived of sufficient oxygen

for a prolonged period of time. The heart muscle is extremely sensitive to the level of oxygen in the blood supply. In fact, if blood is cut off from the heart muscle for any longer than 15 to 30 minutes, the heart muscle begins to die.

The heart muscle receives its blood supply through the coronary arteries. These arteries are located on the surface of the heart and surround the heart like a crown. In fact, the arteries derive their name from the Latin word for crown, "corona." The coronary arteries are small, only one to three millimeters in diameter. Any blockage within the arteries, therefore, can easily impede the flow of blood to the heart muscle. Most such cases are the result of the inner walls of the arteries becoming clogged through a process called atherosclerosis. Arteries with atherosclerotic blockages, called plaque, resemble pipes in which built-up deposits obstruct the flow of water.

Contrary to popular belief, the formation of atherosclerosis is not as simple as the accumulation of cholesterol in the artery. A variety of factors are incorporated into the growing plaque, including smooth muscle cells, fats, calcium, and connective tissue, a gristle-like substance similar to the tissue found in the knee and elbow joints. The atherosclerotic plaque develops over several decades, but symptoms are usually not felt until the artery becomes severely narrowed by greater than 70%. It is estimated that approximately 50% of American adults have one or more blockages in their coronary arteries.

A heart attack usually occurs when a blood clot forms on top of the growing plaque, suddenly and completely blocking off the artery (figure 1, next page). New scientific advances

From the Department of Medicine, Division of Cardiology, Box 31123 Duke University Medical Center, Durham 27710.

have led to a much better understanding of how these blood clots form and how they might be prevented. The blood clot starts to form when the arterial wall becomes damaged at the site of an atherosclerotic plaque. This leads to the formation of a crack or fissure in the wall of the artery. Small components of the blood called platelets then accumulate in this fissure. The platelets normally function to plug holes in our blood vessels when they are damaged by trauma. In this situation of advanced atherosclerosis, however, the platelets play the unfortunate role of initiating the blood clot. Furthermore, they release chemicals which cause the blood vessel to go into spasm, thereby further impeding the blood flow in the artery.

When the amount of blood flow to the heart muscle becomes inadequate, the muscle does not function normally and usually begins to ache. This uncomfortable sensation, called angina, is not usually severely painful, but may be described as discomfort, pressure, or a smothering or choking sensation. Some people have a "defective" anginal warning system and do not feel any discomfort when the heart muscle receives inadequate blood flow. Identifying people without this warning system remains a major challenge in the treatment of heart disease.

When the blood flow is completely cut off for more than 15 to 30 minutes, the discomfort may become the classic "crushing chest pain" of a heart attack. In many cases, however, the discomfort may be felt in the neck, jaw, arm or upper abdomen. Thus, any person who has symptoms with any of these characteristics should consult a physician.

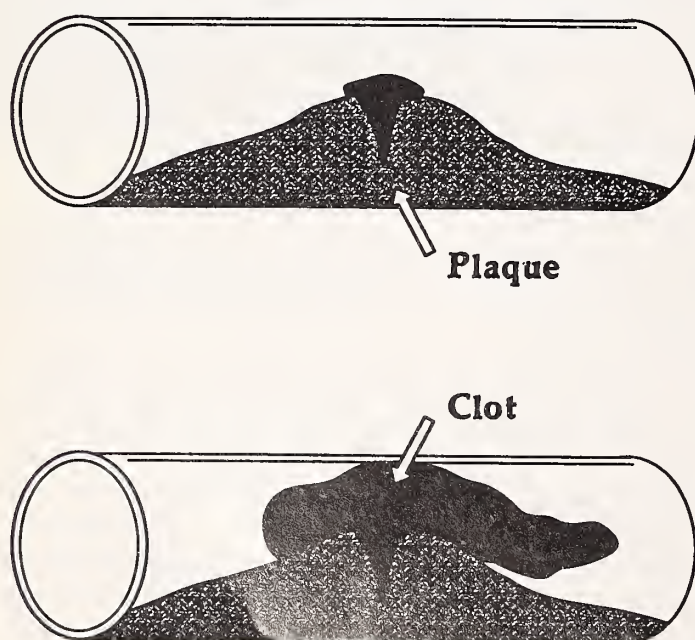


Figure 1. A blood clot may form on top of growing plaque, suddenly and completely blocking the artery.

Reducing the Risks

Medical research has clearly demonstrated that certain habits and traits (risk factors) lead to an increased risk of having a heart attack. Some of these risk factors cannot be changed. For example, people with relatives who developed heart disease at a young age (less than 65 years) have a greater chance of developing heart disease themselves. Similarly, men have a greater chance of heart attack than women, and older people have a greater chance of having a heart attack than younger people. We have no control over these risk factors. But there are other risk factors that we can control, and knowledge of our general risk status can help us to more carefully control them.

The most serious risk factors that we can control are cigarette smoking, high cholesterol levels, high blood pressure, and diabetes.

Smoking

Although tobacco remains a sensitive issue in our state, the medical evidence about cigarettes and heart attack continues to mount. Smokers are more than twice as likely to suffer a heart attack than nonsmokers. A recent study of nurses found that smoking only four cigarettes a day significantly increases the risk of heart attack.

Cholesterol

Cholesterol reduction has been a major focus of public health efforts, largely because of recent evidence that treatment to lower an elevated cholesterol level will lower the risk of heart attack. Routine public health screening for high levels of cholesterol has become more feasible because of a simple, cheap new method of measurement that uses a "finger stick" to obtain a single drop of blood.

Some public health experts have said that every American should know three numbers: social security number, cholesterol level, and blood pressure. Unfortunately, a recent poll showed that only 13% of adult Americans knew their cholesterol levels. The goal for cholesterol level in the bloodstream is less than 200 mg per dl. To achieve this goal the American Heart Association recommends a dietary intake of 100 mg of cholesterol per 1,000 calories consumed and a fat intake of no more than 30% of the total calories.

High Blood Pressure

High blood pressure remains a major problem, particularly in our state, but recently developed treatments can bring blood pressure under control, greatly reducing the risk of both heart attack and stroke.

Diabetes

Diabetes, though incurable, can be controlled. Keeping blood sugars at normal levels will lead to a less rapid narrowing of the blood vessels, helping to control the diabetic's risk of heart attack.

Other Risk Factors

The other modifiable risk factors are obesity, inactivity, and "Type A" behavior.

Inactive, overweight people tend to have high blood pressure and high cholesterol as well as more diabetes. In addition, high body weight increases the workload of the heart.

Although some studies have found a hurried, aggressive lifestyle to lead to increased risk of heart attack, others have not. New studies are paying attention to the reaction of the individual to stress, rather than to the level of stress per se.

Exercise, diet and smoking cessation are the cornerstones of our heart attack risk factor modification program. Adherence to these positive health habits will lead to a lowering of cholesterol, weight, and blood pressure, better control of diabetes, and a reduction in feelings of stress, and will thereby contribute to lessening the overall risk of heart attack.

New Treatments

In conjunction with our increased understanding of the causes of a heart attack, new treatments have been developed that are changing the medical outlook for those who develop atherosclerotic plaques that place them at risk of a heart attack.

Most recently, a new use for an old drug, aspirin, has been discovered. In a study of over 11,000 American doctors, researchers found that taking an aspirin every other day cut the rate of development of heart attacks by about 50% compared to taking a sugar pill every other day. Aspirin has already been shown to reduce the risk of developing a heart attack in patients with severe angina, and to decrease the risk of a second heart attack. Aspirin is thought to work mostly by causing the platelets which initiate blood clotting to become less active.

Several new treatments are available to dissolve the blood clot which blocks the artery when a heart attack occurs. These treatments are most effective if they are started within four to six hours after the onset of symptoms of a heart attack. The new drugs are called thrombolytic drugs because they dissolve (lyse) blood clots (thrombus). In about 70% of cases they are effective in re-establishing blood flow to the heart muscle. Three of these thrombolytic drugs are currently available for use: streptokinase, urokinase, and tissue plasminogen activator. Research suggests that these drugs reduce the risk of dying from a heart attack by 25%. They are available in most emergency rooms and do not require a cardiologist for their

administration. Emergency room physicians, family practitioners and internists have been using thrombolytic drugs throughout North Carolina for over five years.

Thrombolytic drugs are important in the treatment of heart attack victims, but they do not constitute a cure; they only dissolve the blood clot portion of the problem and do not treat the atherosclerotic plaque that remains. Several methods are available to deal with the residual plaque. Currently, the most popular technique is balloon angioplasty, in which a small tube (catheter) with a balloon on its tip is inserted into the artery at the site of the plaque. The balloon is inflated, enlarging the artery and flattening the plaque along the wall of the artery, thereby leading to a greater opening for blood flow.

Another commonly used technique is bypass surgery, in which a vein from the leg or another artery from the chest wall is inserted beyond the plaque, bypassing it and supplying blood flow beyond that area. In the 20 years since its introduction, bypass surgery has become the most commonly performed heart surgery in the United States. Approximately 200,000 of these surgeries are now done each year. New surgical techniques, better anesthesia and improved methods of keeping grafts open have broadened the usefulness of bypass surgery. An increasing number of elderly patients and patients with very poor heart pumping ability can now benefit from the operation. However, like the thrombolytic drugs, bypass surgery is not a cure for coronary atherosclerosis. Adherence to the risk reduction behaviors of a low fat/low cholesterol diet, regular exercise, and no smoking are essential in preventing the buildup of plaque in the grafts as well as the native arteries.

Many new methods of removing the plaque are under development, including the use of lasers and a "roto-rooter" device (atherectomy) to cut out the plaque from the vessel wall. Much of the current research in heart attack is designed to determine when these new methods of treatment are needed and when the patient can be treated with medication alone.

New Hope for Post-Heart Attack Patients

In the past most heart attack victims were treated as invalids, with prolonged hospitalizations and forced disability. New information has led to a reduction in the usual hospital stay from 21 days in 1971 to seven to ten days in 1987, and most patients return to work within four to six weeks. A structured exercise program is started before hospital discharge and continued throughout the convalescent phase. By concentrating on improvement in exercise ability the patient can gain confidence. In fact the most recent statistics from Duke indicate that the risk of dying is only 2% in the first year after discharge from the hospital.

The good news for the United States and for the State of North Carolina is that the risk of heart attack has been declining steadily since 1955. Most of this decline can be attributed

to a better lifestyle, although new medical treatment such as drugs and bypass surgery have also played a vital role. People are exercising more, smoking less, eating less fat, and treating high blood pressure and diabetes more effectively.

Despite this important downward trend in the number of heart attacks, we are many years away from eradicating the problem. Further educational efforts to promote risk factor modification and earlier presentation for medical care when symptoms occur, along with continued improvement in medical care technology, should lead to even greater progress against heart attack and its effects. ☐

Vanishing Premium Disability Income Insurance

*Your premiums stop . . .
Your coverage lasts
until retirement*

Just one of the new concepts being offered by the Disability Industry. Others include retirement income disability and return of premium disability income insurance.

Simply return the attached coupon to examine these new developments at no cost or obligation with a *free audit* of your existing coverage.

COMPENSATION CONSULTANT

Specialists in Compensation Replacement

YES, I'd like more information about:

- ☐ Free Disability Insurance Audit
- ☐ Variable Premium Disability Income Plans
- ☐ Retirement Benefit Disability Income Plans
- ☐ Vanishing Premium Disability Income Plans
- ☐ Return of Premium Disability Income Plans

Name

Address

City State Zip

Telephone

Date of Birth

Mail coupon to:

Compensation Consultant • P.O. Box 1927 • Hickory, NC 28603

NCMJ

A Summer Clearance Sale at Emerald Isle!



Coast Realty announces clearance prices on some exceptional properties! Here are the real bargains everyone has been waiting for all year. We've got something for everyone. Take a look!

This spacious OCEANFRONT luxury condo is perfect for your family. With 4 BRMS and 3 BATHS, you'll have plenty of room. Amenities include beach, hot tub, 2 solariums. \$174,900.

This 4 BRM, 2 BATH, 3rd row cottage needs a new owner. Previous owner's have transferred and want an offer. Only two years old with fully enclosed garage. Only \$99,900.

This new 3 BRM, 2 BATH SOUNDFRONT home has been reduced for you. Peach-tree doors, tiled fireplace, and superb views of the ocean and sound! Reduced to \$165,000.

This quaint Cape Cottage is located in an exclusive subdivision. 3 BRMS, and 2 BATHS with ocean view from second story porch. Easy beach access. Beautifully furnished, Jenn-aire grill. All for only \$98,500.

These offerings won't last long. So if you are thinking about PROPERTY AT THE BEACH, give us a call. We will be pleased to talk with you about existing homes or construction on a new home.

For further information:

Coast Realty and Construction Company
7703 Emerald Drive
Emerald Isle, North Carolina 28594
(919) 354-3700

When it comes to
there's no place like



ender, loving care... home.



No one likes being in the hospital. And no one likes paying a big hospital bill. This is especially true for companies and families wrestling with the high cost of health care.

As a result, more people are looking at home care as a viable option to prolonged hospital stays.

New technologies and services are making it possible for patients to be discharged from the hospital sooner, while continuing medical treatment in the comfort and convenience of the home or workplace.

Baxter is the largest supplier of health care products and services in the world and pioneered the concept of home therapy.

In the last year alone, we provided products and services to more than 40,000 home care patients. Patients requiring complex care. Patients on kidney dialysis and cancer chemotherapy. Patients receiving intravenous antibiotics and parenteral nutrition. Patients requiring immune deficiency therapy. And more.

We work closely with doctors, nurses, hospitals and insurers to make sure that their patients go home with confidence. And that they continue to receive quality care, personal attention and cost effective therapy for as long as it is needed.

So when your patients, employees or family members need some extra TLC, call Caremark Homecare. We believe it's possible to reduce the cost of health care *without sacrificing quality*. Baxter Healthcare Corporation, Caremark Homecare, Raleigh-Durham Pharmacy, 100 Perimeter Park Drive, Suite A, Morrisville, North Carolina 27560. Phone 800.245.2463.

Baxter

Med-Care

The Office Management System

6512 Six Forks Road, P.O. Box 19701
Raleigh, North Carolina 27615
NC 1-800-634-8016; USA 1-800-247-6094
919-847-5110

Med-Care's Software

Our software has been in development for over 11 years. It has been in use by private practice and community health centers for over 8 years.

Over these years, we have received a tremendous amount of suggestions from administrators, physicians, office staff, and accountants. The result? A system that is extremely flexible with a wide comprehensive data base.

Yet, it is efficient and simple enough to be used by staff without prior computer education or experience.

Med-Care reduces paperwork:

- automatic insurance processing includes refiles, aged claims, and C.O.B.
- alternate fee and coding schedules
- **paperless claims to Medicare and major carriers**
- family or patient billing option
- **clinical tracking with mailing labels**
- on-line help messages and scroll/file maintenance from any entry screen
- on demand patient statements, cycle billing, year-end statements, reminders
- appointment scheduling, encounter form printing, chart pull list, daily patient list
- general ledger, payroll, accounts payable, and word processing

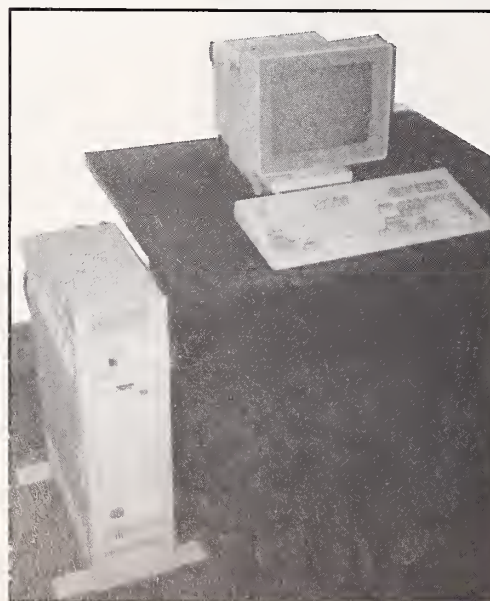
- referral utilization reporting
- **HMO processing and management made easy**

Starting with the encounter form, the appropriate plan will be identified by patient. The proper information from that point on will be handled automatically. By tracking patients on each plan and doing the cross-referencing **Med-Care** can help evaluate the efficiency of your health care plans.

Med-Care is developing a new fourth generation cobol that allows more flexibility, such as windowing, etc.

Med-Care's Support

At **Med-Care** we understand, first and foremost, that support is critical to the successful installation and



IBM Personal System/2™

operation of a computer system. This was confirmed recently in a **Computer World** article which surveyed 350 computer users.

Supporting over 100 private and CHC offices, as a **single-source** vendor, **Med-Care** provides installation, training, hardware and software maintenance, updates and enhancements, and on-going technical assistance and consultation.

Med-Care's Hardware

We feature T.I. and I.B.M. computers. This gives us and our customers a complete range of compatible, upgradeable computers for growth — 1 to 128 terminals. The **Med-Care System** is also available on Unix or Xenix based systems.

At Med-Care

Our Customers Are Important!

*"In my opinion, **Med-Care** has everything I would want in a company — excellent products, a well-trained staff, professional sales and service and good response time."*

Loraine McCaskill
Business Manager
Raleigh Ear, Nose & Throat,
Head & Neck Surgery, Inc.

*"I would highly recommend **Med-Care** and their system to any practice considering automation. Their continued commitment to customer satisfaction has earned for them a reputation matched by none."*

Donald B. Campbell, M.D.
Wake Internal Medicine Consultants, Inc.



If you want to
practice medicine,
not paperwork...
Talk To Me

I'm Lieutenant Ron Boatright. I've worked in the Navy medical profession for over ten years. In Navy Medicine the emphasis is on patients, not paperwork. Highly trained Physicians' Assistants, Hospital Corpsmen, Nurses, and Health Care Administrators not only provide medical support, but they attend to all the paperwork. As a result you are free to make medical decisions based solely on the needs of your patients.

The U.S. Navy is currently seeking qualified physicians in specialty areas to provide medical care for its servicemembers. As a Navy doctor you will work with state of the art equipment in the best facilities available. Along with your professional development, you will enjoy the lifestyle and fringe benefits of being a Navy officer, including:

- 30 days paid vacation annually
- Recreation facilities
- Veteran's benefits
- Annual salary starts between \$40,000-\$60,000 depending on experience
- Navy guarantees the location of your choice and pays relocation costs.

If you are interested in more information, call me at 1-800-662-7568.

FOR ALCOHOLISM AND CHEMICAL
DEPENDENCY

SOMETIMES STAYING NEAR

**HOME
SWEET
HOME**

Offering
EXECUTIVE
RECOVERY
MANAGEMENT
Program

MAKES

**GOOD
CLINICAL
SENSE**

P.O. BOX 240197
1715 SHARON ROAD WEST
CHARLOTTE, NC 28224
704/554-8373

JCAHO Accredited
Member NAATP
Member NCHA

**Charlotte
Treatment
Center**



IS AMETHYST*

JACK E. HARVILLE
EXECUTIVE DIRECTOR

*Amethyst - from the Greek: **NOT DRUNKEN**

Return with Us Now to Those Thrilling Days of Yesteryear

Argyrol and Argyria

Ronald B. Mack, M.D.

Imagine my surprise when I received an inquiry, a few weeks ago from our Emergency Room, about ARGYROL. The phone call involved a 13-year-old young lady who had argyrol eyedrops instilled in her right eye by a well meaning, but anachronistic grandmother, who was attempting to alleviate an already irritated conjunctiva. The word argyrol immediately caused two images to enter my consciousness, by word association, undoubtedly. These images were of the Lone Ranger and of the cases of argyria that I saw as an intern at the Cook County Hospital in Chicago. When you mention the word argyria to medical students and House Staff of this modern era they look at you as if you have lost it and snicker behind your back and murmur, out of earshot, that your racing days are over and that you should be put out to stud. (That sounds like something I would enjoy if only I could remember what it was.)

For those of you who never "saw" the Lone Ranger on radio, an opportunity to develop your imagination was denied. In that period between the Great Depression and WWII young pre-adolescents were searching for heroes, real and fictional, to emulate, to help provide goals to the innocence of youth. In my case the list was short and included Joe DiMaggio, Red Grange and the Lone Ranger. Three nights a week I could lie on the rug in front of the radio and "see" and hear tales of the triumph of good versus evil and imagine what I could do to right the wrongs of the world. To a little boy whose grandparents did not speak English clearly, whose progenitors came to this country to escape the triumph of evil over good, it was heady stuff to hear the Masked Rider of the Plains exclaim: "You have a great heritage. You live in a land of equal rights for all ... government by laws that are best for the greatest number ... to strengthen and preserve that heritage is the duty

and privilege of every American."¹ Remember what Elizabeth Akers Allen said in *Rock Me to Sleep*, "Backward, turn backward, O Time in your flight, Make me a child just for tonight."

Argyria is a condition whereby the skin, nails, mucous membrane, eyes and internal organs acquire a bluish gray discoloration which is permanent. The victims of this disorder look as if they have been disinterred and yet they walk around and act otherwise normal. The condition results from the deposition of silver after long periods of exposure to this substance. The unusual pigmentation usually appears initially on the face and spreads to the ears, neck and hands.^{2,3} In severe cases the skin assumes a metallic black patina. The color can vary from blue to slate gray to a cadaverous black. The color is more pronounced in areas exposed to sunlight. One rather big clinical "pearl" in the diagnosis of argyria is the grayish-blue discoloration of the lunulae of the nails.⁴ The discoloration is not only due to the deposition of silver in the tissue but to an increase in melanin induced by the metal. Apparently it is the increase in melanin, already present in sun-exposed areas, that gives rise to the characteristic appearance. The presence of light is considered the "trigger" for pigment induction in argyria. This process involves photo-reduction of silver compounds to elemental silver, similar to the photographic process.⁵

This peculiar condition can be generalized or localized to the gums, eyes, nasal septum and posterior pharynx. Deposition in the eye is not rare and is known as ocular argyrosis;⁶ it can be the result of local or systemic absorption of silver. Some authorities believe that ocular discoloration is the earliest objective physical sign of generalized argyria, and furthermore, pigment deposition in the conjunctivae may be a very sensitive index of this diagnosis. The abnormal color can be generalized in the eye or limited to the conjunctivae, cornea or lens. Usually there is no loss of vision in this condition. The good news is that victims of argyria are relatively asymptomatic; systemic toxicity is generally not part of the

From the Department of Pediatrics, Bowman Gray School of Medicine, 300 S. Hawthorne Dr., Winston-Salem 27106.

clinical picture. The bad news is that the condition is permanent and there is no known reasonable method to reverse the process.

It is reasonable to ask, where can people and silver possibly interface, except at Tiffany's? Please recall that silver has been part of the medical armamentarium for a long, long time. Have you forgotten Crede who, in 1884, introduced the practice of placing silver nitrate drops in the eyes of newborns to prevent gonorrhea ophthalmia?⁷ In the past, silver ar-sphenamine was used, parenterally, as a treatment against lues, yaws and other diseases caused by protozoa; it was discovered by Dr. Paul Erlich in 1907 and was the celebrated "magic bullet" at the time.⁷ In 1902, Albert Barnes and Herman Hille developed argyrol⁷ (more about this beauty later — I am saving it for dessert). Do we not use silvadene (silver sulfadiazine) in the local treatment of burns, or silver nitrate to cauterize wounds such as umbilical granulomas in the newborn period?

In this part of the 20th Century argyria from silver products used therapeutically is quite uncommon. The disease, these days, is more apt to be secondary to occupational exposure such as workers in photographic plate manufacturing, in silver mining, in mirror plating, and in the silvering of glass beads.³ But recall that silver is also used in the construction of jewelry, dental alloys, electric contacts, electroplating, tableware and so on.

Back to dessert and argyrol, which started me on this quest in the first place. As we have seen, argyrol was introduced very early in this century and is still in use as we speak. I recently walked into my local pharmacy and was able to locate a bottle, in plain view, of this substance from yesteryear. It was sitting on a shelf, along with over-the-counter eyedrops and nose drops. Argyrol is available as Argyrol SS 10% — a mild silver protein stabilized solution. It is sold as a "local anti-infective" and contains a mild silver protein solution combining mild silver protein (100 mg silver/ml, equivalent to 20 mg silver/ml) with gelatin and stabilized with 10 mg ededate calcium disodium per ml.¹¹ It is touted as a "non-irritating," soothing, cleansing, anti-infective for use in the mucous membranes of the eyes, nose and throat; active against a wide range of bacteria.¹¹ The package contains a warning: "prolonged or frequent use of any silver preparation may result in permanent discoloration of the skin and mucous membrane." The user is further admonished to store the product away from light. More specific instructions from the manufacturer include "for the nose and throat, to use as an aid in cleansing and removal of mucous and debris. Tilt head back, drop 3-4 drops in each nostril and expectorate freely. (Give me a break!!) The process can be repeated every four hours PRN for 72 hours." The advice given in the eye instructions is as follows: "aids in cleansing the eye of dust borne bacteria or other particles causing irritation or discomfort. Instill one to

three drops every hour. Do not use more than 72 hours."⁸ In their latest edition, Goodman and Gilman state that the concentration of free silver ion is quite low in argyrol despite the fact that the complex is 19% to 23% silver. It is considered only bacteriostatic and thought not to act with other proteins, thus producing a nonastringent, non-irritating solution.⁹

Our teenage patient did experience a patchy unhappiness on her cornea which was fortunately transient. Many cases of argyria in the first half of this century occurred from prolonged use of argyrol drops. Goodman and Gilman add that "it is surprising that some ophthalmologists will use this obsolete antiseptic for preoperative preparation of the patient." My mother, a sharp, clear-thinking octagenarian, alleges that she never used argyrol for any of our family. But you know my Mom, she used to tell us that orange juice was a contraceptive. We asked, "before or after, Mom?" and she answered, "instead."

It is a bit difficult to determine how much silver is required to produce argyria. One source suggests that the minimum oral exposure is 25 to 50 grams over a period of at least six months.³ Another source states that 3.8 grams, by ingestion, is required to produce the disease.^{10,11} Silver has no known function in people. It is an extremely cumulative element which has a strong affinity for sulfhydryl groups and proteins (probably the reason for its germacidal properties). Silver also can bind to chloride ions, imidazole, phosphate and carboxyl group. This adds up to the fact that very little silver in ionized form is available for entry into the systemic circulation.

For the unwary health care professional, neglecting to take a complete history, the diagnosis can be elusive. The differential diagnosis could include cyanosis, methemoglobinemia, polycythemia, metastatic melanoma, hemachromatosis, Wilson's Disease, Addison's Disease,¹¹ and the walking dead. The diagnosis of argyria is made by complete history, comprehensive physical examination, and a biopsy with dark field microscopy.³ The two most common biochemical procedures for analyzing silver in tissue are emission spectrochemical and atomic spectrometry. It is a blessing to consider this diagnosis early in the game to prevent unnecessary expensive, sometimes invasive, procedures for ruling out other diseases causing pigment changes in the skin.

Alas, there is no treatment for argyria beyond removing the source of silver from the patient's environment and warning the afflicted to stay out of the sun, when possible. Chelation does not seem to make a difference. Referral for counseling may be indicated as the picture these patients present can be unnerving.

Well, Kemo Sabays, I've finished this task and I am leaving. In my place I am leaving a silver bullet. A cloud of dust, a galloping yellow Jeep with the speed of light, and a hearty Hi-Yo Silver!! Away!!

NEONATOLOGIST

New Hanover Memorial Hospital, located in beautiful, historic, oceanside Wilmington, North Carolina, is seeking an additional board certified or board eligible neonatologist.

New Hanover Memorial Hospital is a 500-bed major referral hospital for southeastern North Carolina with graduate medical education programs affiliated with the University of North Carolina School of Medicine.

Candidate will be eligible for academic appointment at UNC School of Medicine. Academic appointment and salary dependent on training and experience. Please submit curriculum vitae and references to:

**Chairman, Search Committee in Neonatology
Area Health Education Center
New Hanover Memorial Hospital
2131 South 17th Street
Wilmington, North Carolina 28402**

The University of North Carolina at Chapel Hill is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.

There's Somewhere To Turn When Someone Turns To You

*When someone turns to you
for advice on drug or alcohol dependency,
turn to the professionals at
Carolina Manor Treatment Center.*

Carolina Manor
TREATMENT CENTER

1100 Pine Run Drive, Lumberton, NC 28358
1-800-445-7595 In NC (919) 738-1191

Operated By Southeastern General Hospital

NAVAL RESERVE PHYSICIAN

- Monthly Stipend for Physicians in training leading to qualifying as General/Orthopedic/Neurosurgeon or anesthesiologist.
- Loan repayment of up to \$20,000 for Board eligible General/Orthopedic surgeons and anesthesiologists.
- CME opportunities.
- Flexible drilling options.

*Promotion Opportunities

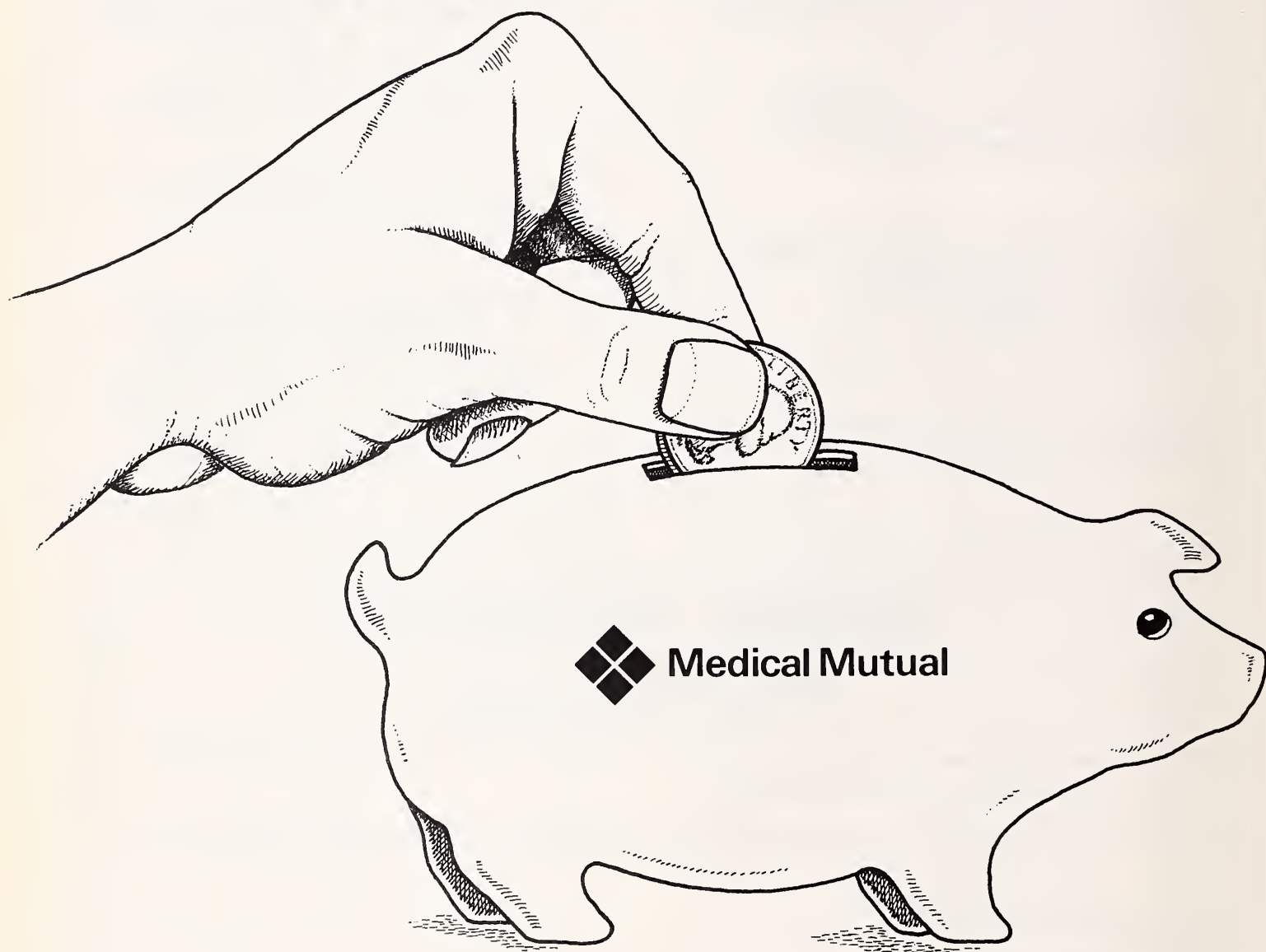
*Prestige

*For graduates of AMA approved
Medical Schools*

**CALL YOUR
NAVAL RESERVE FORCE
REPRESENTATIVE TODAY.**

1-800-443-6419

Medical Insurance Agency. It's Like Doing Business With Yourself.



Medical Insurance Agency is not like any other insurance agency. When you do business with us, the profits come back to you.

It's simple, really. Medical Insurance Agency is a subsidiary of Medical Mutual that provides a full line of insurance policies geared to physicians' needs. While Medical Mutual provides professional liability coverage on a break-even basis, the Agency serves as an income source, returning profits to the company.

Endorsements from both the North Carolina Medical Society and

North Carolina Dental Society have helped Medical Insurance Agency demonstrate its potential. In 1987 profits generated by the Agency benefited all Medical Mutual policyholders, in effect subsidizing each professional liability premium by \$32. Members of the North Carolina Medical Society save again through lower rates on premiums.

And that's just the beginning. The state's professional endorsements give Medical Insurance Agency great buying power, which results in special coverages and prices for our insureds.

This means that we can continue to enhance our policies to meet the unique needs of physicians, with special programs such as our non-cancellable disability income plan to protect your future earnings.

Doing business with Medical Insurance Agency. It's simply good business.



Medical Insurance Agency, Inc.

Subsidiary of Medical Mutual Insurance Company
of North Carolina

Suite 101 Lower Level, 222 North Person Street
Post Office Box 28388 Raleigh, NC 27611-6088
919/828-9336 1/800-822-6561

Drug Enforcement Administration

Renewal of Physician Registration

Mr. Fred H. Gregory, resident agent in charge of the Drug Enforcement Administration, has given us the following information which is important to all physicians.

The Drug Enforcement Administration (DEA) is currently in the process of renewing physicians' registration for up to three years. Upon completion, approximately 200,000, or one-third of all physicians in the U.S. will be renewed each year. Therefore, it is important to keep the Drug Enforcement Administration acquainted with your address and to notify that agency when you move (address below).

Renewal applications are not forwarded by the post office, and therefore physicians could be prescribing without

a valid registration. If it is not renewed, the registration is simply "retired" and is not legal.

Physicians are encouraged to examine their certificate of registration (DEA-223) to verify the correct address, correct schedules, and for the date.

The normal physician in practice should be registered in Schedules 2, 3, 3N, 4, and 5.

Anything less than that limits the scope of practice.

Physicians are registered at their principal place of business. A second office need not be registered so long as no controlled substances are stored in that location.

If any corrections in the DEA certificate are necessary, they can be made by a simple request in writing to the Greensboro Resident Office of the DEA, 2300 West Meadowview Road, Suite 218, Greensboro, NC 27407.

From Eben Alexander, Jr., M.D., Chairman, North Carolina Board of Medical Examiners, The Bowman Gray School of Medicine, Wake Forest University, Winston-Salem 27103.

A Picture Is Worth A Thousand Words? Not Always...

Some Plain Talk on Physician Dispensing

Q. What is Physician Dispensing?

A. It is the resurgence of a time honored service that once included all doctors. It is that service that can save your patients' time and allow you to conveniently dispense the prescriptions you write in your own office. In short Physician Dispensing combines income enhancement with increased patient convenience.

Q. How do I really know my patients will like this service?

A. Extensive surveys and the experience of thousands of doctors have shown that many patients prefer the convenience of purchasing their medications directly from their physicians. With our recommended prices, your patients will usually SAVE money and time.

Q. Is Physician Dispensing ethical?

A. Yes, just as other physician's services — lab, x-ray, diagnostic procedure. Physician Dispensing is ethical since patients have the choice to drive to the pharmacy or let you fill their prescriptions.

Q. Will dispensing affect my insurance?

A. In the view of most insurers, you are already dispensing when you give sample drugs to the patient or administer injections, so dispensing represents no change.

Q. How much staff time is involved in dispensing and is there much extra paperwork?

A. Our computerized labeling and record keeping system is very efficient. *All needed reports are automatically*

generated. It only takes about 60 seconds to dispense a prescription ... frequently less time than calling back and forth to the drug store.

Q. May I try the system in my office without obligation?

A. You can order a 30 day supply and get acquainted with the system. We will come in and help you get started. If you should find that dispensing is just "not for my practice", *You may return any unused medication within 30 days, without any further obligation.*

Q. Why should I choose CompuMed as my dispensing system?

A. CompuMed's System has been designed to meet the individual Physician's specific needs...designed after thousands of hours of hands on experience actually helping physicians dispense in their practices...designed from the inside of the physician's office up — not from the warehouse or the board room down:

- We Can Provide Any of Over 13,000 Medications.
- Including All Brand Names.
- Full Line of Bioequivalent Generics.
- Custom Packaged in the Exact Size You Prefer.
- Packaging Meets or Exceeds FDA & DEA Requirements.
- Your Choice of Computerized or Manual Dispensing Systems.
- Local Service Representatives.

Q. Is an investment required to get started?

A. Nothing, CompuMed can structure terms so no cash investment is needed.

COMPUMED[®] Inc.
PHARMACEUTICALS
HELPING PHYSICIANS REVIVE
A TIME HONORED SERVICE

Combining Income Enhancement With Increased Patient Convenience
CompuMed makes filling a prescription as easy as writing one

MAYBE IT'S TIME YOU LOOKED INTO PHYSICIAN DISPENSING
Call: 1-800-443-9218

MAIL TO: **CompuMed, Inc.**, P.O. Box 23706, 1517 Edwards Ave., New Orleans, LA 70183

Free Physician Dispensing Videotape Available. Circle one: VHS BETA

DR./CLINIC _____ MEDICAL SPECIALTY: _____
ADDRESS _____ CITY _____
STATE _____ ZIP _____ PHONE () _____

American Medical Student Activism: 1964-1968

Donald L. Madison, M.D.

This year marks the twentieth anniversary of the Student Health Action Committee (SHAC). For nearly two decades, every medical student attending the University of North Carolina has known about the SHAC Clinic. Many hundreds of medical, nursing, dental, pharmacy and public health students have served it as volunteers. Yet, the majority — especially in recent years — probably know little of how or why SHAC came to be. On the other hand, most of the medical faculty who are here tonight remember well the concerns of activist medical students in the late 1960s. Some were part of that group; the rest, I hope, can tolerate being reminded of it. In attempting to trace the medical student activist movement of the 1960s from its beginnings until 1968, the year SHAC began, I've relied in part on the published sources. In addition, some of the participants have generously reminded me of parts of the story. Finally, I've also drawn heavily from my own personal files — and memory.

Of course, medical student activism did not end in 1968 — far from it; but it did enter a new phase then as it quickly became an accepted part of the medical student culture, was endorsed by the main student organizations at almost every American medical school, and was announced as the *modus operandi* of the foremost national medical student organization. The founding of SHAC was one result of a new consciousness among medical students that had taken hold during the three previous years. Another result, manifested on the national level, was a radical shift in purpose by the Student American Medical Association (now the American Medical Students Association). Both occurred in the spring of 1968.

1968 may have been the most traumatic year of modern

American history. "The Year Everything Went Wrong" was one popular historian's title for it.¹ In April, the Reverend Martin Luther King, Jr., was assassinated, and riots inflamed 168 American cities and towns, most notably Washington, D.C. In June, Robert F. Kennedy was assassinated, and more American soldiers died than in any other month of the Vietnam War, which also that month became the longest war in American history (and it would last another four and a half years). Also in 1968, former Vice President Richard M. Nixon was elected President, marking the end of the New Frontier - Great Society era. In many ways it was a watershed year.

Triangle Activities

Two SHAC Clinics — one in Northside Chapel Hill, the other in the Edgemont neighborhood of Durham — were started in the spring of 1968 by UNC students in response to community needs. There was no Lincoln Community Health Center then and no Orange-Chatham Comprehensive Health Services program. These two health centers were still three years away and weren't even thought of yet. But the need of the poor in these two communities for more accessible primary health care was plain enough, and a group of health professional students at Chapel Hill was ready to respond.

Why in 1968 did those students become involved in a community health program for the poor? Jim Bryan remembers that some medical students on a pediatrics rotation had cared for a local child with glomerulonephritis following impetigo. The connection between impetigo and more serious health problems was known also by some of the working mothers in the Northside neighborhood of Chapel Hill. Together, students, mothers, faculty, and a neighborhood worker, Mrs. Billie Rogers, organized a "one-shot" dermatology clinic for children. As Toby Atkins reported in an article about the early years of SHAC, "Five 'one-shot' clinics and 235 patients later, they opened a bimonthly pediatric clinic."

From the Department of Social and Administrative Medicine, The University of North Carolina, Chapel Hill 27514. This paper is based on an address for the Twentieth Anniversary Celebration of the SHAC Clinic, Chapel Hill, March 18, 1988.

After a few more months, a community board was formed and services were extended to adults. That was how SHAC started in Chapel Hill. In Durham the story was much the same. UNC medical nursing students began weekly health education classes sponsored by the Edgemont Community Council. That summer they arranged a “one-shot” clinic for neighborhood kids who needed pre-camp physical exams. Students and faculty from Duke joined in. Soon, a community board was incorporated and a general medical clinic opened.² These two SHAC programs were among the first of many student-initiated free clinics that sprang up around the country during 1968 and 1969; by 1970 28 were in operation.³

But the question remains, why in 1968? Medical students had known for a long time about the sequelae of childhood impetigo and they had learned that one of its underlying causes is poverty. At least that’s what it said in their textbooks. And there must have been students before 1968 who noticed that there were people in nearby communities with problems that weren’t being addressed. So why wasn’t the Student Health Action Committee organized earlier — way back in 1952 when UNC became a four-year medical school, or any other time before 1968? It wasn’t because the School of Medicine lacked student leaders — Glenn Pickard was around then, Harvey Hamrick was here. And the Schools of Dentistry and Pharmacy and Nursing and Public Health all had excellent students. The answer, I think, is that in order to catch on, the idea of a SHAC — of a “student health *action* committee” — required a wider movement of medical student activism, wider than just Chapel Hill. SHAC was the main local expression of this wider movement, which among health professional students came rather late. It didn’t get started until the end of 1964.

December 1964 was a time of high expectation. Change was in the air. The primary goal of the Civil Rights movement had been achieved the summer before when on June 19, after a vote for cloture ended a long filibuster in the Senate, President Johnson signed the Civil Rights Act into law. On that same day, the first group of student volunteers completed their training as voter registration workers on the campus of Miami University in Oxford, Ohio, and headed south by automobile caravan to be part of “Freedom Summer.” They arrived in Jackson, Mississippi, two days later and began moving out to their assigned locations. The next day three of them were reported missing. In August their bodies were found, buried in the base of an earthen dam near Philadelphia, Mississippi.

No other student volunteers lost their lives that summer, but three were wounded by gunfire, eighty were beaten, and over a thousand were arrested. Local black people who hosted the volunteers fared much worse. There were several unsolved murders of blacks that appeared circumstantially to be linked to hostility toward the civil rights movement. Thirty-seven Negro Churches and thirty-one homes were burned or bombed that summer.

Something else significant had happened during that summer of 1964. The Democrats nominated President Lyndon Johnson for another term, while the Republicans chose conservative Arizona Senator Barry Goldwater over Nelson

Rockefeller. “A choice, not an echo” was the slogan on the banners carried by Goldwater supporters. In November, the American people made their choice. They gave Johnson a landslide victory that carried sizeable Democratic majorities into both houses of congress, something President John F. Kennedy had never enjoyed during his 1,000 days in office.

Four years earlier, on the first day of his presidency, Kennedy had turned the minds of young Americans toward public service with a single phrase: “Ask not what your country can do for you . . .” By 1964 the Peace Corps was already three years old with 10,000 volunteers working in 46 countries around the world.⁴ Earlier, in 1962, author and socialist organizer Michael Harrington had written a book titled *The Other America*.⁵ In the book, which became an unexpected best seller, Harrington described a hidden community of the poor, a surprisingly large number of Americans whose existence had been overlooked for so long in the post-war prosperity that they had become invisible, an entire class that the majority, urban middle class could easily avoid acknowledging as they hurried back and forth between work in the city and home in the suburbs over expressways that kept the squalor of the inner city out of sight.

Among the readers of *The Other America* was President Kennedy, who talked of a federal program to combat poverty that he hoped to announce after the 1964 election.⁶ He didn’t live that long — but in March of 1964, Lyndon Johnson sent Congress a message declaring an “unconditional war on poverty.” And in August, he signed the Economic Opportunity Act into law.

All of these events — the struggle by the Civil Rights movement against the injustice of segregation and discrimination, the spirit of idealistic service represented by the Peace Corps, and the discovery of an underdeveloped, underprivileged “nation” of the poor within the most affluent country on earth — were stimulating a new social consciousness among students in 1964. Recruiters for the Peace Corps were seen on virtually every college campus. The Student Nonviolent Coordinating Committee, Students for a Democratic Society, and several other activist organizations were highly visible as well on many campuses. But although the membership base of these groups was college students, their purpose was community action — either in the form of voter registration campaigns in the South during the summer, or community organizing and grass-roots political activity in disadvantaged urban communities. Almost every group of students became involved in some way — undergraduates, especially; but also graduate students, theology students, law students.⁷

And perhaps a few medical students. But only a few. It may have been that medical students lacked time — although most had at least two free summers off from medical school, and in 1964 the yearly tuition at the most expensive private school was still only \$1,500. Of course, some lacked interest, but that would have been equally true of every other group of students. It wasn’t that medical students lacked an organization. They had one — the Student American Medical Association.

The Student American Medical Association

SAMA had been created and financed in 1950 by the AMA as an antidote to an earlier student organization, the Association of Internes and Medical Students. AIMS was an activist organization, founded in the 1930s, whose members were involved in student issues, public health issues and, especially, the debate over national health insurance, in which their position was opposite that of the majority of physicians. It had chapters at about eleven medical schools, and its student members looked for guidance to a small group of politically liberal older physicians, almost all of whom were medical educators. Their main mentor, the patron saint of AIMS, was Dr. Henry Sigerist, the distinguished medical historian at Johns Hopkins. By the late 1940s, AIMS, like most other activist organizations from the 1930s that still existed, was feeling the effects of the McCarthy-inspired anticommunist hysteria. Many of the medical student members of AIMS would later distinguish themselves as the leaders of the medical care reforms of the 1960s, but in the '40s they were seen by their elders in the profession and by their more conservative fellow students as a group of youthful noise-makers who did and said things that rubbed the wrong way.

Dr. G. Lombard Kelly, who was dean of the Medical College of Georgia, claimed credit for suggesting the creation of SAMA. Kelly had taken a six-month sabbatical to serve full-time as secretary of the AMA Council on Medical Service:

"During my tenure with the Council I became convinced that the organization known as Association of Internes and Medical Students . . . was an evil influence among the medical students of this country. I had suspected its communist leanings from the start and would not permit a chapter in our school (though in truth there was no desire for one at any time). On the basis of my convictions, I began attempts to sell my Council on the idea of organizing an association of medical students as a junior organization within the framework of the American Medical Association. I wrote a tentative constitution and bylaws modeled after that of the AMA . . ."⁸

Kelly's proposal, made in 1945, was endorsed by the Council on Medical Service but rejected by the AMA trustees because of the expense. However, in 1949 a student organization formed as an alternative to AIMS actually came into existence at the University of Virginia. The initiator was a fourth-year student by the name of Allen Offen. One day, listening to the radio while eating lunch, he heard on the news that one of New York City's major hospitals was being picketed by interns and residents who were demanding higher stipends. (Interns' wages in the 1940s averaged about \$1000 a year and one of AIMS' aims was better living conditions.) Offen's reaction to this news was immediate. According to Russell Staudacher, the former executive director of SAMA,

he "... bolted the rest of his sandwich and rushed back to school, deeply concerned over the fact that this could happen within the profession he soon was to join as an intern."⁹

The result of Offen's deep concern was the formation of what would later become the first local chapter of SAMA. Soon there was another petition to the AMA asking that it sponsor a student organization, and the next year, 1950, the AMA House of Delegates "specifically directed the Board of Trustees to formulate appropriate plans to develop a Junior American Medical Association."¹⁰ The AMA Board proceeded to give its progeny the name, Student American Medical Association, and drafted its bylaws. It also housed the headquarters of the new organization.

The New Physician

Over the next fourteen years, SAMA grew in size until it included chapters at most American medical schools. It published a national journal, *The New Physician*, offered a series of insurance plans to its members, launched an auxiliary organization for medical students' spouses, handed out "chapter of the year" awards to both SAMA and women's auxiliary chapters, and sponsored annual contests in medical research, medical writing and medical art.¹¹ Mostly, however, SAMA functioned as a training ground in good medical society citizenship for future AMA members. As Joseph Garland, the editor of the *New England Journal of Medicine*, noted approvingly in 1952:

"The principal objectives of the Student American Medical Association — developed under and guided by the experienced hand of the American Medical Association — are to indoctrinate students early in their novitiate in the ethical standards and the internal and external relations of their profession, and to interest them in the organizational means through which these relations are intended to achieve uniformity."¹²

Garland didn't say "... to achieve conformity," but by 1964 that was clearly what SAMA was indoctrinating. How the work of indoctrination was going can be seen in the pages of *The New Physician* for that year. The majority of the articles were clinical, "how to treat" papers by practicing physicians — the kind of popular summaries that fill those drug company ad-supported "throwaway" journals that physicians receive unsolicited in the mail. There were about five of these in each issue, plus a transcription of a clinical case conference and a multiple-choice quiz with the correct answers found in the back of the magazine.

There was also humor. For nearly two years, throughout 1963 and 1964, *The New Physician* ran a contest around a template cartoon that someone had contributed. It pictured two "new physicians" facing each other, dressed in diapers and helmets and carrying standards with the caduceus insignia. The contestant who submitted the cleverest caption each

month could enjoy the pleasure of seeing it in print beneath this work of art. Other cartoons in the magazine reflected the editor's preference for what passed then for conventional medical humor. Catering to a medical student population that was overwhelmingly white and male, the jokes were often chauvinistic in their use of women, nurses and non-whites as the objects of fun.¹³

Occasionally the magazine ran articles by student authors. In one, a husband and wife (a medical and a nursing student) described their experiences at a mission hospital in Swaziland. Even here, the editor's addiction to humor prevailed. Cartoons featuring witch-doctors and other aborigine types were used to illustrate what the authors obviously intended as a serious medical travelogue.¹⁴ Sometimes *The New Physician* published articles on socioeconomic issues that were supposed to concern medical students. The magazine's definition of "social," however, had little to do with the kinds of social issues that other students were concerned with — civil rights, poverty, and so on. Typical was an article on billing and collections, something that may well have interested the average medical student, although I can't remember any of us talking about it. But just in case there might be students like me who would only skim it, the editor inserted a cartoon into the text to catch our attention and make the larger point.¹⁵

As a medical student reader of *The New Physician* I could admit that its contents probably reflected the mainstream of medical student thinking. But I also remember being vaguely disturbed by what I was reading, and questioning whether the medical profession would ever be relevant to the problems we were seeing on the news. More disturbing was that I could find almost no one at my medical school who shared my uneasiness or who was bothered in the least by the irrelevance of SAMA. I didn't realize what William Whyte had already pointed out, namely that my generation of young Americans had traversed an era which placed an unusually high value on conformity. While there were signs in 1964 that this era was over, the template of "The Organization Man" still shaped the social attitudes and actions of most medical students.¹⁶

A New Organization

In the fall of 1964 I was in New York, doing an elective at Montefiore Hospital in the Bronx, and living in the house staff dormitory there. One evening I got a call from a fourth-year student at the University of Southern California — Bill Bronston. He was calling, he said, to find out when I would be back in Los Angeles, since he needed my help in organizing a new city-wide organization of medical students that would, as he put it, "take stands on public health issues." I hadn't met Bronston, but I knew who he was. In those years USC, the California College of Medicine (now part of the University of California at Irvine), and my school, Loma Linda, all shared the Los Angeles County Hospital. With over 3,000 beds, it

could accommodate three medical schools easily. And although each school's students were trained on separate services, we saw each other in the halls and in the cafeteria and a few of us were acquainted.

Bronston was hard to miss. His white clinic coat never showed a wrinkle — I always suspected him of hiding a store of clean ones somewhere in the hospital and changing at lunch — and his slacks, shirt and tie looked like they came straight off a department store mannikin; he wore wide, black-framed glasses, had full dark red hair and a carefully trimmed beard, all of which together gave him the appearance of a latter-day medical student cavalier. But Charles I would not have mistaken Bill Bronston for a royalist. Although his father was a famous Hollywood producer, whose name appeared before the titles of his films ("Samuel Bronston presents . . . *El Cid*" or "Samuel Bronston's *Circus World*"), Bill's political instincts and organizing talents, and especially his ability to hold an audience, must have been inherited from his grand uncle, Lev Davidovich Bronstein. Born into a wealthy family in Czarist Russia, he would later take the name Leon Trotsky.

In December, Bronston called a meeting attended by three other students — one of his classmates, David Lillian; a USC Sophomore named Michael McGarvey; and myself. How, he asked us, would we organize all the medical nursing, dental, and other health professional students in Los Angeles into a city-wide activist organization that would launch its own community health projects, educate its members and take stands on public issues? Such brazen optimism was so infectious that by the end of the evening we were already planning to turn our new organization — which we'd just named the Student Medical Action Conference (SMAC), but which had no members and no apparent support beyond the four of us and a few friends — into a national movement. Obviously, we reasoned, there must be a whole lot of medical students besides us who were disgusted with SAMA and concerned about the relevance of the medical profession — students who had perhaps been involved in the Civil Rights movement as undergraduates or who might have joined the Peace Corps if they hadn't gone to medical school. We reasoned, too, that a student organization concerned with broader public health issues would attract nursing students, social work students and other non-medical, health professional students. That night we drafted a "credo" for the organization, a formal statement of what its members stood for and what it would do. By the next week a brochure was printed and distributed to health science schools throughout the Los Angeles area and a mass meeting scheduled for early January, after the holiday break. Leon Trotsky couldn't have done any better.

At the meeting, which turned out to be far less "mass" than we were expecting, opposition surfaced in the form of the sophomore class at USC. About thirty of them turned out, easily enough to constitute a majority of the audience. After I presented the "credo," Bronston began his pitch for members, but was soon interrupted by one of the sophomores who demanded that we take a vote on the wording of the credo and the name of the organization. Others joined in. They objected

to the word "Action." It was inflammatory, they said, because it implied that this would be more than a service organization. If SMAC were really welcoming all students as members, as the credo claimed, then we must be careful not to offend those who might want to serve, but who wouldn't feel comfortable affiliating with an organization that, for example, might come out in favor of socialized medicine. (In January of 1965 the major issue for the medical profession, and the focus of an extraordinary national advertising campaign by the AMA, was the defeat of Medicare.) The majority of medical students in 1965 were doubtless sympathetic to the problems of blacks in the south and the plight of poor people closer to home, but this majority also consisted of students who only two months before had cast their first presidential vote for Barry Goldwater. Acceptable "action" to them meant service in the tradition of the Rotary Club or an undergraduate social fraternity; the kind of public "action" that we were interested in was highly suspect.

When Bronston insisted that motions and voting weren't in order, nearly all of the USC sophomores — half of the audience — walked out of the meeting. It was not an auspicious beginning. We did change the name (leaving "action" out) to the Student Medical Conference (SMC). And most of the sophomores came back; actually, they very quickly became the heart of the organization and soon took over its leadership. That winter we began planning community health projects for the following summer. A USC student journal, *Borborygmi*, and a speaker forum that Bronston and other students had launched earlier in the year, came to be identified with the SMC and helped increased its visibility.¹⁷ The movement rapidly spread to UCLA, the California College of Medicine, the school of nursing at Los Angeles County General, and ultimately to health professional schools all over California.

Then Bronston came to a pair of less demanding rotations, where he could extend his weekends, and began organizing in earnest. His wife was a TWA stewardess, which allowed him to fly inexpensively. When he wasn't on an airplane, he was telephoning or writing letters. That spring, following one lead after another, he identified and made contact with like-minded students all over the country, traveling to Palo Alto, Boston, New York, Washington and Chicago. Fitzhugh Mullan described that first visit to Chicago:

"Charismatic, articulate, and, to some, threatening, Bronston sparked enthusiasm and controversy wherever he touched down. His message was clear and generally well received; health student action programs were feasible, politically crucial, and educationally mandatory if the priorities and allegiances of American medicine were to change at all. In Chicago his effect was powerful. . . . Suddenly Bronston was describing and detailing things we had only dreamed about. Bearded and intense, he held us spellbound. . . . Those of us who spent the evening with Bronston were sold. We agreed to organize an interscholastic, interdisciplinary health student group devoted to

curricular reform and community service in Chicago. More important, we agreed to host a national student convention in the fall of 1965."¹⁸

That first national meeting of Student Health Organizations — by then the SMC had been replicated under other names in several cities, and collectively these organizations were calling themselves the Student Health Organizations — was hosted by the University of Chicago, officially by the SAMA chapter there. It was followed the next summer by the first SHO student health project. The Office of Economic Opportunity (the "War on Poverty" agency) made a grant to the SMC through the University of Southern California, which enabled 90 students — medical, nursing, dental, social work, pharmacy and others — from all over the country to work during that summer of 1966 in community health projects throughout the state of California. The next summer, 1967, OEO sponsored three SHO projects — another one in California plus one in the South Bronx. In 1968 there were seven large projects — in California, Chicago, New York, New England, Cleveland, Colorado and Philadelphia — and smaller ones in Milwaukee and Kansas City. Altogether, during those three summers nearly 900 medical and other health professional students participated. All of the student health projects had faculty co-directors: sponsorship of a medical school was necessary to receive and administer the government funds; but virtually all of the preparation, including arranging the placements and most of the project direction, was done by the SHO students.¹⁹

Nineteen sixty-eight saw the peak of SHO activity and the start of its decline.²⁰ By then the issue of the Vietnam War was drowning out all of the others. Feelings ran high. For some SHO activists, the leading health issue was without question the war. Others thought that SHO's anti-war stance was diverting it away from the main task and alienating its friends. The debate over whether SHO should remain a health service-oriented, reformist student group or become a politically radical, anti-war group tore the movement apart.¹⁸ One could say that during late 1968 and 1969 it self-destructed. Officially, the Student Health Organizations had never been more than a loose confederation of autonomous local groups, and now the absence of a national organizational structure added to the movement's instability. By 1970 there wasn't any SHO left.

Meanwhile, throughout 1965 and 1966 SAMA had continued to maintain its familiar course. *The New Physician* did manage to run some occasional social commentary (which invariably echoed the official positions of the AMA), but mostly it stuck to the old format. Then, in the March, 1966, issue there appeared a long letter from an intern in Dallas. The editors added an explanatory note: ". . . the nature of the offering along with its objectivity . . . dictate its use as an editorial. This we are doing in the hope that it will similarly bestir other readers to offer comments pro or con, on the thoughts so perfectly expressed by (the author)."²² The "editorial" was a philosophical discourse that went on for four pages. It called on young physicians to give up their claims as

servants of mankind and instead consider themselves “traders,” accepting the dictum that the only true motivator for a physician is selfishness. The author, an enthusiastic follower of Ayn Rand, had written a paraphrase of her thought. Response from the readers was immediate. At last, *The New Physician* had created a stir. Some of the letters—mostly those from older physicians—were enthusiastic. But if the executive director of SAMA had assumed that American medical students would welcome the anti-altruistic teachings as their new professional watchcry, he was mistaken. The rebuttals poured in, filling the “letters” column not just of the following issue, but of the May, June, July, and August issues. More reaction appeared in October, still more in November, and there were two final lengthy commentaries in the letters column for December.

As a result of the Ayn Rand disciple’s editorial and the reaction it prompted, a resolution was introduced at the 1966 SAMA convention by the delegate from the University of Southern California, a third-year student and an SHO member who the year before had led the walk-out on Bronston’s meeting. His resolution called for *The New Physician* to run a new regular column in which “other views” (than those of the AMA) would be presented.²³ The resolution passed and the December issue of *The New Physician* featured an article on the Physician’s Forum, an organization most medical students had never heard of, but whose views often ran counter to those of the AMA.²⁴

By 1967 the leaders of the SAMA chapters at several of the nation’s medical schools were also SHO members. The medical students who had participated in the California project the summer before came from many different schools and most became active organizers when they returned to campus in the fall. Almost all of the SAMA delegates knew about the SHO, and while it made some of them nervous, many were envious of SHO’s spirit and energy. At the 1967 SAMA convention, for the first time in the organization’s history, the house of delegates engaged in a lively debate. It was so unique that *The New Physician* published the entire transcript under the title, “Dialogue in Democracy.”²⁵ The debate was precipitated by the surprise announcement by the delegate from Stanford University that the members of the SAMA chapter there had voted to withdraw from the national organization. The delegate listed the reasons:

“SAMA presents a bad public image; its reputation is that of an organization functioning primarily to perpetuate its own existence. It is associated with a mediocre journal ... which has no strong student voice in its editorial policy... (it) has been an inadequate forum for debate and consideration of minority views. ... Also, the House of Delegates voted against federal loans for medical education—this vote turned out to be unrepresentative of the opinions of the general medical student population. ... Many medical students seek opportunities to serve in underdeveloped countries and areas of the US beset by poverty and attendant poor standards of medical care.

SAMA has failed to provide these opportunities; other organizations are doing so.”¹⁶

Insisting that the Stanford students were not abdicating their responsibility, he concluded by calling for a debate:

“... students are actively involved in community service projects, curriculum reforms, and in setting up a curriculum for the training of community and family physicians. In addition, 71 Stanford medical students have refused to serve in the armed forces in Vietnam and have signed a pledge to that effect. They are joined by several hundred medical students across the country (in) actively seeking responsible alternatives... so that they will have a chance to serve their country in a way which is acceptable to their consciences.... We welcome your criticism and rebuttal and seek an active dialogue with all of you...”²⁷

Some of the delegates must have been relieved to be rid of a chapter with 71 draft dodgers; but most disapproved of Stanford’s pullout. In the lengthy debate that followed, during which it was revealed that other chapters were also on the verge of withdrawing, it was clear that the sting of criticism had been felt. There was only one mention by name of SHO. It was made by the delegate from the University of North Carolina, a campus which had no SHO activity yet. Clement Lucas, a SAMA loyalist who would be elected national president the following year, called for a grassroots revival:

“This afternoon the Student Health Organization gave a presentation to the Medical Trends Committee, and I truly wish that each and every delegate here had an opportunity to hear them. This organization has started out on a grassroots level, they are interested in doing something for people on the grassroots level, they are interested in medicine, they are interested in society, and they have no national organization. Yet we have the local societies, we have a national organization, we have over 60 chapters...and yet we come here and say the SAMA is doing nothing...”²⁸

At that 1967 convention, SAMA began reviving itself. First, the delegates passed a resolution encouraging their local chapters to “start investigating the socio-economic problems of poor people in their communities, especially as these problems apply to health.” They elected as their new national president David Kindig of the University of Chicago, who had hosted that first SHO meeting in the fall of 1965, and they instructed him to appoint a committee on community health projects and “establish a formal liaison with the Student Health Organization, which has already had experience in this area.”²⁹ Within the year a student editor had taken over *The New Physician*, the content of which soon became unrecognizable to readers like me who as medical students had criticized the old version. The following year SAMA hired a new executive director, someone of the students’ choice instead of another

ex-medical society staffer recruited for the students by the AMA, as all of the predecessors had been.

From that point SAMA took an increasingly activist and independent road. When new president Clement Lucas addressed the house of delegates of SAMA's parent organization at its annual convention in the spring of 1968, he told the AMA what it could expect:

"For many years SAMA has had the reputation of being solely a service organization that offered insurance to its members. However, due to the activism of the students in medicine and their new social awareness and consciousness, and due to the influence of other student organizations, such as the Student Health Organization, our organization . . . has been created anew and is seeking through responsible action to influence our society and to play a significant role in building a more just society for all people. . . . Will you be a part of our efforts? Will you join us in taking a positive stand in these times of need? We stand ready in anticipation of your answer."³⁰

Lucas sat down to scattered applause. SAMA had given notice that it would be an activist organization.

Acknowledgment

I am indebted to James Bryan, Fitzhugh Mullan, and Jeffrey Stolz for providing some of the information and sources used in this paper.

References

1 Manchester W. The glory and the dream. Boston: Little, Brown, 1974, p. 1122.

2 McConnell DM, Jr., and Atkins HH, II. Student-initiated community health care. The N Phys 1970;19:325-8.

3 Martin ED, ed. Compendium of health science student activities in community health. Flossmoor, IL: Student American Medical Association, standing committee on community health, 1970. Two published studies of utilization patterns at student-initiated free clinics are (1) Friedin, R, Levy R, and Harmon R. A student-community planned health project for the poor. N Eng J M 1970;283:1142-7, and (2) Hughes JS, McRae DL, and Madison DL. Patterns of patient utilization in a volunteer medical clinic. N Carolina Med J 1972;33:430-5.

4 Schlesinger AM, Jr. A thousand days. Boston: Houghton Mifflin, 1965, p. 607.

5 Harrington M. The other America: poverty in the United States. New York: Macmillan, 1963.

6 Schlesinger AM. p. 1011-2.

7 Gitlin, T. The sixties: years of hope, days of rage. New York: Bantam Books, 1987.

8 Kelly GL. Undated letter quoted in Staudacher RF, The history of SAMA. The N Phys;13:347-54.

9 Staudacher (see note 8).

10 Report of the reference committee on reports of the Board of Trustees. J Am Med Assn 1950;143:1088.

11 Staudacher RF. SAMA: taking inventory. The N Phys 1966;15:A41-7.

12 Editorial: Journal of the Student American Medical Association. N Eng J Med 1952;246:239-40.

13 Two examples: (1) one of a circle of gowned surgeons around the operating table remarks to the others, after the prone patient has pinched the derriere of the scrub nurse, sending her airborne with surgical instruments flying: "That's a good omen — I think he'll pull through now." (2) In a doctor's office, a woman, nude except for the identifying white shoes and nurse's cap, announces to the doctor as she opens the door to the waiting room (through which can be seen a man with crutches): "I'm going to prove once and for all that there is absolutely nothing wrong with Mr. Dutmire's leg."

14 Beard J, and Beard R. Externship expedition. The N Phys 1964;13:311-6. One cartoon showed a masked witch doctor performing an "operation," and commanding the "scrub nurse:" "Quick, Miss M'Bwango, another rattle!" Another depicted three loin-clothed aborigines. The one in the middle is introducing the second — a huge man carrying an oversized wooden hammer — to the third, a witch doctor: "This is Wumba. He'll be your anesthetist."


15 Billing and collections. (Reprinted from "The Business Side of Medical Practice," published by the American Medical Association). The N Phys 1965;14:282-6. The accompanying cartoon showed a doctor sitting behind his office desk. Across from him is a male patient. The doctor is speaking: "Maybe the bill is a little steep — all I did was save your life."

16 Whyte WH, Jr. The organization man. New York: Simon and Schuster, 1956.

17 Among the visiting speakers were Michael Harrington, author of The Other America; Paul O'Rourke, a physician in the California State Health Department who was an assistant for poverty programs to Governor Edmund G. "Pat" Brown; H. Jack Geiger of Tufts University and the medical committee for human rights; author and psychiatrist Thomas Szasz; and Gerard Piel, publisher of Scientific American.

18 Mullan F. White coat, clenched fist: the political education of an American physician. New York: Macmillan, 1976, pp. 52-3.

19 All of the student health projects published final reports, which described their programs in detail as well as the results of the formal evaluations that were



"The Power of the Pen"

When you decide to use Bactrim, use the power of the pen as well. Protect your prescribing decision in accordance with your state regulations to prevent substitution. It guarantees your patients will get the power of Bactrim.

Specify
"Dispense as written"

BactrimTM
(trimethoprim and
sulfamethoxazole/Roche)

Roche Laboratories
a division of Hoffmann-La Roche Inc.

340 Kingsland Street, Nutley, New Jersey 07110-1199

Copyright © 1988 by Hoffmann-La Roche Inc. All rights reserved.

- a part of most of the projects. Some of these reports were printed by the federal government but most are now unavailable. However, two published accounts of the student health project of the South Bronx from the perspectives of the project director and one of the student participants, respectively, are (1) Madison DL. The student health project: a new approach to education in community medicine. The Milbank Memorial Fund Quarterly 1968;46:389-408; and (2) Goldhammer P. Patient advocate in a city slum. The N Phys 1969;18:22-5.
- 20 A contemporary account of the SHO movement as it was in early 1968 appears in McGarvey M, Mullan F, and Sharfstein S. A study in medical action—the student health organizations. N Eng J Med 1968;279:74-6.
- 21 Mullen (see note 18) pp. 59-67.
- 22 Courington FW. With interested concern. The N Phys 1966;15:A13,14,22,23.
- 23 The 1966 Annual Meeting of the Association. The N Phys 1966;15:313-21.
- 24 National Medical Forum: Physician's Forum. The N Phys 1966;15:A12,13.
- 25 Dialogue in democracy. The N Phys 1967;16:323-3. This title understated the turbulence of the debate. Edward D. Martin, who was national president of SAMA in 1969, described the 1967 convention as an "assault from within" on "this hypometabolic and socially insensitive organization... by a minority of SAMA members who had been or were active in the Student Health Organizations and (who) felt that SAMA, with its total inactivity in the area of community health, needed to be strongly challenged in regards to its basic legitimacy as a student organization." Martin (see note 3), p. 4.
- 26 Dialogue in democracy (see note 25), p. 323.
- 27 Ibid., 324.
- 28 Ibid., 331.
- 29 Kindig DA. The 1967 SAMA House of Delegates. The N Phys 1967;16:286.
- 30 Lucas CC, Jr. SAMA speaks to the AMA House of Delegates: C. Clement Lucas Jr. Tells the AMA how it is. The N Phys 1968;17:238-40.

For otitis media

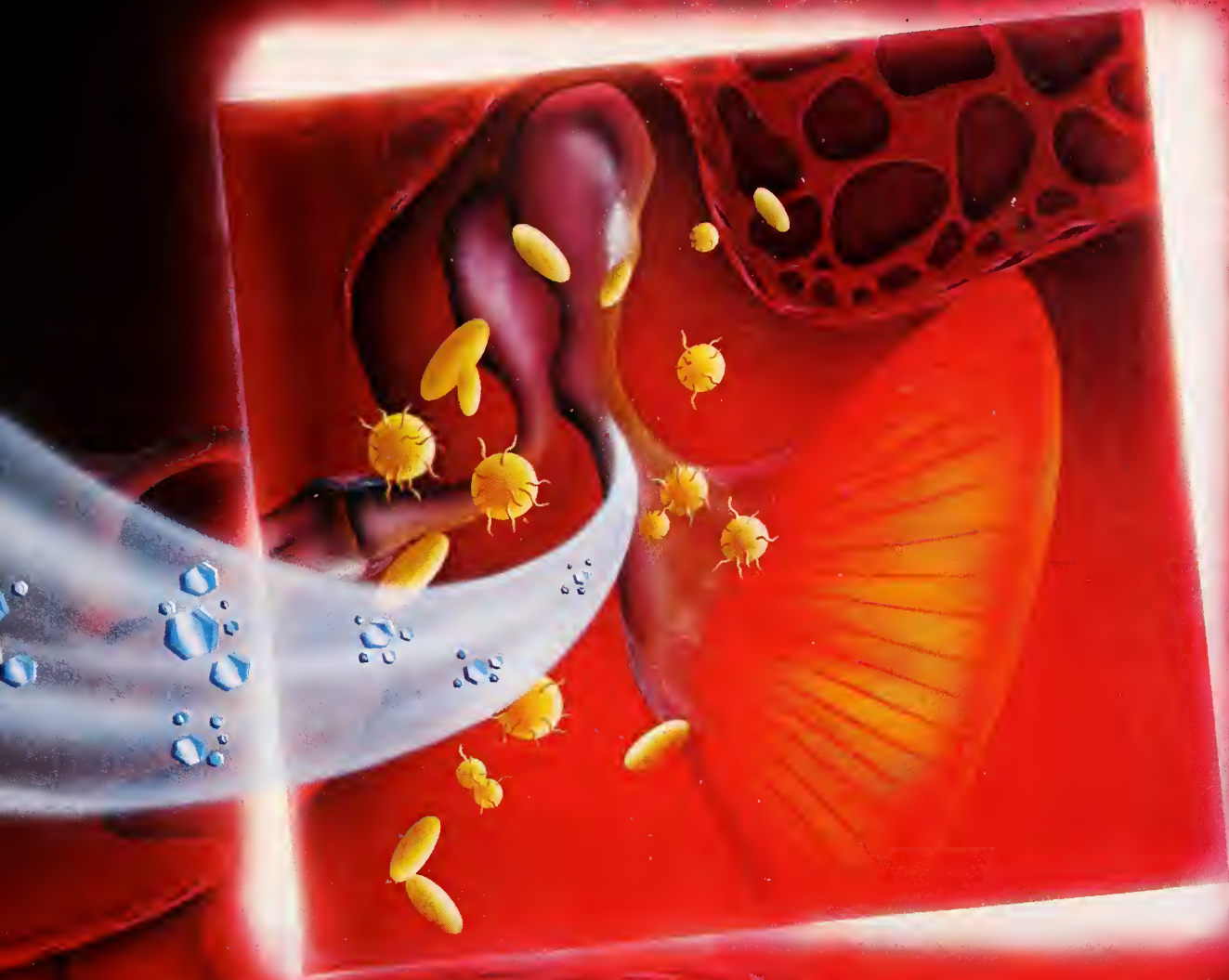


Illustration of
Bactrim power
in middle ear
infection.

Bactrim Power

- Penetrates
- Concentrates
- Overpowers
- Persists

Bactrim concentrates in hard-to-reach infections¹ to overpower susceptible strains of *H. influenzae* and *S. pneumoniae* (*in vitro*)² year after year. B.i.d. dosing, cherry flavor and economy keep successful therapy within your power. Especially when you remember to protect your prescribing decision by specifying D.A.W.

In vitro results may not correlate with clinical results. Not indicated for prophylactic or prolonged use in otitis media and contraindicated in infants under two months of age.

Specify *"Dispense as written"*

BactrimTM Pediatric

(40 mg trimethoprim and 200 mg sulfamethoxazole per 5 mL)

BactrimTM

(trimethoprim and sulfamethoxazole/Roche)

Before prescribing, please consult complete product information, a summary of which follows:

CONTRAINDICATIONS: Hypersensitivity to trimethoprim or sulfonamides; documented megaloblastic anemia due to folate deficiency; pregnancy at term and during the nursing period; infants less than two months of age.

WARNINGS: FATALITIES ASSOCIATED WITH THE ADMINISTRATION OF SULFONAMIDES, ALTHOUGH RARE, HAVE OCCURRED DUE TO SEVERE REACTIONS, INCLUDING STEVENS-JOHNSON SYNDROME, TOXIC EPIDERMAL NECROLYSIS, FULMINANT HEPATIC NECROSIS, AGRANULOCYTOSIS, APLASTIC ANEMIA AND OTHER BLOOD DYSCRASIAS.

BACTRIM SHOULD BE DISCONTINUED AT THE FIRST APPEARANCE OF SKIN RASH OR ANY SIGN OF ADVERSE REACTION. Clinical signs, such as rash, sore throat, fever, arthralgia, cough, shortness of breath, pallor, purpura or jaundice, may be early indications of serious reactions. In rare instances a skin rash may be followed by more severe reactions, such as Stevens-Johnson syndrome, toxic epidermal necrolysis, hepatic necrosis or serious blood disorder. Perform complete blood counts frequently. **BACTRIM SHOULD NOT BE USED IN THE TREATMENT OF STREPTOCOCCAL PHARYNGITIS.** Clinical studies show that patients with group A β -hemolytic streptococcal tonsillopharyngitis have a greater incidence of bacteriologic failure when treated with Bactrim than with penicillin.

PRECAUTIONS: *General:* Give with caution to patients with impaired renal or hepatic function, possible folate deficiency (e.g., elderly, chronic alcoholics, patients on anticonvulsants, with malabsorption syndrome, or in malnutrition states) and severe allergies or bronchial asthma. In glucose-6-phosphate dehydrogenase deficient individuals, hemolysis may occur, frequently dose-related.

Use in the Elderly: May be increased risk of severe adverse reactions in elderly, particularly with complicating conditions, e.g., impaired kidney and/or liver function, concomitant use of other drugs. Severe skin reactions, generalized bone marrow suppression (see WARNINGS and ADVERSE REACTIONS) of a specific decrease in platelets (with or without purpura) are most frequently reported severe adverse reactions in elderly. In those concurrently receiving certain diuretics, primarily thiazides, increased incidence of thrombocytopenia with purpura reported. Make appropriate dosage adjustments for patients with impaired kidney function (see DOSAGE AND ADMINISTRATION).

Use in the Treatment of Pneumocystis Carinii Pneumonia in Patients with Acquired Immunodeficiency Syndrome (AIDS): AIDS patients may not tolerate or respond to Bactrim in same manner as non-AIDS patients. Incidence of side effects, particularly rash, fever, leukopenia, elevated aminotransferase (transaminase) values, with Bactrim in AIDS patients treated for *Pneumocystis carinii* pneumonia reported to be greatly increased compared with incidence normally associated with Bactrim in non-AIDS patients.

Information for Patients: Instruct patients to maintain adequate fluid intake to prevent crystalluria and stone formation.

Laboratory Tests: Perform complete blood counts frequently; if a significant reduction in the count of any formed blood element is noted, discontinue Bactrim. Perform urinalyses with careful microscopic examination and renal function tests during therapy, particularly for patients with impaired renal function.

Drug Interactions: In elderly patients concurrently receiving certain diuretics, primarily thiazides, an increased incidence of thrombocytopenia with purpura has been reported. Bactrim may prolong the prothrombin time in patients who are receiving the anticoagulant warfarin. Keep this in mind when Bactrim is given to patients already on anticoagulant therapy and reassess coagulation time. Bactrim may inhibit the hepatic metabolism of phenytoin. Given at a common clinical dosage, it increased the phenytoin half-life by 39% and decreased the phenytoin metabolic clearance rate by 27%. When giving these drugs concurrently, be alert for possible excessive phenytoin effect. Sulfonamides can displace methotrexate from plasma protein binding sites, thus increasing free methotrexate concentrations.

Drug/Laboratory Test Interactions: Bactrim, specifically the trimethoprim component, can interfere with a serum methotrexate assay as determined by the competitive binding protein technique (CBPA) when a bacterial dihydrofolate reductase is used as the binding protein. No interference occurs if methotrexate is measured by a radioimmunoassay (RIA). The presence of trimethoprim and sulfamethoxazole may also interfere with the Jaffe alkaline picrate reaction assay for creatinine, resulting in overestimations of about 10% in the range of normal values.

Carcinogenesis, Mutagenesis, Impairment of Fertility: **Carcinogenesis:** Long-term studies in animals to evaluate carcinogenic potential not conducted with Bactrim. **Mutagenesis:** Bacterial mutagenic studies not performed with sulfamethoxazole and trimethoprim in combination. Trimethoprim demonstrated to be nonmutagenic in the Ames assay. No chromosomal damage observed in human leukocytes *in vitro* with sulfamethoxazole and trimethoprim alone or in combination; concentrations used exceeded blood levels of these compounds following therapy with Bactrim. Observations of leukocytes obtained from patients treated with Bactrim revealed no chromosomal abnormalities. **Impairment of Fertility:** No adverse effects on fertility or general reproductive performance observed in rats given oral dosages as high as 70 mg/kg/day trimethoprim plus 350 mg/kg/day sulfamethoxazole.

Pregnancy: Teratogenic Effects: Pregnancy Category C. Trimethoprim and sulfamethoxazole may interfere with folate acid metabolism; use during pregnancy only if potential benefit justifies potential risk to fetus. Nonteratogenic Effects: See CONTRAINDICATIONS section.

Nursing Mothers: See CONTRAINDICATIONS section.

Pediatric Use: Not recommended for infants under two months (see INDICATIONS and CONTRAINDICATIONS sections).

ADVERSE REACTIONS: Most common are gastrointestinal disturbances (nausea, vomiting, anorexia) and allergic skin reactions (such as rash and urticaria). **FATALITIES ASSOCIATED WITH THE ADMINISTRATION OF SULFONAMIDES, ALTHOUGH RARE, HAVE OCCURRED DUE TO SEVERE REACTIONS, INCLUDING STEVENS-JOHNSON SYNDROME, TOXIC EPIDERMAL NECROLYSIS, FULMINANT HEPATIC NECROSIS, AGRANULOCYTOSIS, APLASTIC ANEMIA AND OTHER BLOOD DYSCRASIAS (SEE WARNINGS SECTION).**

Hematologic: Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, neutropenia, hemolytic anemia, megaloblastic anemia, hypoprothrombinemia, methemoglobinemia, eosinophilia. **Allergic Reactions:** Stevens-Johnson syndrome, toxic epidermal necrolysis, anaphylaxis, allergic myocarditis, erythema multiforme, exfoliative dermatitis, angioedema, drug fever, chills, Hensch-Schoenlein purpura, serum sickness-like syndrome, generalized allergic reactions, generalized skin eruptions, photosensitivity, conjunctival and scleral injection, pruritus, urticaria and rash. Periarthritis nodosa and systemic lupus erythematosus have been reported. **Gastrointestinal:** Hepatitis (including cholestatic jaundice and hepatic necrosis), elevation of serum transaminase and bilirubin, pseudomembranous enterocolitis, pancreatitis, stomatitis, glossitis, nausea, emesis, abdominal pain, diarrhea, anorexia. **Genitourinary:** Renal failure, interstitial nephritis, BUN and serum creatinine elevation, toxic nephrosis with oliguria and anuria, crystalluria. **Neurologic:** Aseptic meningitis, convulsions, peripheral neuritis, ataxia, vertigo, tinnitus, headache. **Psychiatric:** Hallucinations, depression, apathy, nervousness. **Endocrine:** Sulfonamides bear certain chemical similarities to some goitrogens, diuretics (acetazolamide and the thiazides) and oral hypoglycemic agents; cross-sensitivity may exist. Diuresis and hypoglycemia have occurred rarely in patients receiving sulfonamides. **Respiratory:** Pulmonary infiltrates. **Musculoskeletal:** Arthralgia, myalgia. **Miscellaneous:** Weakness, fatigue, insomnia.

DOSAGE AND ADMINISTRATION: Not recommended for use in infants less than two months of age.

URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN: Usual adult dosage for urinary tract infections is one DS tablet, two tablets or four teaspoonsfuls (20 ml) b.i.d. for 10 to 14 days. Use identical daily dosage for 5 days for shigellosis. **Recommended dosage for children with urinary tract infections or acute otitis media** is 8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses every 12 hours for 10 days. Use identical daily dosage for 5 days for shigellosis. **Renal Impaired:** Creatinine clearance above 30 ml/min, give usual dosage; 15-30 ml/min, give one-half the usual regimen; below 15 ml/min, use not recommended.

ACUTE EXACERBATIONS OF CHRONIC BRONCHITIS IN ADULTS: Usual adult dosage is one DS tablet, two tablets or four teasp. (20 ml) b.i.d. for 14 days.

PNEUMOCYSTIS CARINII PNEUMONIA: Recommended dosage is 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

HOW SUPPLIED: DS (double strength) Tablets (160 mg trimethoprim and 800 mg sulfamethoxazole)—bottles of 100, 250 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 20. Tablets (80 mg trimethoprim and 400 mg sulfamethoxazole)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40. **Pediatric Suspension** (40 mg trimethoprim and 200 mg sulfamethoxazole per teasp.)—bottles of 100 ml and 16 oz (1 pint). **Suspension** (40 mg trimethoprim and 200 mg sulfamethoxazole per teasp.)—bottles of 16 oz (1 pint).

STORE TABLETS AT 15°-30°C (59°-86°F) IN A DRY PLACE PROTECTED FROM LIGHT. STORE SUSPENSIONS AT 15°-30°C (59°-86°F) PROTECTED FROM LIGHT.

Our Alumni Make Great Recoveries.

They needed our program to solve their problems, so you probably won't hear them brag about their Alma Mater. But they're proud of us and we're proud of them, because they continue to live straight and sober *after* they leave our program.

Some people call it success. We call it recovery. And it happens because of teamwork. Our staff, our client's physician, employer, and family, all working together with each patient for the same goal: freedom from drugs and alcohol one day at a time.

Guaranteed. That's right, if a patient follows our program and doesn't remain drug and alcohol free, we'll provide additional treatment at *no charge*.

Don't lose your patients to alcohol and drugs. Get them back with our help and discover what recovery can mean for your patient's life.

We offer 24 hour free confidential evaluation and case consultations 7 days a week.



**Charter
Northridge
Hospital**

400 Newton Road
Raleigh, NC 27615
1-800-447-1800

Patient costs covered by Medicaid, Medicare and most insurance companies.



A Facility of Charter Medical Corporation
Quality Hospitals.

Roche Laboratories

a division of Hoffmann-La Roche Inc.

340 Kingsland Street, Nutley, New Jersey 07110-1199

Conjoint Report

To the North Carolina Medical Society
and the North Carolina Commission for Health Services

Ronald H. Levine, M.D., M.P.H., State Health Director

Once again, I undertake the pleasurable annual duty, originally imposed many years ago by a wise state legislature, of reporting to the practicing physicians of North Carolina as well as our State Health Commission.

AIDS

1987 saw our Communicable Disease Laws and Rules significantly updated and revised to take into account recent improvements in the understanding of infectious disease epidemiology as well as the epidemic of AIDS that we now face.

While North Carolina remains a low-incidence state, the approximately 500 cases of AIDS that we have experienced represent untold anguish and suffering. The North Carolina Medical Society has been active and instrumental in securing the establishment of a strong, scientifically-based legal and regulatory framework for AIDS control. In the absence of a vaccine or an effective mode of treatment, every physician must become a risk-reduction teacher and consultant, so that all segments of our society, not just those at highest risk, are knowledgeable about behaviors necessary to prevent transmission of this deadly virus.

An item of particularly bad news is the resurgence of our old nemesis, infectious syphilis, after three consecutive years of decline in incidence. We are already seeing one disastrous result of this increase; congenital syphilis. Five babies have already been born with this disease during the first two

months of 1988. Physicians in the private and public sectors must insist upon the performance of a second serology late in pregnancy.

Child Immunization

Our North Carolina Child Immunization Program continues to be one of the premiere programs in the country. This success is directly attributable to the efforts of the medical and public health communities and the hundreds of school officials around the state that diligently work to ensure that our immunization laws are complied with.

More than 95% of our children presenting themselves to kindergarten and first grade in the most recent academic year were in full compliance with North Carolina's requirements. Our new college immunization law has also reaped positive gain. Almost 98% of the more than 50,000 collegians were in compliance with this law upon return to campus last fall.

Our next task is to improve immunization levels for adults, especially our elderly. Five hundred or more adult North Carolinians die annually from influenza and its complications; yet less than 20% of those at highest risk are receiving flu vaccine each year. Pneumonia vaccine, Diphtheria/Tetanus vaccine, and hepatitis B vaccine are also grossly under-utilized as the effective preventive measures that we know they represent in appropriate target populations.

Infant Mortality

On a brighter note, I am very pleased to report a further decline in North Carolina's infant mortality rate. Our 1986 rate of 11.6 deaths per 1,000 live births represents a significant decline from 1985 and is our *lowest rate ever*. We are edging up in our rank among the states on this important

From North Carolina Department of Human Resources, Division of Health Services, Raleigh 27602-2091. This report was delivered to the House of Delegates of the North Carolina Medical Society and the North Carolina Commission for Health Services, during NCMS Annual Session, May 5, 1988.

index of health, but I must tell you that babies in 41 other states still have a better chance of surviving their first year of life.

There are ominous signs too, that our infant death rate has or may soon reach a plateau. The percent of North Carolina births weighing less than 1,000 grams continues to increase as does the percentage of births with inadequate prenatal care. Most alarming of all, the percent of North Carolina women entering labor without having had *any* prenatal care has increased every year since 1980!

Although significant legal system reform, if achieved, would be very helpful in addressing this crisis, we *are* making efforts in other areas. The recent expansion of our Medicaid Program for low-income pregnant women and their babies holds considerable promise for improved access to prenatal care. Also, our department continues to seek new and innovative approaches to eliminating the tragedy experienced by far too many North Carolina adolescents; that is, premature parenthood. Since 1985 we have allocated almost \$3 million to community-based adolescent pregnancy and prematurity prevention pilot projects in 33 counties. Each project will submit an evaluation in August of this year and I hope to be able to share with you in my 1989 Report the findings regarding successful and replicable models.

Adult Health Promotion

Our efforts to improve the health and well-being of North Carolina's adults continue to focus on promoting strategies and programs that help them to choose healthier lifestyles. This was given a major boost during 1987 with the establishment of a Statewide Health Promotion Program centered in our local health departments, where they are coordinated with other existing community wellness programs and resources, such as YMCAs, Weight Watchers, local recreation departments and community dieticians.

Hypertension

Our agency continues to emphasize the importance in North Carolina of hypertension control, the subject of our 1986 Conjoint Report to you. Local health departments are increasingly integrating into their hypertension programs non-pharmacological interventions designed to reduce risk factors associated with hypertension: weight reduction, exercise, and cessation of tobacco use, for example. North Carolina is hosting the 14th Annual Southeastern High Blood Pressure conference to be held in Asheville in October. This conference will bring together public health and medical professionals from throughout the South to discuss the state-of-the-art in hypertension control. I extend to you an early

invitation to attend this conference.

Cholesterol

You will recall that cholesterol reduction was highlighted in last year's Conjoint Report, leading to a collaborative venture between the North Carolina Medical Society Auxiliary and your state health agency. The goal of the "Know Your Number" project is to encourage community and physician awareness of high blood cholesterol as well as steps that can be taken to reduce blood cholesterol levels. The project offers a menu of activities, allowing each local auxiliary to select their particular intervention strategy.

Preventable Injuries

The health issue that I wish to highlight this year is that of preventable injuries.

The patterns of mortality in North Carolina have undergone a profound transition throughout the twentieth century. While infectious disease mortality rates have declined 95% from 1894 to 1985, injury mortality has actually increased. Injuries take an alarming toll today, and are, according to the National Institute of Medicine, "relentless, unexpected by those involved, and often avoidable and unnecessary."

Injuries are the leading cause of death for North Carolinians under the age of 44. For the age group 1 to 14, injuries possess a mortality rate more than twice that of the next leading cause, cancer. For those 15 to 24 years old, the injury death rate is 16 times greater than the cancer death rate. The overwhelming preponderance of injury mortality in the young has led to the label "the last major plague of the young."

One means of assessing the societal impact of injury mortality is by measuring the years of productive life lost; that is, the difference between an arbitrary retirement age of 65 and age at death for those individuals who die prior to retirement. In North Carolina in '86, injuries were responsible for more than 100,000 years of productive life lost, one and a half times those lost from heart disease and one and a third times the loss from cancer.

Then again, injury *mortality* represents only one facet of the state's injury problem. *Nonfatal* injuries are also an important public health concern. Injuries are the leading cause of visits to health care providers. Ten percent of all admissions to acute care hospitals are the result of injuries, and they are the leading cause of hospitalizations in the under-45 age group.

The economics of injury are staggering. Nationally, 29 million hospital bed-days are required each year. Motor vehicle injuries alone cost the nation \$20 billion annually, exceeded only by the total cost of cancer morbidity and mortality. This translates into an estimated cost of \$500 million annually for North Carolina.

Let us briefly look at the major contributors to injury mortality in North Carolina. Our #1 killer is, as might be expected, motor vehicle accidents. Is there a place for preventive medicine here? We know that child restraint devices, when properly used, eliminate 90% of fatalities in the 0-4 age group. Lap and shoulder belt devices can reduce by 50% to 60% the fatalities in older occupants.

The contribution of alcohol in automobile fatalities has been well publicized; we have made significant progress here. Our breathalyzer program is outstanding, leading to a conviction rate of 91% of persons charged. But we need to seriously consider lowering the legal impairment threshold. Also, I believe North Carolina should no longer allow moped operators to traverse our highways without helmets.

You may be as surprised as I to learn that suicides and homicides are, respectively, the second and third leading causes of injury fatality to North Carolina residents. Hand-guns are the principal means of death in 39% of our suicide cases and 33% of homicide cases.

Deaths from burns and housefires are the fourth leading cause of injury fatality in North Carolina. Alcohol involvement has been shown to be significant in housefire fatalities. Of those residents who died from housefires in 1985 and were tested for blood ethanol, 56% were legally intoxicated. Smoke detectors are required in all dwellings built since 1972. How many lives would be saved if the requirement were applicable to all homes sold regardless of age?

Falls are the fifth leading cause of injuries in North Carolina. Fall fatalities occur disproportionately in the over-65 age group. They are the result of a complex interplay of physiology, pathology, and environment. The use of psychotropic prescription drugs has been implicated in the etiology of many fall fatalities. Health care providers must be aware of the potentially deleterious effects of certain drug regimens on their elderly patients and should re-evaluate their therapeutic plan accordingly.

We are fortunate in North Carolina to have access to natural and man-made bodies of water for commerce and recreation; but drowning, a consequence of that access, is the sixth leading cause of injury mortality in our state and consistently exceeds the national norm. Most drownings in our state are the result of recreational fishing, swimming or wading in lakes, ponds, rivers and creeks. These settings are obviously unlikely to have trained lifeguards available. Should our young be required to demonstrate some minimal swimming proficiency prior to completion of secondary school? Again, alcohol involvement is a significant factor. In a study of 1,000 drowning deaths where blood ethanol data were available, 34% indicated legal intoxication.

A study of our boating fatalities has shown that almost three-quarters of the drowning victims were not wearing personal flotation devices. North Carolina law mandates the *accessibility* of personal flotation devices; should not the law *require* boaters to wear them?

The Division of Health Services has become actively involved in the pursuit of injury reduction in our state. We are

now in the final year of a three-year federally-funded Childhood Injury Prevention Pilot Project, which we hope will lead to a permanent statewide health department-based injury control program. The two pilot counties have initiated a direct client counseling service using the Injury Prevention Program developed by the American Academy of Pediatrics; "Safe Home" visits are being made by health department staff to assess homes for injury risks and to install safety devices as appropriate. We have also initiated a Child Injury Prevention Resource Center containing a variety of educational materials on injury control; we have produced six television and radio public service announcements as well as a newsletter which is distributed nationally.

Working jointly with the UNC Injury Prevention Research Center, we have developed a statewide plan for injury surveillance designed to gather morbidity data through an Emergency Room record data abstraction system.

When we open a newspaper or turn on a radio or television, we hear and are shown in graphic detail that injuries are a fact of life and death. Despite their devastatingly high toll in pain, suffering, and death, the problem of injuries remains largely unappreciated by a majority of the health care community. Unintended injury is the last remaining category of human morbidity that is viewed by laypersons and professionals in prescientific terms. Again, "accidents" do not just happen; they are caused. Just as "luck" has not played a part in the decline of infectious diseases in this century, the decline of injuries will be the result of the application of scientific methods and principles applied objectively to the problem. How true is the statement "Injuries are not accidents"!

I believe that the medical practitioners of this state constitute an essential force in stemming the tide of premature mortality and morbidity resulting from injuries. It is you who counsel parents unfamiliar with the various stages of child development. It is you who are in an excellent position to remind a toddler's mother or father to keep poisons locked up and syrup of ipecac handy. We also require your help to understand more clearly the epidemiologic circumstances surrounding injuries. As we seek to grasp new and better injury prevention strategies we must first have the knowledge of the causative factors. Was the subdural hematoma the result of motor vehicle collision, bicycle wreck, fall from a window or fall from a moped? Your recording of both the anatomical diagnosis as well as the cause of injury, when collected and analyzed statistically, will ultimately increase the likelihood of success of our preventive programs and policies.

The medical community can and does speak with compassion and authority to legislators and regulators in advocating for strengthening existing life-saving laws and regulations, and for that we are grateful. A successful collaborative effort in this area will demonstrate once again that North Carolina remains our nation's #1 leader in public-private medical effort on behalf of the public's health and well-being. □

ō·mō·hūn'·drō
communications

Writing and
editing for
the medical
and health
sciences

(919) 493-2060
1412 Vickers Avenue
Durham, North Carolina 27707

Our New Look...

With this issue of the *Journal*, we initiate a new means of production: "desktop publishing." It's fun and very cost-effective; it keeps more functions in-house that were previously done by our printer.

We thank our printer, The Ovid Bell Press, for assisting us at every step and making the transition as smooth as possible. Thanks are also due the staff of the North Carolina Medical Society — especially Bud Cowan, who taught the Managing Editor much about the software and let her spend two whole days in his office, looking over his shoulder. Thanks!

Dx: recurrent herpes labialis

WILLIAM M. CAMERON, M.D.
738 EAST HIGH ST

For _____

R

Herpecin-L
Lip Balm
Sig: q.h.
as needed

HERPECIN-L®

"HERPECIN-L is my **treatment of choice** for perioral herpes." GP, NY

"HERPECIN-L appears to actually **prevent** the blisters . . . used **soon enough**." DDS, MN

"HERPECIN-L® . . . a **conservative approach** with **low risk/high benefits**." MD, FL

"Used at **prodromal symptoms** . . . blisters **never formed** . . . remarkable." DH, MA

"(In clinical trials) . . . **response was dramatic**. HERPECIN-L . . . proven **far superior**." DDS, PA

"All patients claimed **shorter duration** . . . at **prodromal symptoms** . . . HERPECIN-L **averted** the attacks." MD, AK

OTC. See P.D.R. for information. For samples to make your own clinical evaluation, write: CAMPBELL LABORATORIES, Inc., P.O. BOX 812-MD, FDR STATION, NEW YORK, N.Y. 10150

In North Carolina HERPECIN-L is available at all Crown, Eckerd, Kerr, Mutual Drug, Revco and RiteAid and other select pharmacies.

Letters to the Editor

...be careful out there!

To the Editor:

One bright, sunny April 1988 morning, I arrived in our Trauma Room at Wake Medical Center as the Surgical Resident in her usual competent manner was completing initial trauma assessment on an elderly pedestrian with obvious bilateral lower extremity fractures resulting from a motor vehicle encounter. Exposure had been accomplished by opening pants and shirt with scissors. His clothes were now pinned between the backboard and patient. Neck, chest, and pelvis x-rays were taken expeditiously. Whoa ...!

This once again is a reminder to ourselves that (a) plenty of folks are armed for a variety of reasons including personal protection, (b) weapons are an imminent threat to health care providers, and (c) a plan of action for management of this situation at the treatment facility needs to be available.



In our case, this hand-held automatic in its holster was removed from the trouser pocket under the patient by the surgeon and given to the patient's son, himself an armed guard.

Dale W. Oller, M.D.
Director of Trauma/Surgical Teaching Service
Wake AHEC, Wake Medical Center
Raleigh 27610

A comment on Dr. Weaver's editorial.

To the Editor:

Thanks so very much to James P. Weaver for his editorial on the value of "I don't know" (1988;49:334-5).

Another "positive influence in medical care" of "I don't know" is that it gives us the opportunity to learn. Physicians living with the feeling that they are already supposed to know don't have the mindset necessary to ask questions and to learn. George Pickering refers to this as "the great value of ignorance."

Today's modern medicine will be tomorrow's antiquity. Meanwhile, we must keep our eyes open; we might see something! Dr. Weaver has surely given us a valuable insight.

John R. Dykers, Jr., M.D.
P.O. Box 565
Siler City 27344

In praise of Dr. Pories's cartoon.

To the Editor:

The quality of our excellent medical journal seems always to be improving. The latest evidence is the addition of Dr. Pories's "I.V. League" (49:303). Dr Pories is not only an excellent physician and educator, but also is one of the more creative minds in medicine

today. It is a treat to be able to read his work in our journal.

Byron A. Stratas, M.D.
Medical University of South Carolina
Charleston 29425-2236

Postscript from Dr. Gamble.

To the Editor:

Several months ago I wrote to your "Letters" department telling a problem I had encountered with N.C. Medical Mutual. I had asked them to issue the paid-up "tail-end" endorsement on my higher Class policy and sell me a lower Class policy. They told me it could not be done; later the matter was clarified and resolved.

The purpose of this letter is to express my appreciation to Mr. Britt H. Pope, V-P Underwriting of Medical Mutual, for his help in working this out for me. Further, I would like to suggest to anyone having problems in changing their coverage that they be sure to talk with him before becoming frustrated or giving up.

John R. Gamble, Jr., M.D.
108 Doctor's Park
P.O. Box 250
Lincolnton 28092

One doctor's experience with Tagamet.

To the Editor:

In the past few years I have been using Tagamet as a histamine H₂ receptor antagonist for my patients with varicella zoster. This appears to decrease the inflammatory response surrounding the vesicles, and also aids in the rapid healing of the lesions.

Recently while visiting in England our 26-year-old daughter developed chicken pox. Fortunately, I did not contact a practitioner in the area for we would have been quarantined 14 days. Her lesions had appeared in 24 to 36 hours at which time the diagnosis was established. I was able to obtain some Tagamet and treated her with 400mg of Tagamet b.i.d. Immediately her itching ceased and any lesions that developed following the initiation of therapy with Tagamet appeared to be aborted. The vesicles were minimal in size and for the most part all lesions decreased in size, as did the inflammatory response surrounding the lesions. The only visible residual scarring appeared to be those lesions which occurred during the first 24 to 36 hours, namely, six or seven lesions.

I am wondering if this medication could be utilized by the pediatricians in armamentarium for treatment of patients with varicella.

Harold A. Ludwig, M.D.
1600 Canal Dr.
Wilson 27893

An error in our pages.

To the Editor:

Somebody has a funny idea of geography (McCann et al., Liver transplantation. 1988; 49:324-327; see map, p. 325).

Please explain.

Paul G. Killenberg
Department of Medicine
Box 3902 DUMC
Durham 27710

Response to Dr. Killenberg:

The problem is that the managing editor occasionally works standing on her head; this accounts for the fact that the map published with your article shows South Carolina and Georgia north of North Carolina!

We apologize to the authors of the article, and to our readers, for the confusion. In future, we will try to remain upright.

—Managing Editor

THE ARMY RESERVE OFFERS NEW FINANCIAL INCENTIVES FOR RESIDENTS.



If you are a resident in Anesthesiology or Surgery*, the Army Reserve has a new and exciting opportunity for you. The new Specialized Training Assistance Program will provide you with financial incentives while you're training in one of these specialties.

Here's how the program can work for you. If you qualify, you may be selected to participate in the Specialized Training Program. You'll serve in a local Army Reserve medical unit with flexible scheduling so it won't interfere with your residency

training, and in addition to your regular monthly Reserve pay, you'll receive a stipend of \$678 a month.

You'll also have the opportunity to practice your specialty for two weeks a year at one of the Army's prestigious Medical Centers.

Find out more about the Army Reserve's new Specialized Training Assistance Program.

Call or write your US Army Medical Department Reserve Personnel Counselor:

**Army Reserve Health Care Team
2634 Chapel Hill Blvd.
Suite 205
Durham, NC 27707-2875
(919) 493-1364 Collect**

* General, Orthopaedic, Neuro, Colon/Rectal, Cardio/Thoracic, Pediatric, Peripheral/Vascular, or Plastic Surgery.

ARMY RESERVE MEDICINE. BE ALL YOU CAN BE.



The only thing we have to offer
as professional investment counselors
is investment counsel.

Our clients — individuals, retirement and profit-sharing funds, and endowments — have benefited from our advice over our eleven-year history.

In fact, we have never had a loss year, and that includes down markets as well as up markets.

We are confident of our ability to continue to enhance the wealth of our clients while meeting their individual needs and objectives over the long term.

Inquiries from individuals and institutions are invited.

McMillion/Eubanks Capital Management, Inc.

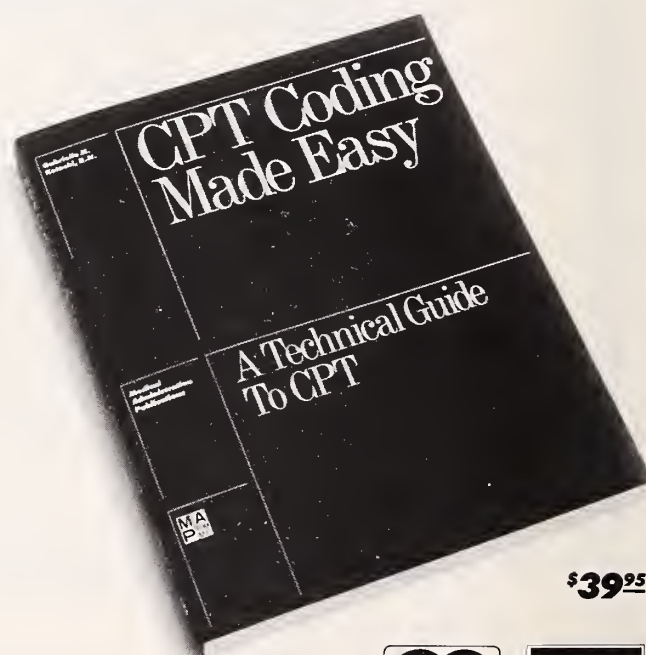
Suite 1018
210 North Elm Street
Greensboro, NC 27420
(919) 274-2491

113 North Columbia Street
Chapel Hill, NC 27514
(919) 929-0373

Do You Let Your Staff Play Doctor?

If you leave the coding of procedures up to your staff, you may be letting them play doctor. Not only could this be costing you money, it could be exposing you to audit liability. Why? Procedures and services listed in CPT are often complicated and difficult to understand for non-medical staff. So give your billing staff a lesson in procedures with CPT Coding Made Easy: A Technical Guide to CPT.

- **Perfect guide for non-medical staff**
- **Describes CPT procedures in plain English**
- **Teaches how to avoid costly misinterpretations of CPT definitions**
- **Helps improve reimbursement**
- **Helps reduce audit liability**
- **An ideal reference for beginning and advanced coders alike**



\$39⁹⁵



To Order, Call Now 1-800-624-6994

Medical Administration Publications
671 Executive Drive
Willowbrook, IL 60521
312/654-1666



Continuing Medical Education

September 17

DUMC Glaucoma Symposium

Place: Durham

Credit: 6 hours Category IAMA, 0.6 CEU

Info: Cindi Easterling, Office of CME, DUMC, Box 3108, Durham 27710. 919/684-6878

September 18-21

Basic Clinical Teaching Skills

Place: Rougemont

Info: Cindi Easterling, Office of CME, DUMC, Box 3108, Durham 27710. 919/684-6878

September 19-23

Diagnostic Ultrasound: Obstetrics

Place: Winston-Salem

Credit: 7 hours per day Category I AMA

Info: Registrar, Ultrasound Center, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4504

September 24-25

7th Annual Symposium of Advances in Electron

Microscopy

Info: Cindi Easterling, Office of CME, DUMC, Box 3108, Durham 27710. 919/684-6878

September 26-30

Diagnostic Ultrasound: Radiology (Abdomen)

Place: Winston-Salem

Credit: 7 hours per day Category I AMA

Info: Registrar, Ultrasound Center, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4504

September 28

1988 Series - Duke Tuesday

Place: Durham

Credit: 5 hours Category I AMA, 0.5 CEU

Info: Cindi Easterling, Office of CME, DUMC, Box 3108, Durham 27710. 919/684-6878

September 30

Down-East Dermatology Day

Place: Greenville

Credit: 7 hours Category I AMA

Info: Office of CME, ECU, P.O. Box 7224, Greenville 27858-4354. 919/551-5200

September 30-October 1

Advanced Cardiac Life Support Provider Course

Place: Asheville

Credit: 16 hours Category I AMA, ACEP, AAFP

Fee: \$200

Info: Daniel L. Dolan, MD, MAHEC, 501 Biltmore Avenue, Asheville 28801-4686. 704/257-4419

September 30-October 1

2nd Annual Duke Critical Care Conference

Place: Research Triangle Park

Info: Cindi Easterling, Office of CME, DUMC, Box 3108, Durham 27710. 919/684-6878

October 3-7

Diagnostic Ultrasound: Neurovascular

Place: Winston-Salem

Credit: 7 hours per day Category I AMA

Info: Registrar, Ultrasound Center, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4505

October 6-7

ECT Mini Course

Place: Durham

Info: Cindi Easterling, Office of CME, DUMC, Box 3108, Durham 27710. 919/684-6878

October 7

Scientific Session, Medical Alumni Association

Place: Winston-Salem

Info: Sally Hudson Gulley, Div. of CME, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4450

October 7-9

5th Annual George C. Ham Symposium: Psychiatric Malpractice Issues and Women's Issues in Therapy

Place: Chapel Hill

Credit: 4 Hours Category I AMA

Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Bld., Chapel Hill 27599-7000. 919/962-2118

October 10-11

Diagnostic Ultrasound: Transcranial Doppler

Place: Winston-Salem

Credit: 7 hours per day Category I AMA

Info: Registrar, Ultrasound Center, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4504

October 10-14

Infection Control: The Infection Control Practitioner Environmentalist

Place: Chapel Hill

Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Bld., Chapel Hill 27599-7000. 919/962-2118

October 12-14

Diagnostic Ultrasound: Arterial/Venous Doppler

Place: Winston-Salem

Credit: 7 hours per day Category I AMA

Info: Registrar, Ultrasound Center, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4505

October 14-15

22nd Annual Duke/McPherson Otolaryngology Symposium

Place: Durham

Info: Cindi Easterling, Office of CME, DUMC, Box 3108, Durham 27710. 919/684-6878

October 15-18

Ninth Mountain Meeting

Place: Asheville

Credit: 12 hours Category I AMA

Info: Sally Hudson Gulley, Div. of CME, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4450

October 19-21

14th Annual Southeastern High Blood Pressure Conference

Place: Asheville

Fee: \$65

Info: Betty Lamb, Adult Health Services Section, Div. of Health Services, Raleigh 27602. 919/733-7081

October 19-21

Doppler Echocardiography: Beginning with Color Flow Imaging

Place: Durham

Info: Cindi Easterling, Office of CME, DUMC, Box 3108, Durham 27710. 919/684-6878

October 21-22

Davison Club Weekend

Place: Durham

Info: Cindi Easterling, Office of CME, DUMC, Box 3108, Durham 27710. 919/684-6878

October 21-22

Neuromuscular Disease Update-Diagnosis, Genetics, Management

Info: Cindi Easterling, Office of CME, DUMC, Box 3108, Durham 27710. 919/684-6878

October 24-28

Diagnostic Ultrasound: Echocardiography

Place: Winston-Salem

Info: Registrar, Ultrasound Center, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4505

October 26-29

Endoscopic Biliary Therapy Live CC TV Symposium

Place: Durham

Info: Cindi Easterling, Office CME, DUMC, Box 3108, Durham 27710. 919/684-6878

October 28

New Perspectives in Anticoagulation

Place: Chapel Hill
 Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Bldg., Chapel Hill 27599-7000. 919/962-2118

October 28-30
 Dees Symposium on Allergy and Immunology
 Place: Durham
 Info: Cindi Easterling, Office CME, DUMC, Box 3108, Duham 27710. 919/684-6878

October 31 (and continuing throughout the year):
 Geriatric Education Modules in geriatric medicine, geriatric mental health, health promotion, and long-term care
 Place: Durham
 Fee: \$10 per module
 Info: Geriatric Education Center, Box 3003 DUMC, Durham 27710. 919/684-2248

October 31-November 1
 Diagnostic Untrasound: Urology
 Place: Winston-Salem
 Info: Registrar, Ultrasound Center, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4505

November 3-6
 Fall Symposium in OB/GYN
 Place: Asheville
 Info: Cindi Easterling, Office of CME, DUMC, Box 3108, Durham 27710. 919/684-6878

November 4-5
 Duke University Hospital and Health Alumni Administration Assoc.
 Place: Durham
 Info: Cindi Easterling, Office CME, DUMC, Box 3108, Duham 27710. 919/684-6878

November 4-5
 Neurology for the Practicing Physician
 Place: Chapel Hill
 Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Bldg., Chapel Hill 27599-2118. 919/962-2118

November 5
 Current Therapy for Peripheral Vascular Disease
 Place: Research Triangle Park
 Credit: 7 hours Category I AMA, 0.7 CEU
 Info: Cindi Easterling, Office CME, DUMC, Box 3108, Duham 27710. 919/684-6878

November 5
 Clinical Grand Rounds
 Place: Durham
 Info: Cindi Easterling, Office CME, DUMC, Box 3108, Duham 27710. 919/684-6878

November 6-9
 The Difficult Learner
 Place: Rougemont
 Info: Cindi Easterling, Office CME, DUMC, Box 3108, Duham 27710. 919/684-6878

New Members

Jose Mark Rub, 2700 Cottage Pl., #326, Greensboro 27405
Alamance-Caswell
 Joseph Ross Pringle, Jr. (PD), 711 Hermitage Rd., Burlington 27215
Buncomb
 Ronald Jay Neimkin (HS), 20 McDowell St., Asheville 28801
 Stephen Kottemann Westly (ORS), PO Box 1980, Asheville Hand Ctrs., PA, Asheville 28802
Caldwell
 Sherry Lou Woodhouse (PTH), PO Drawer 680, Lenoir 28645
Carteret
 Julia Bleakley Ballance (PD), 13 Medical Park, Morehead City 28557
Craven-Pamlico-Jones
 Christine Graham Bounous (IM), Box 68, Pollocksville 28573

Edwin Phillip Bounous, Jr. (IM), Box 68, Pollocksville 28573
Cumberland
 Edward Francke Baines (AN), 1673 Banbury Dr., Fayetteville 28304
Durham-Orange
 Margaret Ann Deutsch (RESIDENT), 605 Jones Ferry Rd. #DD9, Carrboro 27510
 Lisle Albert Eaton, Jr. (PTH), 8 White Oak Tr., Chapel Hill 27516
 Angela Ferebee (STUDENT), 101 Homestead Rd. #916, Chapel Hill 27516
 Deepak Ramchandra Gelot (STUDENT), E-20 Ridgewood Apts., 404 Jones Ferry Rd., Carrboro 27510
 Stephanie Wolfe Heindel (STUDENT), Spring Garden Apt., #22, Holland Dr., Chapel Hill 27514
 William Michael Lyth (RESIDENT), 200 Westminster Dr., Apt. 132K, Chapel Hill 27514
 Allen Wayne Mangel (RESIDENT), 534 Finley St., Durham 27705
 Mary Lou Parker (STUDENT), 1214 Hillview Rd., Chapel Hill 27514
 Patricia Jaye Zurflieh (STUDENT), 260 Severin St., Chapel Hill 27516
Forsyth—Stokes-Davie
 Jerry L. Bennett (PD), 2240 Cloverdale Avenue, Suite 217, Prof. Bldg., Winston-Salem 27103
 Timothy Arvid Berg (RESIDENT), 1821 Elizabeth Ave., Winston-Salem 27103
 Diane Lynn Duvall (STUDENT), 1936 Hinshaw Ave., Winston-Salem 27104
 Amy Wen Liu (STUDENT), 106 S. Sunset Dr., Winston-Salem 27101
 Norman Eric Miller, 300 S. Hawthorne Rd., Winston-Salem 27103
 Susan Marie Stuber (STUDENT), 2050 Craig St., Apt. #12, Winston-Salem 27103
 Francis O'Neill Walker (N), 300 S. Hawthorne Rd., Winston-Salem 27103
Gaston
 Hasan Mohamad Baagil (FP), 1315 E. Garrison Boulevard, Gastonia 28052
Greensboro Society of Medicine
 Anne Bryson King (PD), 342 N. Elm Street, Greensboro 27401
Halifax
 Pauline Morgan Anderson (OBG), Rt. #2, Box 441, Roanoke Rapids 27870
 Darlene Cheryl Thorne (PTH), Halifax Memorial Hospital, Roanoke Rapids 27870
Harnett
 David Houston Brown (IM), PO Box 399, Buies Creek 27506
 Pankaj Kirtikant Vyas (IM), 109 S. Railroad St., PO Box 667, Benson 27504
Mecklenburg
 Vijay Govind Dhande, 6434 Burlwood Rd., Charlotte 28211
 Rebecca Renovsky Tomsyck (P), 1900-918 Randolph Rd., Charlotte 28207
New Hanover-Pender
 Thomas Vincent Clancy, 2131 S. 17th St., Wilmington 28402
Pitt
 Douglas William Picton (STUDENT), 31 Courtney Square, Greenville 27858
 Howard Davenport Robertson, #10 Doctor's Pk., Greenville 27834
 Albert Lee Wiley, Jr. (ON), ECU School of Medicine, Dept. of Radiation Oncology, Greenville 27858
Wake
 Paul Peniston Cook (IM), 3320 Wake Forest Rd., Raleigh 27609
 Hugh Kenneth Leatherman, Jr. (U), 3901 Computer Rd., Raleigh 27609
 Julie Lynne Ware (PD), 4704 Oak Park Rd., Raleigh 27612
Wilson
 Dawn Sowards Brezina (EM), 1911 Canal Dr., Wilson 27893

In North Carolina, when you decide to prescribe Librium,

To protect your prescription...



**You sign
on the right.**

Librium[®] 5-mg, 10-mg, 25-mg capsules
brand of
chlordiazepoxide HCl/Roche [®]

ROCHE[®]

Copyright © 1987 by Roche Products Inc., Manati, Puerto Rico 00701. All rights reserved.

Classified Ads

KEEPING LONG HOURS? Too many patients and not enough time? Have you considered employing a physician assistant to help you extend your practice without extending yourself? The North Carolina Academy of Physician Assistants can supply you with helpful information about the training and capabilities of physician assistants. For more information contact Dean Minton, PA-C, NCAPA Public Affairs Chairman, 209 Shenendoah Dr., Winston-Salem 27103. 919/748-2247 (work); 919/768-4934 (home).

INTERNIST to join established multi-specialty group. Cardiology experience preferred. Practice is based in scenic, waterfront community; hospital with three nursing homes. Near Norfolk, VA. Competitive salary/benefits. Send CV to: Box 429, Edenton, NC 27932.

GREENSBORO: Full-time or part-time position available. Established Outpatient General Family Practice 5 1/2 years old, growing rapidly. Wonderful opportunity in the best U.S. location to live. Very well equipped with state of the art Lab, X-ray, EKG/Defibrillator, Spirometry, Audiometry, etc. Financial reward: Excellent. Quality of life: Excellent. Opportunity for medically challenging work: Excellent. Contact: Chris W. Guest, M.D., 919/299-0000 or send CV to 102 Pomona Drive, Greensboro 27407.

INTERNIST wanted to join three man group in Winston-Salem. Excellent opportunity with well established largely fee-for-service practice. Reply to Forsyth Internal Medicine Associates, P.A., 1405 Plaza Drive, Winston-Salem 27103.

FAMILY PHYSICIANS BC/BE. Group practice, no buy-in, salary guarantee plus incentive year 1, shared call. Resume to Medical Director, Box 4568, Spartanburg, SC 29305.

PHYSICIAN OFFICE supply including examination tables, EKG machine, typewriter, file cabinets, table calculator - for sale. Call 704/253-0312.

NORTH CAROLINA - Emergency Medicine opportunities with local Emergency Medical group in central NC in two medium volume E.D.s. Board certified/prepared in E.M., F.P./I.M. preferred. Competitive salary, CME, ACEP dues, malpractice paid. Replies and C.V.s to James Strickland, M.D.; P.O. Box 464; Burlington 27215. 919/228-0768

RETIRING? JUST DON'T CLOSE YOUR DOORS! Please help a younger physician to take over. I am an internist,

looking for an established practice to buy, preferably in the Triangle Area. Will consider other opportunities as well. Kindly call Dr. Haq at 716/373-1939.

OBSTETRICIAN/GYNECOLOGIST: BC/BE for rapidly growing university clinical practice. Emphasis upon group obstetric practice but general gynecology included. New in-patient facilities. Guaranteed salary plus liberal benefits. Full-time medical school faculty appointment, level and salary commensurate with experience. Reply with CV to Charles B. Hammond, M.D., Box 3852, Duke University Medical Center, Durham, NC 27710. (Equal Opportunity Employer).

EXCELLENT OPPORTUNITY: BE/BC Radiologist to join established solo practitioner in S.E. VA. Hospital-based practice offers partnership, unlimited growth potential, competitive, guaranteed salary. Hunting, fishing, and variety of recreational activities in beautiful small town. Contact Sandy Cundiff, Tyler & Co., 9040 Roswell Rd., Atlanta, GA 30350. Call 404/641-6411.

EMERGENCY PHYSICIANS: Join our team of emergency medicine professionals at Cape Fear Valley Medical Center in Fayetteville. 492-bed hospital. High acuity level. Approximately 42,000 annual ED visits. New state-of-the-art emergency department opening mid-August. Compensation \$120,000+. Professional liability insurance procurement program. Please call or submit curriculum vitae to: Physician Recruiter, Coastal Emergency Services of Durham, Inc., 3200 Croasdaile Dr., Dept. SAU, Suite 405, Durham, NC 27705; 800/334-3306 (US) or 800/672-1665 (NC).

PRACTICE FOR SALE — 510 N.W. Broad Street, Southern Pines, NC 28387. 919/692-6022.

GENERAL SURGEON needs an associate surgeon in a multi-specialty outpatient clinic and outpatient surgery facility. Brinton Surgical Center, P.A., 603 East Center Avenue, Mooresville, 28115.

PHYSICIAN/PEDIATRICIAN OFFICE EQUIPMENT: including two exam tables, pediatrics weight/exam table, lab equipment. List available. Retired. Hammett, 103 Surrey Road, Waynesville 28786. 704/456-3392.

BE/BC NEUROSURGEON: (including '89 res.) needed to establish or join a private practice in a pleasant community of 65K (110K draw). Affiliated w/500+ bed hospital on VA/NC border. Readily accessible to five major teaching universities. Contact Mary Wynkoop, Tyler &

Co., 9040 Roswell Rd. Atlanta, GA., 30350 or call 404/641-6411.

URGENT CARE PRACTICE for sale: Excellent location in Charlotte. Fully equipped. Could be a practice for Family Practitioner. Reply: Tryon Medical Building, 114 S. Tryon St., Charlotte, 28202.

PUBLIC HEALTH PHYSICIAN II position available with the Alamance County Health Department to work in the clinic. Annual salary of \$55,044 with competitive fringe benefits, liability insurance paid by employer. Must be a graduate from an accredited school of medicine and completion of internship in an approved hospital and three years of experience in a professional medical capacity. Licensed to practice medicine in N.C. and eligible to be insured for medical professional liability insurance coverage. Prefer public health experience. Send application before September 20, 1988 to Becky Perkins, Alamance County Health Department, 209 N. Graham-Hopedale Road, Burlington, 27215. Phone: 919/227-0101.

SEEKING BE/BC NEUROSURGEON to join popular two member neurosurgical group located in southeastern metro area near Smokey Mountains and large lake system. Supported housing by three progressive hospitals. Sound housing values, comfortable lifestyles with all amenities available. Contact Mary Wynkoop at Tyler & Co., 9040 Rosewell Rd., Atlanta, GA 30350. Or call 404/641-6411.

OB/GYN OR PERINATAL: 500-bed teaching hospital with 16-bed level III Perinatology Center needs clinician/teacher. Metro city of 185K in Piedmont area of NC. Five colleges, good schools, low cost living, and excellent parks. Hospital-based with competitive package, benefits + malpractice. Contact Sandy Cundiff, Tyler & Co. 9040 Rosewell Rd., Atlanta, GA 30350. Call 404/641-6411.

DISCOUNT HOLTER SCANNING: starting at \$35. Spacelab Holters available at \$1275. Turn over time is 24-48 hours. Hook up kits available at \$4.95. Stress test electrodes available at 29¢. Scanning paper available at \$18.95. One free test is offered at no obligation on trial basis. Cardio Care, Inc. La Plata Professional Center, P.O. Box 1528, La Plata, MD 20646. 1-800/248-0153.

INTERNIST NEEDED for busy two member IM group. Affiliated with progressive 400+ bed hospital in delightful SE metro community of 500K near Smoky Mountains. Competitive financial package, with excellent professional & personal growth potential. Contact Mary Wynkoop, Tyler & Co., 9040 Rosewell Rd., Atlanta, GA 30350. Call 404/641-6411.



PHYSICIANS Ambulatory Care Clinic

John Short & Associates, Inc., an internationally recognized Healthcare Management and Consulting firm, is actively seeking **PHYSICIANS** with experience and credentials in **FAMILY MEDICINE** and **PRIMARY CARE SPECIALITIES**.

Full or part-time positions are available to staff an existing Primary Care Clinic in the North Carolina Coastal Region. Qualifications include Board Certification or Board Eligibility and State Licensure.

John Short & Associates, Inc. offers competitive compensation including paid malpractice insurance, professional development funding and incentive programs. For additional information please contact: **Susan Bray, Recruiting Director, John Short & Associates, Inc., Box 1305, Columbia, MD 21044, (301) 964-2811.**

Equal Opportunity Employer.

NCMJ Classified Ads...

Send your ad to:

EDITORIAL ASSISTANT
NCMJ
Box 3910 DUKE UNIVERSITY MEDICAL CENTER
DURHAM 27710

Please specify the number of months you'd like your ad to run, and tell us your name, address, and phone number.

Closing date is the 25th of the second prior month.

Rates:

NCMS members, \$15/25 words, plus 25¢ each additional word;
Others, \$25/25 words, plus 25¢ each additional word.

Send no money; you will be billed.
For further information, call 919/684-5728.

Index to Advertisers

Advanced Health Technology	430-431	Med-Care	448
Baron Financial	421	Medical Administration Publications	474
Blue Cross and Blue Shield of NC, Inc.	440	Medical Mutual Insurance Co. of NC	454
Burroughs Wellcome	417	Medical Protective Company	432
Campbell Laboratories	470	MONY	439
Caremark Homecare	446-447	Omohundro Communications	470
Carolina Consultation Center	429	Palisades Pharmaceuticals	438
Carolina Manor	453	Republic Health	479
Charlotte Treatment Center	450	Roche Laboratories	464,465,466,477,Covers 3-4
Charter Northridge Hospital	466	Southern Medical Association	410
Coast Realty & Construction Co.	445	U.S. Air Force	409
Compensation Consultant	444	U.S. Army	422,432a
CompuMed	456	U.S. Army Reserve	472
Crumpton Company	Cover 2	U.S. Navy	449
Eli Lilly	432b	U.S. Navy Reserve	453
Hinrichs Financial Group	412	Wilmington AHEC	453
McMillion/Eubanks Capital Management	473	Winchester Surgical Supply	480

Winchester

"SERVICE SINCE 1919"

Winchester Surgical Supply Company

P.O. Box 35488 Charlotte, NC 28235
704/372-2240 or 800-868-5588

Winchester Home Healthcare

Medical supplies and equipment for your patients at home
Charlotte, N.C. Greensboro, N.C. Hickory, N.C.
704/332-1217 919/275-0319 704/324-0336
704/547-0708

Serving the Medical Profession and their patients

Our salesmen are located in all parts of North Carolina.

We have DISPLAYED at every N.C. State Medical Society Meeting since 1921
and advertised CONTINUOUSLY in the N.C. Journal since January 1940 issue.

CURRENT
JNLS
W1
NO
407

North Carolina Medical
Journal
UCSF LIBRARY
Received on: 11-09-88

The
Official Journal
of the
North Carolina
Medical Society
October 1988
Volume 49
Number 10

North Carolina Medical Journal

For Doctors and their Patients

SPECIAL ISSUE

Psychiatry

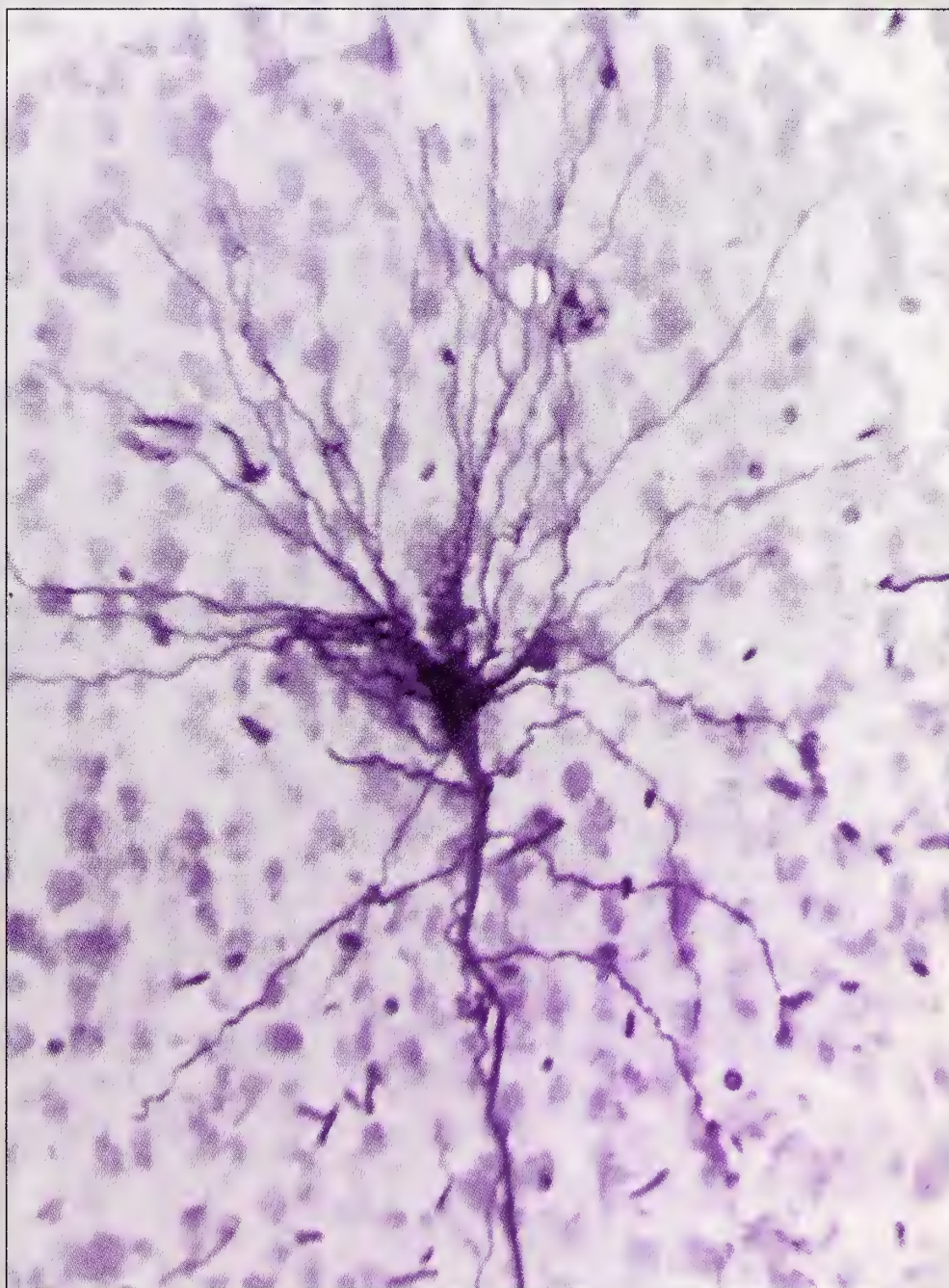
Morris A. Lipton, M.D., Ph.D.
Guest Editor

Clinical Psychiatry

Psychiatry for the Non-Psychiatrist

"For Patients"

Psychiatric Research



The Direct Line To Security And Peace of Mind



CRUMPTON COMPANY

Many N.C. Physicians participate in the
**Crumpton Plan of Disability Income
Protection —**

a plan that provides income when you cannot!

Because **we care** we have

- Benefits designed to meet today's needs
- Personalized claim service
- New broadened portfolio of insurance products

NOT PROMISES BUT PERFORMANCE

from the Disability Income Specialists who
have served N.C. Professionals for nearly
50 years!

Take a few minutes to call us today for
information on our expanded products and
services.

You will be glad you did!



CRUMPTON COMPANY
PROFESSIONAL INSURANCE ADMINISTRATORS
POST OFFICE BOX 51939, DURHAM, NC 27717-1939
919/493-2441 800/672-1674 (NC) 919/489-7380 (FAX)

STAFF

Eugene A. Stead, Jr., M.D.
Rt. 1, Box 194, Bullock
EDITOR
919/693-4531

Francis A. Neelon, M.D.
Durham
ASSOCIATE EDITOR

F. Maxton Mauney, Jr., M.D.
Asheville
ASSOCIATE EDITOR

Eben Alexander, Jr., M.D.
Winston-Salem
ASSOCIATE EDITOR

William B. Blythe, M.D.
Chapel Hill
ASSOCIATE EDITOR

William W. Fore, M.D.
Greenville
ASSOCIATE EDITOR

Edward C. Halperin, M.D.
Durham
ASSOCIATE EDITOR

Laurel Ferejohn
Durham
MANAGING EDITOR
919/684-5728

Jane Whalen
Durham
EDITORIAL ASSISTANT
George E. Moore
Raleigh
BUSINESS MANAGER

EDITORIAL BOARD

Charles W. Styron, M.D.
Raleigh
CHAIRMAN

Edwin W. Monroe, M.D.
Greenville

Robert W. Prichard, M.D.
Winston-Salem

Louis deS. Shaffner, M.D.
Winston-Salem

Jay Arena, M.D.
Durham

Jack Hughes, M.D.
Durham

William B. Blythe, M.D.
Chapel Hill

Margaret N. Harker, M.D.
Morehead City

The appearance of an advertisement in this publication does not constitute any endorsement of the subject or claims of the advertisement.

The Society is not to be considered as endorsing the views and opinions advanced by authors of papers delivered at the Annual Meeting or published in the official publication of the Society. — *Constitution and Bylaws of the North Carolina Medical Society*, Chapter IV, Section 3, page 4.

NORTH CAROLINA MEDICAL JOURNAL

Box 3910, Duke University Medical Center, Durham, NC 27710 (919/684-5728), is owned and published by The North Carolina Medical Society under the direction of its Editorial Board. Copyright © The North Carolina Medical Society 1988. Address manuscripts and communications regarding editorial matters, advertising, subscription rates, etc., to the Managing Editor at the Durham address. All advertisements are accepted subject to the approval of a screening committee of the State Medical Journal Advertising Bureau, 711 South Blvd., Oak Park, Illinois 60302 and/or by a Committee of the Editorial Board of the North Carolina Medical Journal in respect to strictly local advertising. Instructions to authors appear in each issue (see table of contents). Annual Subscription, \$12.00 (+ tax in NC). Single copies, \$2.00. Publication office: The Ovid Bell Press, Inc., 1201-05 Bluff St., Fulton, MO 65251. *Second-class postage paid at Raleigh, North Carolina 27611 and additional mailing offices.* Postmaster: Send address changes to North Carolina Medical Society, 222 N. Person St., Raleigh, NC 27611.

THE ULTIMATE TAX SHELTER.

- Fund Your Pension Plans At 25% Of Payroll With A Cost Of Only 5-11% For Staff Employees
- Add A Supplemental Retirement Plan For Key Employee Physicians And Spend No Additional Funds For Staff
- EQUALS: 85-95% Of All Retirement Funding Benefits Allocated To Key Employee Physicians!

For Information Call:

Baron Benefits Management, Inc.

A BARON FINANCIAL COMPANY

Executive Compensation and Employee Benefit Specialists

4110 Wake Forest Road, Suite 211
Raleigh, N.C. 27609
(919) 790-9904/(800) 222-8783

300 Wendover Avenue East, Suite 202
Greensboro, N.C. 27401
(919) 379-8207/(800) 822-1086

"I've gone through a bypass, 6 months of physical therapy and now I'm supposed to come up with a \$150,000 malpractice tail premium."



This could be a real situation. Worse, it could happen to you because of a "loop-hole" in your malpractice coverage.

Even though Claims Made malpractice insurance extends protection if you face a lawsuit after retirement or death, most policies provide no protection if you return to work during a disability, even if you return to your occupational specialty.

So you may be forced to pay a whopping premium—the tail premium—in order to maintain your malpractice tail coverage.

If your malpractice insurance company doesn't waive this tail premium, there's only one policy in the marketplace designed to cover it: MONY's new Distinction Disability Insurance Series.

DISTINCTION™

The Intelligent Choice In Disability Income

MONY
FINANCIAL SERVICES

Sue Anne Schoonderwoerd
P.O. Box 95161, Raleigh 27625
(919) 872-8666

The Mutual Life Insurance Company of New York, NY, NY.

Malpractice protection is only part of the story.

Malpractice Tail Premium Coverage is only one of the reasons MONY's Distinction is a different approach to disability insurance. It meets your needs.

- ☐ Your coverage cannot be canceled. No restrictions can ever be added.
- ☐ We're a mutual company and any dividends we pay can actually reduce the cost of your policy.

Please send me more information on MONY's Malpractice **Tail Rider**.

Name: _____

Address: _____

Phone: () - Age: Tail Amount: _____

(919/872-8666)

MONY
FINANCIAL SERVICES

P.O. Box 95161
Raleigh, North Carolina 27625

North Carolina Medical Journal

FOR DOCTORS AND THEIR PATIENTS

Contents / October 1988, Volume 49, Number 10

SPECIAL ISSUE: PSYCHIATRY

ABOUT THE GUEST EDITOR

EDITORIAL

From the Guest Editor *Morris A. Lipton*

PSYCHIATRY FOR THE NON-PSYCHIATRIST

Psychiatric Aspects of AIDS for the Non-Psychiatrist *Stanley P. Oakley, Jr.*

Management of the Agitated Patient: A Pharmacological Update *James J. McGough and Joseph R. Bona*

Approaches to Insomnia: Helping Patients, Avoiding Pitfalls, Doing No Harm *Jerry G. Gregory, Everett C. Simmons, and Bruce R. Berger*

Panic Disorder and Agoraphobia: An Update for Primary Care Physicians *William L. Anixter*

Admission, 1985 *Pem Kahler (Poetry)*

FOR PATIENTS

The Mental Illness Awakening *John Baggett*

Psychotherapy: One Perspective *Charles R. Vernon*

Panic Disorder with Agoraphobia *James L. Mathis*

Adjustment Disorder and Sun Sensitive *Pem Kahler (Poetry)*

CLINICAL PSYCHIATRY

Pain Management Programs: Clinical and Research Perspectives *Francis J. Keefe, Karen M. Gil, and David A. Williams*

Eating Disorders: Evaluation and Treatment *W. J. Kenneth Rockwell*

Clinical Problems in Geriatric Psychiatry: The Relationship Between Dementia of the Alzheimer's Type and Depression *Burton V. Reifler*

PSYCHIATRIC RESEARCH

Advances in Biological Psychiatry and Psychotherapy Are Not Mutually Exclusive *Charles B. Nemeroff and W. Edward Craighead*

HIV: Psychoimmunologic and Neuropsychiatric Relationships *Paul D. Zislis, Robert N. Golden, Cort Pedersen, and Dwight L. Evans*

Depression in Cancer Patients: Diagnostic and Treatment Considerations *Dwight L. Evans, Cheryl F. McCartney, Charles B. Nemeroff, John J. Haggerty, Jr., Jeffrey S. Simon, Cort A. Pedersen, Valerie Holmes, Marion Droba, George A. Mason, David Raft, Wesley C. Fowler, and Robert N. Golden*

The New Antidepressants *Robert N. Golden, Terry M. Brown, Helen Miller, and Dwight L. Evans*

LETTERS TO THE EDITOR

BULLETIN BOARD

Continuing Medical Education

New Members

558

560

Classified Advertisements

In Memoriam

The Number Of Blue Cross and Blue Shield Subscribers Is Reaching Epidemic Proportions.

More and more people are signing up for Blue Cross and Blue Shield coverage at a faster and faster rate. Today we have over a million subscribers in North Carolina. And when you include subscribers' family members, the number is closer to two million. There are a lot of reasons for that success. But a large part of it is attributable to the variety of plans we offer. We provide a greater choice of group plans than any other carrier in the state. And we're giving



employers the opportunity to let each employee pick a plan that suits him or her best. We also offer coverage to people who don't qualify for group.

So next time you peek into your waiting room, chances are you'll be looking at a room full of our subscribers. Subscribers who have come to us for quality coverage and to you for quality care.



**Blue Cross®
Blue Shield®**
of North Carolina

The Choice Of Nearly
Two Million North Carolinians.
©1988 Blue Cross and Blue Shield of North Carolina



WANTED!!

*Your
Creativity*

ADVANCED HEALTH TECHNOLOGY, INC.

If you have a bright, innovative idea about a medical or medically related product and don't know where to turn:

"TURN TO US"

At no initial cost and minimal time to you, AHT will:

- ☞ Evaluate and research your innovative idea through a board of medical specialists.
- ☞ Have our lawyers file the applications and conduct the patent search process.
- ☞ Negotiate the marketing, manufacturing, and/or distribution of your product after patent search.

ADVANCED HEALTH TECHNOLOGY, INC.

FOR MORE INFORMATION AND A FREE COMPANY PACKET

MAIL THIS PORTION TODAY!!

OR CALL: 1-800-541-6098 OR (919) 768-7719

3111 MAPLEWOOD AVENUE, WINSTON-SALEM, NORTH CAROLINA 27103



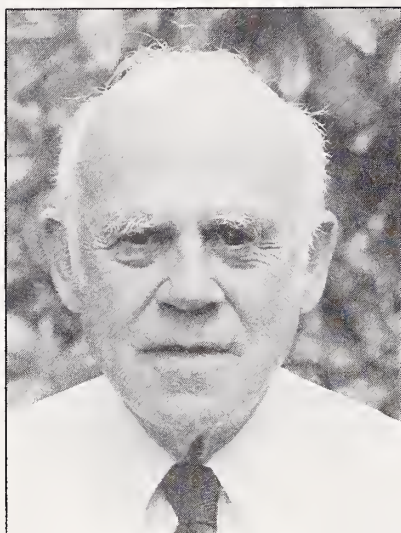
NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

HOME PHONE _____ BUSINESS PHONE _____

About the Guest Editor



Dr. Morris A. Lipton, Sarah Graham Kenan Emeritus Professor of Psychiatry and Biochemistry, has been at the UNC School of Medicine since 1959. A graduate of the City College of New York in 1935, he obtained his Ph.D. in biochemistry from the University of Wisconsin in 1939 and his M.D. from the University of Chicago in 1948. He had further training in psychiatry, internal medicine and psychoanalysis in Chicago, and is a Board Certified Internist and Psychiatrist.

He was brought to Chapel Hill by Dr. George Ham, the first chairman of the Department of Psychiatry there, primarily to help to build the research program of the young department, which he seems to have succeeded in doing admirably. The annual psychiatric research budget is now about four million dollars of federal funds. Dr. Lipton feels that his chief contribution to this success has been in stimulating the intellectual growth and research capability of younger colleagues, many of whom hold prominent research positions at UNC, the National Institute of Mental Health, and other major Departments of Psychiatry.

In his 29 years at this medical school he has served many roles including Chair of the Department of Psychiatry for four years. However, his continuing and consuming interest in research led to his resignation from that position and his creation and 18-year leadership of the Biological Sciences Research Center of the Child Development Institute at UNC. This nationally renowned Center is devoted to basic research in the neurosciences and to clinical research in a large number of areas related to mental retardation and illness.

Dr. Lipton's research interests are very broad and he has published more than 200 scholarly articles. He is former president of the American College of Neuropsychopharmacology and was editor of the classic work "Psychopharmacology: A Generation of Progress."

Since his retirement Dr. Lipton continues to serve the Department of Psychiatry in an advisory role in teaching, research and administration. He is also Deputy Editor of the *American Journal of Psychiatry*, with major responsibility for biological psychiatry, and serves on several merit research review boards of the Veterans Administration and National Institute of Mental Health.

He seems to be an excellent choice to be guest editor for this psychiatric issue of the *North Carolina Medical Journal* and he has fulfilled his role enthusiastically.

—Eugene A. Stead, Jr., M.D., Editor

From the Guest Editor

Morris A. Lipton, M.D., Ph.D.

In a joint resolution, the Congress and the President have declared October 2-8, 1988, to be National Mental Illness Awareness Week. Its purpose is to communicate to the public the distressing magnitude of the problems of the mentally ill and their families, and information about ongoing research which is altering our understanding and treatment of these illnesses. It is hoped that recognition of the biological substrates of the mental illnesses will reduce the social stigma with which such patients and their families have been so long associated.

We are grateful that Dr. Stead, Editor of the *North Carolina Medical Journal*, and his Editorial Board have responded positively to the request of the Public Affairs Committee of the North Carolina Psychiatric Society to devote the October issue of the Journal exclusively to psychiatry. This is a unique and generous gift. It is the first time that the Journal has published a psychiatry special issue; hopefully it will not be the last.

As Guest Editor, I wanted to compile an issue which would demonstrate the wide scope of the problems addressed by practicing psychiatrists in North Carolina and by the teachers and researchers in the state's four medical schools. A glance at the Table of Contents will reveal a range of topics which reflect the diversity of problems with which North Carolina psychiatrists are currently concerned. There are papers dealing with pain, insomnia, anxiety and its derivatives (like phobias), depression, eating disorders, the cognitive and emotional problems of the elderly, and the neuropsychiatric aspects of AIDS. These problems are common to both psychiatry and general medicine.

Conspicuously absent from this list are drug abuse and schizophrenia, which of course are two of the most important problems facing psychiatrists today. This is not editorial oversight, but the result of the exceptional nature of each of these problems. In the case of drug abuse, current federal and state emphasis is on educational methods for diminishing the demand for drugs, and on legal methods for controlling the supply. Important as this is, it is tangential to fundamental biological research on the causes, mechanisms, treatment, and consequences of drug abuse with which the physician readers of this Journal are concerned. Schizophrenia remains the most baffling and devastating of the so-called mental

illnesses. Current evidence suggests that it is not a single disease with a single etiology, but rather a syndrome with common clinical features. It resembles some of the chronic progressive syndromes encountered by the internist in which treatment relieves symptoms, delays and occasionally arrests the progress of the illness, but provides no predictable cures. The latest research on schizophrenia involves epidemiology, population and molecular genetics, the molecular biology of the regulation of the metabolism of neurotransmitters and their receptors, and the newer imaging techniques that are revealing exciting information about the anatomy, blood-flow and metabolism of the living brain in situ. This array of highly technical research could not adequately be addressed in the limited space available. Perhaps later issues of the Journal can address some of it more adequately.

Our aim in this issue was to give the readers an overview of as many psychiatric activities as possible and to provide the primary care physician and other medical professionals with practical and applicable information. I believe that the value this information has for the reader will be enhanced by an awareness of some fundamental differences and similarities between psychiatry and general medicine.

The centuries-old Cartesian dichotomy between brain and mind is gradually being resolved, as overwhelming evidence shows that mental disorders are a product of malfunction of the brain. The brain receives stimuli from the body and the external world, and integrates them and causes the body to react. In the higher species it also thinks. Thus the primary difference between psychiatric illness and other medical illness is that, in the first, organic malfunction is manifested as dysregulation in the areas of thinking, feeling and behavior, while in the second it is exhibited in somatic symptoms characteristic of the affected organ, like the kidney, heart or immune system. Another major difference between them is that in general medicine we can often pinpoint a specific etiological agent. This may be a micro-organism, nutritional deficiency, chemical intoxication or trauma. When the etiological agent can be identified and eliminated we have a true cure. In psychiatry, except for the deliria associated with infection, toxicity or trauma, we cannot attribute the illness to a single etiological agent. The best paradigm for most mental illness is that of dysregulation

caused by a genetic vulnerability coupled with environmental stress. In this sense the mental illnesses resemble diabetes or hypertension, except that the stressors tend to be less physical or chemical and more psychological and social than those of the medical illnesses. Lacking specific single etiologies that can be eliminated to yield true cures and even immunity, the psychiatrist deals with his or her patient's problems as does the general physician who encounters similar problems: by employing treatments which diminish symptoms and disability and stop or slow the progression of illness.

In both psychiatry and medicine, diagnosis is essential to treatment and, since the symptoms with which the psychiatrist deals are largely behavioral, he or she relies heavily on psychological tests which, over the years, have been shown to be empirically valid and reliable. But the increasing emphasis placed upon advances in biological laboratory diagnostic methods shows another parallel between psychiatry and general medicine. These new diagnostic methods—such as newer forms of electroencephalography, imaging techniques like the CAT scan, positron emission tomography, molecular magnetic resonance, neuroendocrine challenge tests and biochemical markers for determination of the state of illness and the trait of vulnerability to certain illnesses—are not different in principle from the diagnostic methods of the rest of medicine.

The therapeutic strategies which the psychiatrist employs commonly involve psychotropic drugs usually combined with psychological methods. There are acute illnesses like delirium, transient psychoses and acute anxiety states which can be treated very rapidly and successfully.

There are also recurrent illnesses like the affective disorders which resemble medical illnesses like rheumatoid arthritis or autoimmune illnesses where remissions and exacerbations occur and for which repeated therapeutic interventions are necessary.

Increasing emphasis upon the biological substrates of mental illness has diminished the distance between the psychiatrist and other physicians. This shift in psychiatric thinking can be attributed to what has been called "the pharmacological revolution" which began with the introduction of clinically useful psychotropic drugs some 30 years ago. All clinical advances have their basic science antecedents and these involved the major basic science discoveries like the anatomy of the neuron and the demonstration of the synapse about 80 years ago, followed by the discovery about 40 years ago of chemical rather than electrical transmission as the means of communication between neurons. This in turn was followed by the discovery of the chemical structure of, first, the simple transmitters like acetylcholine and norepinephrine, then the more complex peptide neuromodulators and most recently the rapidly increasing knowledge of the chemically very complex receptors. It is interesting to note that this type of basic neuroscience generated more than six Nobel prizes and, until the 1950s, had no obvious relevance to clinical psychiatry, which was heavily dominated by

Freudian metapsychology. The situation changed dramatically with the accidental and serendipitous discovery of psychotropic drugs in the 1950s. Some of these, like LSD, produced distortions of perception and thinking which resembled the psychoses. Others were quickly proven to be therapeutically useful. Studies of their mode of action gradually revealed that they interacted with neurotransmitters affecting the synthesis, release, and degradation of different neurotransmitters, or their binding to specific receptors.

To this day, pharmacology interacts constantly with other neurosciences, contributing much to them and gaining from them new drugs with therapeutic potential. Commercially the psychotropic drug industry is big business in which every major drug company is heavily involved. Intellectually the neurosciences today are the most vigorous and exciting branch of biology. They attract many young scientists. The Society of Neuroscience has grown in membership from 100 to about 11,000 in approximately a decade. Discoveries come so rapidly that they are difficult to assimilate. Clinically, relevance to theory and practice of psychiatry is demonstrable daily. The future of biological psychiatry, though impossible to predict, looks very bright.

Yet many important questions remain. These range from the most fundamental to the clinical. Let me mention only three. At the most basic level, with the discovery of the relatively few small molecule neurotransmitters and the many more peptide neuromodulators, we seem to be achieving some understanding of, to use a metaphor, the alphabet of the language with which billions of neurons communicate with each other. But we still know very little about the way the letters of this alphabet are combined into a neurological spelling system, syntax, and grammar, that permit us to think and that constitute the experience and information which constantly affect our lives. To paraphrase what Kety once said, we are beginning to understand the nature of memory, but know very little about the biology of the multitude of memories that determine our personalities, our coping styles, our strengths and weaknesses and our behavior.

At a more clinical level we have learned that many mental illnesses can be treated psychologically or with drugs. In this sense these illnesses are unique. We are at a loss to explain how such drastically different treatments can both be effective. A clue is offered by the recent findings that psychological experiences alter the bloodflow and metabolism of the brain somewhat like drugs do. Perhaps there is a final common path.

At the strictly clinical level we know that there is a genetic component to the susceptibility to schizophrenia, the affective disorders, and the anxiety disorders. But the genetics are not simple Mendelian and we still know very little about genetic vulnerability periods from gestation to old age.

What we do know is that at present, chronic illness, be it psychiatric or physical, requires correction of the biological defects so far as we are able and then re-education and the development of new coping skills through appropriate psychological treatment and social support systems. Dramatic

examples may be seen in the studies at UCLA, Pittsburgh, and in England, which have shown that the relapse rate within a year of first-break schizophrenics treated exclusively with the best of our drugs, administered skillfully, is 60% to 70%. When the support systems, particularly from the family, are added to the medical regimen, the relapse rate drops to approximately 10%.

The magnitude of unanswered questions is as great as those in the remainder of medicine. It is encouraging therefore that new changes in the leadership of the Alcohol, Drug and Mental Health Administration and in the National Institute of Mental Health will emphasize research. Hopefully this will not be at the expense of delivery of services.

Meanwhile, the physician has a daily obligation to do the best he or she can with the tools available. Fortunately these are increasing rapidly. New drugs are regularly available and while most of these are "cousins" of established ones, they have different side effects and are useful for some non-responders as well as for special populations like the very young, the elderly and the medically ill. Totally new types of drugs are under development and these may open new vistas of treatment. It is difficult for me, however, to feel that any drugs will ever be as effective for mental illness as vaccines or antibiotics are for the infectious diseases.

It appears unlikely that we will ever develop drugs which will fully substitute for the preventive and therapeutic effects of good human relations, especially those involved in the doctor-patient relationship. Psychological treatments, I

suspect, will always be necessary and fortunately these, too, have evolved. Instead of the global resolution of unconscious conflicts and the major personality reconstruction which followed, as proposed by psychoanalysts forty years ago, today psychological treatments are targeted for relief of specific symptoms and the resolution of specific problems. There are almost as many catalogued psychological treatments as there are drugs, and while some of these are idiosyncratic or cultish, others which involve behavior modification, cognitive therapy and training in social skills or assertiveness have proven to be very useful.

The modern young psychiatrist is taught to use both medical and psychological strategies, and there is substantial evidence that therapeutic results are best when both are appropriately employed, simultaneously or in sequence. Psychiatry, which for a long time was method-oriented, is increasingly problem-oriented. The psychiatrist of the future should be able to select the most appropriate drugs and combine them with the most appropriate psychological treatments and social interventions to produce the most gratifying results.

Hopefully, as psychiatrists of the future understand more about the biological substrates of the major mental illnesses, primary physicians will increasingly recognize that all chronic illness contains psychological components whose proper management will enhance the patients' comfort and progress. As each specialty broadens its horizons, the patient will benefit. □

NAVAL RESERVE PHYSICIAN

- Monthly Stipend for Physicians in training leading to qualifying as General/Orthopedic/Neurosurgeon or anesthesiologist.
- Loan repayment of up to \$20,000 for Board eligible General/Orthopedic surgeons and anesthesiologists.
- CME opportunities.
- Flexible drilling options.

*Promotion Opportunities

*Prestige

*For graduates of AMA approved
Medical Schools*

**CALL YOUR
NAVAL RESERVE FORCE
REPRESENTATIVE TODAY.**

1-800-443-6419

Now America's oldest professional liability insurer has come to North Carolina.

The newest professional liability insurer in North Carolina is the oldest in the nation. The Medical Protective Company pioneered the concept of professional protection before the turn of the century and has been serving doctors exclusively ever since. Through good times and bad.

With the current liability crisis escalating, you need to take a close look at your coverage and the company that stands behind it. Then take a close look at us. You'll see we carry the highest

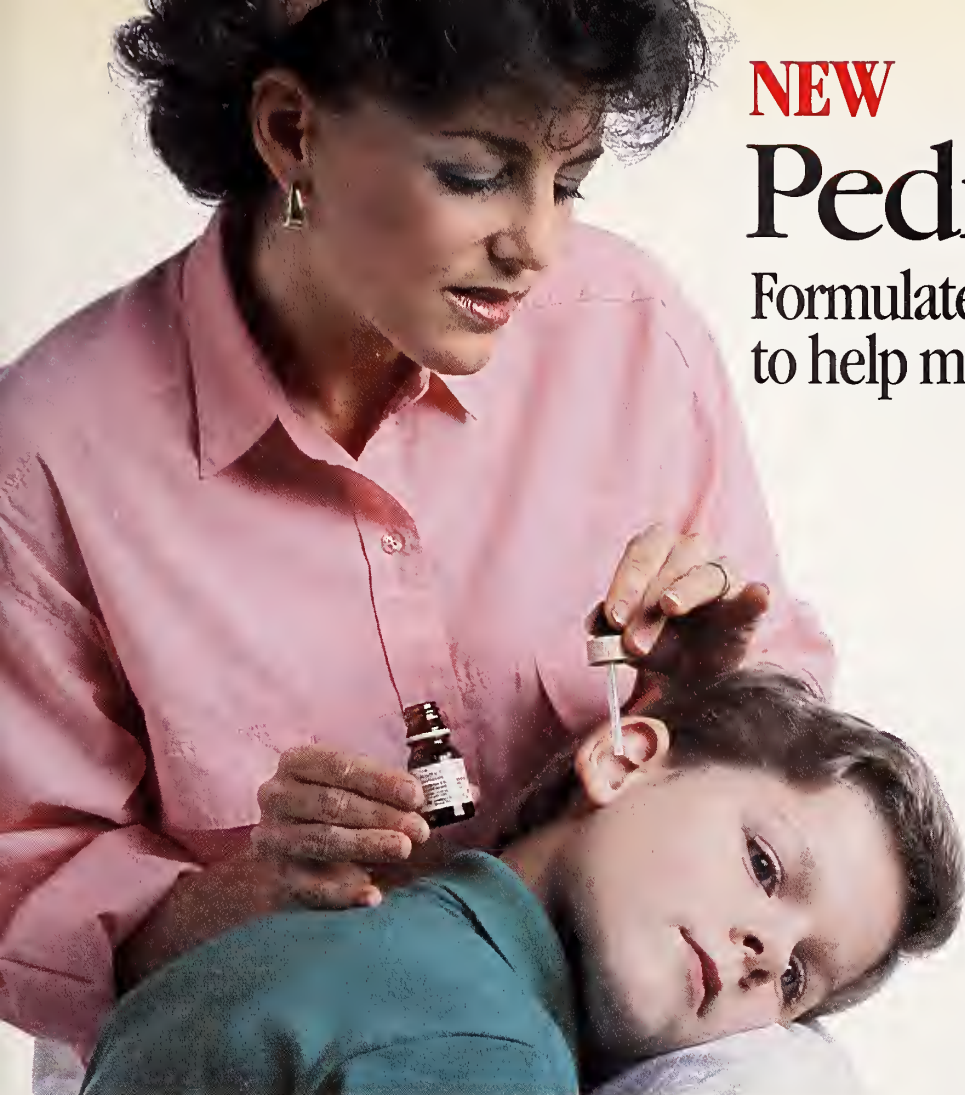
rating from A.M. Best, the firm that tracks the financial stability of insurance companies nationwide. Beyond that, you'll find complete protection at premium rates that are likely lower than you're currently paying. Plus the personal attention and claims prevention assistance you deserve.

Contact Stu Mitchelson today at 704/541-8020. He's the oldest company's representative in its newest state. And he's here to serve you.

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

Stuart Mitchelson, P.O. Box 13489
Charlotte, North Carolina 28211, (704) 541-8020

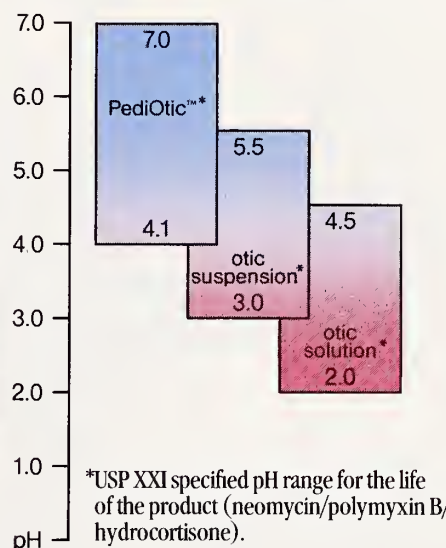


NEW

PediOtic™ suspension sterile

Formulated to be less acidic to help minimize irritation.

A more normal pH range means less potential for painful irritation.



Formulated to help take the sting out of otitis externa therapy



New PediOtic™ suspension is specially formulated to have a higher pH range than conventional otics.

Children may be less likely to resist its instillation, and their parents will appreciate the ease of compliance.

And you can prescribe new PediOtic

suspension with confidence, knowing it contains the same proven antibiotic/anti-inflammatory combination physicians have trusted for years.

Now there's a gentle effective treatment for "swimmer's ear" to please patient, parent, *and* physician.

PediOtic™ suspension sterile

(polymyxin B sulfate-neomycin sulfate-hydrocortisone)



NEW PediOtic™ suspension sterile (polymyxin B sulfate-neomycin sulfate-hydrocortisone)

brief summary

DESCRIPTION: PediOtic suspension (polymyxin B sulfate-neomycin sulfate-hydrocortisone) is a sterile antibacterial and anti-inflammatory suspension for otic use. Each ml contains: Aerosporin® (polymyxin B sulfate) 10,000 units, neomycin sulfate equivalent to 3.5 mg neomycin base, and hydrocortisone 10 mg (1%). The vehicle contains thimerosal 0.001% (added as a preservative) and the inactive ingredients cetyl alcohol, glyceryl monostearate, mineral oil, polyoxy 40 stearate, propylene glycol, and Water for Injection. Sulfuric acid may be added to adjust pH. PediOtic suspension has a minimum pH of 4.1, which is less acidic than the minimum pH of 3.0 for Cortisporin® Otic Suspension. **INDICATIONS AND USAGE:** For the treatment of superficial bacterial infections of the external auditory canal caused by organisms susceptible to the action of the antibiotics, and for the treatment of infections of mastoidectomy and fenestration cavities caused by organisms susceptible to the antibiotics. **CONTRAINDICATIONS:** This product is contraindicated in those individuals who have shown hypersensitivity to any of its components, and in herpes simplex, vaccinia, and varicella infections. **WARNINGS:** This product should be used with care in cases of perforated eardrum and in longstanding cases of chronic otitis media because of the possibility of ototoxicity. Neomycin sulfate may cause cutaneous sensitization. A precise incidence of hypersensitivity reactions (primarily skin rash) due to topical neomycin is not known. When using neomycin-containing products to control secondary infection in the chronic dermatoses, such as chronic otitis externa or stasis dermatitis, it should be borne in mind that the skin in these conditions is more liable than is normal skin to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low-grade reddening with swelling, dry scaling and itching; it may be manifest simply

as a failure to heal. Periodic examination for such signs is advisable, and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for the patient thereafter. **PRECAUTIONS:** As with other antibacterial preparations, prolonged use may result in overgrowth of non-susceptible organisms, including fungi. If the infection is not improved after one week, cultures and susceptibility tests should be repeated to verify the identity of the organism and to determine whether therapy should be changed. Treatment should not be continued for longer than ten days. Allergic cross-reactions may occur which could prevent the use of any or all of the following antibiotics for the treatment of future infections: kanamycin, paromomycin, streptomycin, and possibly gentamicin. **ADVERSE REACTIONS:** Neomycin occasionally causes skin sensitization. Ototoxicity and nephrotoxicity have also been reported (see WARNINGS section). Adverse reactions have occurred with topical use of antibiotic combinations including neomycin and polymyxin B. Exact incidence figures are not available since no denominator of treated patients is available. The reaction occurring most often is allergic sensitization. In one clinical study, using a 20% neomycin patch, neomycin-induced allergic skin reactions occurred in two of 2,175 (0.09%) individuals in the general population.¹ In another study, the incidence was found to be approximately 1%.² The following local adverse reactions have been reported with topical corticosteroids, especially under occlusive dressings: burning, itching, irritation, dryness, folliculitis, hypertrichosis, acneiform eruptions, hypopigmentation, perioral dermatitis, allergic contact dermatitis, maceration of the skin, secondary infection, skin atrophy, striae, and miliaria. Stinging and burning have been reported rarely when this drug gained access to the middle ear. **HOW SUPPLIED:** Bottle of 7.5 ml with sterilized dropper. NDC 0081-0910-02. Store at 15° to 25°C (59° to 77°F).

REFERENCES: 1. Leyden JJ, Kligman AM: Contact dermatitis to neomycin sulfate. *JAMA* 1979;242:1276-1278. 2. Prystowsky SD, Allen AM, Smith RW, et al: Allergic contact hypersensitivity to nickel, neomycin, ethylenediamine, and benzocaine. *Arch Dermatol* 1979;115:959-962.

BURROUGHS WELLCOME CO., Research Triangle Park, NC 27709
Copr. © 1988 Burroughs Wellcome Co. All rights reserved.

Are You Only Smiling For The Camera?



Or do you know someone who is?

Saint Albans Psychiatric Hospital in Radford, Virginia has been helping people deal with life since 1916. We offer comprehensive programs for adults and adolescents in chemical dependency, eating disorders, depression, out-of-control behavior and other life problems — all supervised by a skillful and compassionate staff.

When you know someone in need of psychiatric help call Saint Albans.

We build real smiles.

*In Virginia: 1-800-572-3120
Outside Virginia: 1-800-368-3468
P.O. Box 3608 Radford, Va., 24143*

 **Saint Albans
Psychiatric Hospital**
Radford, Virginia



(ciprofloxacin HCl/Miles)



A REVOLUTIONARY ORAL ANTIMICROBIAL WITH THE POWER OF PARENTERALS

- Highly active *in vitro* against a broad range of gram-positive and gram-negative pathogens, including methicillin-resistant *Staphylococcus aureus* and *Pseudomonas aeruginosa**
- For treatment of infections in the:
 - lower respiratory tract[†]
 - urinary tract[†]
 - skin/skin structure[†]
 - bones and joints[†]
- Convenient **B.I.D.** dosage – 250 mg, 500 mg and 750 mg tablets

**In vitro* activity does not necessarily imply a correlation with *in vivo* results.

[†]Due to susceptible strains of indicated pathogens. See indicated organisms in Brief Summary.

CIPRO® SHOULD NOT BE USED IN CHILDREN OR PREGNANT WOMEN.

A history of hypersensitivity to ciprofloxacin is a contraindication to its use. A history of hypersensitivity to other quinolones may also contraindicate the use of ciprofloxacin.



Miles Inc.
Pharmaceutical Division
400 Morgan Lane
West Haven, CT 06516

Please see adjacent page of this advertisement for Brief Summary of Prescribing Information.

Cipro[®] TABLETS (ciprofloxacin HCl/Miles)

■ **500 mg B.I.D. for most infections;**
750 mg B.I.D. for severe or complicated infections.

BRIEF SUMMARY CONSULT PACKAGE INSERT FOR FULL PRESCRIBING INFORMATION INDICATIONS AND USAGE

Cipro[®] is indicated for the treatment of infections caused by susceptible strains of the designated microorganisms in the conditions listed below:

Lower Respiratory Infections caused by *Escherichia coli*, *Klebsiella pneumoniae*, *Enterobacter cloacae*, *Proteus mirabilis*, *Pseudomonas aeruginosa*, *Haemophilus influenzae*, *Haemophilus parainfluenzae*, and *Streptococcus pneumoniae*.

Skin and Skin Structure Infections caused by *Escherichia coli*, *Klebsiella pneumoniae*, *Enterobacter cloacae*, *Proteus mirabilis*, *Proteus vulgaris*, *Providencia stuartii*, *Morganella morganii*, *Citrobacter freundii*, *Pseudomonas aeruginosa*, *Staphylococcus aureus* (penicillinase and nonpenicillinase-producing strains), *Staphylococcus epidermidis*, and *Streptococcus pyogenes*.

Bone and Joint Infections caused by *Enterobacter cloacae*, *Serratia marcescens*, and *Pseudomonas aeruginosa*.

Urinary Tract Infections caused by *Escherichia coli*, *Klebsiella pneumoniae*, *Enterobacter cloacae*, *Serratia marcescens*, *Proteus mirabilis*, *Providencia rettgeri*, *Morganella morganii*, *Citrobacter diversus*, *Citrobacter freundii*, *Pseudomonas aeruginosa*, *Staphylococcus epidermidis*, and *Streptococcus faecalis*.

Infectious Diarrhea caused by *Escherichia coli* (enterotoxigenic strains), *Campylobacter jejuni*, *Shigella flexneri*, and *Shigella sonnei** when antibacterial therapy is indicated.

*Efficacy for this organism in this organ system was studied in fewer than 10 infections.

Appropriate culture and susceptibility tests should be performed before treatment in order to isolate and identify organisms causing infection and to determine their susceptibility to ciprofloxacin. Therapy with Cipro[®] may be initiated before results of these tests are known; once results become available appropriate therapy should be continued. As with other drugs, some strains of *Pseudomonas aeruginosa* may develop resistance fairly rapidly during treatment with ciprofloxacin. Culture and susceptibility testing performed periodically during therapy will provide information not only on the therapeutic effect of the antimicrobial agent but also on the possible emergence of bacterial resistance.

CONTRAINDICATIONS

A history of hypersensitivity to ciprofloxacin is a contraindication to its use. A history of hypersensitivity to other quinolones may also contraindicate the use of ciprofloxacin.

WARNINGS

CIPROFLOXACIN SHOULD NOT BE USED IN CHILDREN OR PREGNANT WOMEN. The oral administration of ciprofloxacin caused lameness in immature dogs. Histopathological examination of the weight-bearing joints of these dogs revealed permanent lesions of the cartilage. Related drugs such as nalidixic acid, cinoxacin, and norfloxacin also produced erosions of cartilage of weight-bearing joints and other signs of arthropathy in immature animals of various species (SEE ANIMAL PHARMACOLOGY SECTION IN FULL PRESCRIBING INFORMATION).

PRECAUTIONS

General:

As with other quinolones, ciprofloxacin may cause central nervous system (CNS) stimulation, which may lead to tremor, restlessness, lightheadedness, confusion, and very rarely to hallucinations or convulsive seizures. Therefore, ciprofloxacin should be used with caution in patients with known or suspected CNS disorders, such as severe cerebral arteriosclerosis or epilepsy, or other factors which predispose to seizures (SEE ADVERSE REACTIONS).

Crystals of ciprofloxacin have been observed rarely in the urine of human subjects but more frequently in the urine of laboratory animals. Crystalluria related to ciprofloxacin has been reported only rarely in man, because human urine is usually acidic. Patients receiving ciprofloxacin should be well hydrated, and alkalinity of the urine should be avoided. The recommended daily dose should not be exceeded. Alteration of the dosage regimen is necessary for patients with impairment of renal function (SEE DOSAGE AND ADMINISTRATION SECTION IN FULL PRESCRIBING INFORMATION).

Drug Interactions:

Concurrent administration of ciprofloxacin with theophylline may lead to elevated plasma concentrations of theophylline and prolongation of its elimination half-life. This may result in increased risk of theophylline-related adverse reactions. If concomitant use cannot be avoided, plasma levels of theophylline should be monitored and dosage adjustments made as appropriate.

Antacids containing magnesium hydroxide or aluminum hydroxide may interfere with the absorption of ciprofloxacin, resulting in serum and urine levels lower than desired; concurrent administration of these agents with ciprofloxacin should be avoided.

Probenecid interferes with the renal tubular secretion of ciprofloxacin and produces an increase in the level of ciprofloxacin in the serum. This should be considered if patients are receiving both drugs concomitantly.

As with other broad-spectrum antibiotics, prolonged use of ciprofloxacin may result in overgrowth of nonsusceptible organisms. Repeated evaluation of the patient's condition and microbial susceptibility testing is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Information for Patients:

Patients should be advised that ciprofloxacin may be taken with or without meals. The preferred time of dosing is two hours after a meal. Patients should also be advised to drink fluids liberally and not take antacids containing magnesium or aluminum concomitantly or within two hours after dosing. Ciprofloxacin may cause dizziness or lightheadedness; therefore patients should know how they react to this drug before they operate an automobile or machinery or engage in activities requiring mental alertness or coordination.

Carcinogenesis, Mutagenesis, Impairment of Fertility

Eight *in vitro* mutagenicity tests have been conducted with ciprofloxacin and the test results are listed below:

- Salmonella/Microsome Test (Negative)
- E. coli* DNA Repair Assay (Negative)
- Mouse Lymphoma Cell Forward Mutation Assay (Positive)
- Chinese Hamster V₇₉ Cell HGPRT Test (Negative)
- Syrian Hamster Embryo Cell Transformation Assay (Negative)
- Saccharomyces cerevisiae* Point Mutation Assay (Negative)
- Saccharomyces cerevisiae* Mitotic Crossover and Gene Conversion Assay (Negative)
- Rat Hepatocyte DNA Repair Assay (Positive)

Thus, two of the eight tests were positive, but the following three *in vivo* test systems gave negative results:

- Rat Hepatocyte DNA Repair Assay
- Micronucleus Test (Mice)
- Dominant Lethal Test (Mice)

Long-term carcinogenicity studies in animals have not yet been completed.

Pregnancy—Pregnancy Category C:

Reproduction studies have been performed in rats and mice at doses up to six times the usual daily human dose and have revealed no evidence of impaired fertility or harm to the fetus due to ciprofloxacin. In rabbits, as with most antimicrobial agents, ciprofloxacin (30 and 100 mg/kg orally) produced gastrointestinal disturbances resulting in maternal weight loss and an increased incidence of abortion. No teratogenicity was observed at either dose. After intravenous administration, at doses up to 20 mg/kg, no maternal toxicity was produced, and no embryotoxicity or teratogenicity was observed. There are, however, no adequate and well-controlled studies in

CONVENIENT B.I.D. DOSAGE

Recommended dosage schedule

Infection Site*	Severity of Infection	Dosage
Respiratory Tract*	Mild/Moderate	500 mg B.I.D.
Bone and Joint*	Severe/Complicated	750 mg B.I.D.
Skin/Skin Structure*	Mild/Moderate	250 mg B.I.D.
Urinary Tract*	Severe/Complicated	500 mg B.I.D.
Infectious Diarrhea*	Mild/Moderate/Severe	500 mg B.I.D.

pregnant women. SINCE CIPROFLOXACIN, LIKE OTHER DRUGS IN ITS CLASS, CAUSES ARTHROPATHY IN IMMATURE ANIMALS, IT SHOULD NOT BE USED IN PREGNANT WOMEN (SEE WARNINGS).

Nursing Mothers:

It is not known whether ciprofloxacin is excreted in human milk; however, it is known that ciprofloxacin is excreted in the milk of lactating rats and that other drugs of this class are excreted in human milk. Because of this, and because of the potential for serious adverse reactions from ciprofloxacin in nursing infants, a decision should be made to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.

Pediatric Use:

Ciprofloxacin should not be used in children because it causes arthropathy in immature animals (SEE WARNINGS).

ADVERSE REACTIONS

Ciprofloxacin is generally well tolerated. During clinical investigation, 2,799 patients received 2,868 courses of the drug. Adverse events that were considered likely to be drug related occurred in 7.3% of courses, possibly related in 9.2%, and remotely related in 3.0%. Ciprofloxacin was discontinued because of an adverse event in 3.5% of courses, primarily involving the gastrointestinal system (1.5%), skin (0.6%), and central nervous system (0.4%).

The most frequently reported events, drug related or not, were nausea (5.2%), diarrhea (2.3%), vomiting (2.0%), abdominal pain/discomfort (1.7%), headache (1.2%), restlessness (1.1%), and rash (1.1%).

Additional events that occurred in less than 1% of ciprofloxacin courses are listed below. Those typical of quinolones are italicized.

GASTROINTESTINAL: *blurred vision, disturbed vision, (change in color perception, overbrightness of lights), decreased visual acuity, diplopia, eye pain, tinnitus, bad taste.*

CENTRAL NERVOUS SYSTEM: *(See above), dizziness, lightheadedness, insomnia, nightmares, hallucinations, manic reaction, irritability, tremor, ataxia, convulsive seizures, lethargy, drowsiness, weakness, malaise, anorexia, phobia, depersonalization, depression, paresthesia.*

SKIN/HYPERSENSITIVITY: *(See above), pruritus, urticaria, photosensitivity, flushing, fever, chills, angioedema, edema of the face, neck, lips, conjunctivae or hands, cutaneous candidiasis, hyperpigmentation, erythema nodosum.*

SPECIAL SENSES: *blurred vision, disturbed vision, (change in color perception, overbrightness of lights), decreased visual acuity, diplopia, eye pain, tinnitus, bad taste.*

MUSCULOSKELETAL: *joint or back pain, joint stiffness, achiness, neck or chest pain, flare-up of gout.*

RENAL/UROGENITAL: *interstitial nephritis, renal failure, polyuria, urinary retention, urethral bleeding, vaginitis, acidosis.*

CARDIOVASCULAR: *palpitations, atrial flutter, ventricular ectopy, syncope, hypertension, angina pectoris, myocardial infarction, cardiopulmonary arrest, cerebral thrombosis.*

RESPIRATORY: *epistaxis, laryngeal or pulmonary edema, hiccough, hemoptysis, dyspnea, bronchospasm, pulmonary embolism.*

Most of these events were described as only mild or moderate in severity, abated soon after the drug was discontinued, and required no treatment.

In several instances, nausea, vomiting, tremor, restlessness, agitation, or palpitations were judged by investigators to be related to elevated plasma levels of theophylline possibly as a result of a drug interaction with ciprofloxacin.

Adverse Laboratory Changes: Changes in laboratory parameters listed as adverse events without regard to drug relationship:

Hepatic—Elevations of: ALT (SGPT) (1.9%), AST (SGOT) (1.7%), alkaline phosphatase (0.8%), LDH (0.4%), serum bilirubin (0.3%).

Hematologic—eosinophilia (0.6%), leukopenia (0.4%), decreased blood platelets (0.1%), elevated blood platelets (0.1%), pancytopenia (0.1%).

Renal—Elevations of: Serum creatinine (1.1%), BUN (0.9%).

CRYSTALLURIA, CYLINDRURIA, AND HEMATURIA HAVE BEEN REPORTED.

Other changes occurring in less than 0.1% of courses were: Elevation of serum gamma-glutamyl transferase, elevation of serum amylase, reduction in blood glucose, elevated uric acid, decrease in hemoglobin, anemia, bleeding diathesis, increase in blood monocytes, and leukocytosis.

OVERDOSAGE

Information on overdosage in humans is not available. In the event of acute overdosage, the stomach should be emptied by inducing vomiting or by gastric lavage. The patient should be carefully observed and given supportive treatment. Adequate hydration must be maintained. In the event of serious toxic reactions from overdosage, hemodialysis or peritoneal dialysis may aid in the removal of ciprofloxacin from the body, particularly if renal function is compromised.

DOSAGE AND ADMINISTRATION

The usual adult dosage for patients with urinary tract infections is 250 mg every 12 hours. For patients with complicated infections caused by organisms not highly susceptible, 500 mg may be administered every 12 hours.

Respiratory tract infections, skin and skin structure infections, and bone and joint infections may be treated with 500 mg every 12 hours. For more severe or complicated infections, a dosage of 750 mg may be given every 12 hours.

The recommended dosage for infectious diarrhea is 500 mg every 12 hours.

In patients with renal impairment, some modification of dosage is recommended (SEE DOSAGE AND ADMINISTRATION SECTION IN FULL PRESCRIBING INFORMATION).

HOW SUPPLIED

Cipro[®] (ciprofloxacin HCl/Miles) is available as tablets of 250 mg, 500 mg, and 750 mg in bottles of 50, and in Unit-Dose packages of 100 (SEE FULL PRESCRIBING INFORMATION FOR COMPLETE INFORMATION).

*Due to susceptible strains of indicated pathogens. See indicated organisms in Brief Summary.

**For further information, contact the Miles Information Service:
1-800-642-4776. In VA. call collect: 703-391-7888.**

COMMITTED TO THERAPEUTIC EFFICIENCY



Miles Inc.
Pharmaceutical Division
400 Morgan Lane
West Haven, CT 06516

Psychiatric Aspects of AIDS for the Non-Psychiatrist

Stanley P. Oakley, Jr., M.D.

Acquired Immunodeficiency Syndrome (AIDS) has become one of the nation's major health concerns. The early lack of scientific knowledge about AIDS led to an unfortunate media sensationalism that produced many polarized and judgmental opinions regarding this disease. The fact that AIDS was associated initially with stigmatized groups such as homosexuals, drug abusers and minorities, and also that it links two powerful human forces, sex and death, added to its unique impact.

Opposing opinions and reactions to AIDS have been published widely, but the American Medical Association Council on Ethical and Judicial Affairs recently ruled that it is unethical for a physician to refuse to treat a patient with AIDS.¹ As a result of this ruling, as well as of the increasing number of cases and the increasing knowledge about the medical aspects of this disease, more primary care physicians and health professionals will be caring for AIDS patients.

In addition to the physical sequelae, many psychiatric problems occur and may be overlooked as one medical crisis after another is pursued. AIDS patients repeatedly have stressed that their psychological needs have not been given enough attention.² This paper reviews the psychiatric factors and sequelae involved with the diagnosis of AIDS.

AIDS is a terminal disease with no definitive treatment and shares many features of other fatal illnesses, with some added considerations due to its unique social status. Several classifications of reactions to the diagnosis of AIDS have been proposed,^{3,4} but since many physicians will be familiar with the phases of denial, anger, bargaining, depression, and acceptance proposed by Kubler-Ross for terminal illness,⁵ this paper will use her classification to examine the personal impact of AIDS. It is important to remember that not all patients go through the stages in the same order, and they may progress, regress, or skip stages depending upon the individ-

ual and the course of the illness.

The first stage is denial. The initial reaction of the patient is shock and anxiety, alternating with a tendency to deny the presence of the illness.⁶ The patient may question the accuracy of the diagnosis, ignore the information given, or engage in risk-taking behavior in an unconscious attempt to deny or negate the danger. It frequently is useful to have a trusted companion accompany the patient when the diagnosis is presented, since the shock and denial may impair the AIDS patient's ability to assimilate the information.

It also is wise to see the patient again in a few days to review the situation. Denial usually is self-limited and can be allowed to run its course unless the patient is refusing needed treatment or continues to engage in self-destructive and unsafe behavior. In this case, the physician must walk a fine line between breaking down denial enough to instruct the patient in "safe sex" precautions, etc., without totally shattering the denial. The patient will signal the physician when the denial is yielding to reality, often by raising previously ignored and "forbidden" topics or by beginning to question the physician in an attempt to acquire a feeling of control over the illness. Due to our lack of knowledge and definite answers, this questioning can increase the stress and feelings of helplessness that most physicians feel while caring for a patient suffering from a fatal disease. The physician can cope with this by answering the patient's questions as accurately as possible while avoiding statistical data which frequently dehumanize and discourage the patient.

The anxiety during this stage can be greater in patients diagnosed as seropositive for Human Immunodeficiency Virus (HIV) or with AIDS-Related Complex (ARC) disorders, due to the increased uncertainty about the future course of their illness.⁷ In these cases, the physician's role is to remain accessible to the patient and to provide information while allaying irrational fears in order to assist the patient in coping with this uncertainty.⁸

Denial gives way to the stage of anger. In this phase patients begin to ask, "why me?" It is all too easy for patients to answer this by blaming their own sexual orientation or past drug use and to experience guilt and anger at themselves.

From the Department of Psychiatric Medicine, East Carolina University School of Medicine, Greenville 27858-4534.

Many will view their illness as punishment,⁹ while others will turn their anger toward society and the government for discrimination and lack of support. Some patients will be angry at having to disclose a previously private sexual orientation or lifestyle. If the anger is directed toward the patient's family or caregivers, the physician may need to help the recipients of this hostility understand what is occurring with the patient. The family may need help discussing feelings of conflict over a patient's lifestyle, possible guilt and shame, and questions of what to tell their friends and relatives as the patient's disease progresses. Finally, the anger may be projected upon the physician by a seemingly hostile, callous and non-compliant patient.¹⁰ If this occurs, the physician must understand the situation and avoid returning the anger and thereby increasing the patient's feelings of abandonment and rejection. The anger usually will pass if the patient is allowed to express the feelings openly in an empathetic atmosphere.

The next stage is a period of bargaining. This may not be noticeable to the physician as it frequently consists of the patient privately bargaining with his God in hopes of a cure. The patient will make a promise to do some sort of good for the world if only his illness will be removed. This stage is brief and of little clinical significance.

The fourth stage is grief or depression. In addition to facing the loss of all things in death, the AIDS patient is faced with coping with the attitudes of society towards AIDS, guilt over their own possible contributions to the situation, and potential physical disfigurement. Whereas most terminal illnesses produce a rallying of support systems around the patient, AIDS produces the opposite. These factors compound the depressive feelings common among patients at this stage.¹¹ Although previous reports have stated that suicide is uncommon in people with AIDS,¹² a recent study revealed that AIDS patients have a suicide rate 66 times higher than that of the general population.^{13,14} In view of this new information, all physicians should inquire about suicidal ideas and plans in AIDS patients with symptoms of depression.

Depression

The diagnosis of depression may be difficult in the AIDS patient due to the frequent presence of the AIDS Dementia Complex. This subcortical dementia is the result of direct brain infection by HIV.¹⁵ It will affect the majority of AIDS patients during the course of their disease,¹⁶ and may be the sole presenting symptom in up to one-fourth of cases.¹⁷ The early symptoms of the AIDS Dementia Complex imitate those of depression: decreased concentration; mental slowing; psychomotor retardation; apathy; and memory loss. As the dementia progresses, gait abnormalities and leg weakness appear, the patient may become globally demented and mute, and an organic psychosis or agitation may occur.

Postmortem examination of the brains of these patients reveals cerebral atrophy, glial nodes, and focal vacuolation in the white matter and subcortical nuclei.¹⁸

Since the early symptoms of the AIDS Dementia Complex resemble the vegetative symptoms of depression, the following points may be of assistance in differentiating between them. Serial "mini-mental state" examinations¹⁹ should be performed at one- to two-week intervals. These may uncover the early subtle cognitive deficits present in the AIDS-related organic brain syndrome.²⁰ If the examinations do not document organic deficits and the patient has been successfully treated for depression in the past, a trial of antidepressant medication may be given. The starting dose should be one-third the normal dose and drugs with low anticholinergic side effects such as trazodone, nortriptyline or desipramine should be used, since an organic component may make the patient hypersensitive to the side effects of these agents.²⁰ If the symptoms do not respond to therapeutic doses there is an increased probability that the patient is suffering from the neuropsychiatric effects of the virus, and a full organic evaluation, including lumbar puncture, computed tomography or magnetic resonance imaging may be indicated. Frequently, full neuropsychological testing can confirm the organic cognitive deficits while the clinical neurological studies are still normal.^{21,22} There have been reports that psychostimulants such as methylphenidate or dextroamphetamine improve patients' depressive, cognitive and psychomotor deficits, and these may be worth a trial if other medications fail.²³ The organic psychosis and agitation resulting from the AIDS Dementia Complex may be treated with standard antipsychotics, but again low anticholinergic drugs such as haloperidol or trifluoperazine should be used to reduce the possible side effects.

The organic brain syndrome described above is becoming more apparent in clinical studies and may actually "anesthetize" the patient, due to decreased mental function before the stage of acceptance occurs. In this final stage, acceptance is not synonymous with hopelessness. The patient accepts that he or she will die, but may retain hope that some curative drug will be developed. Other patients may become active in one of the AIDS self-help groups. During this phase, hope will rise and fall as new developments and treatments are reported. The physician must remain well informed in order to discuss these developments with the patient.

Most dying patients have a fear of abandonment and of dying alone. This fear is magnified in AIDS patients by the social attitude toward them and by the necessary isolation in health care facilities. One of the most valuable contributions a physician can make to the care of these patients is to be aware of his or her own feelings about this terminal disease and to give them reassurance early and often that they will not be abandoned, that the physician will remain with them throughout their illness.

In conclusion, the devastating physical aspects of AIDS may overshadow the emotional aspects unless the physician

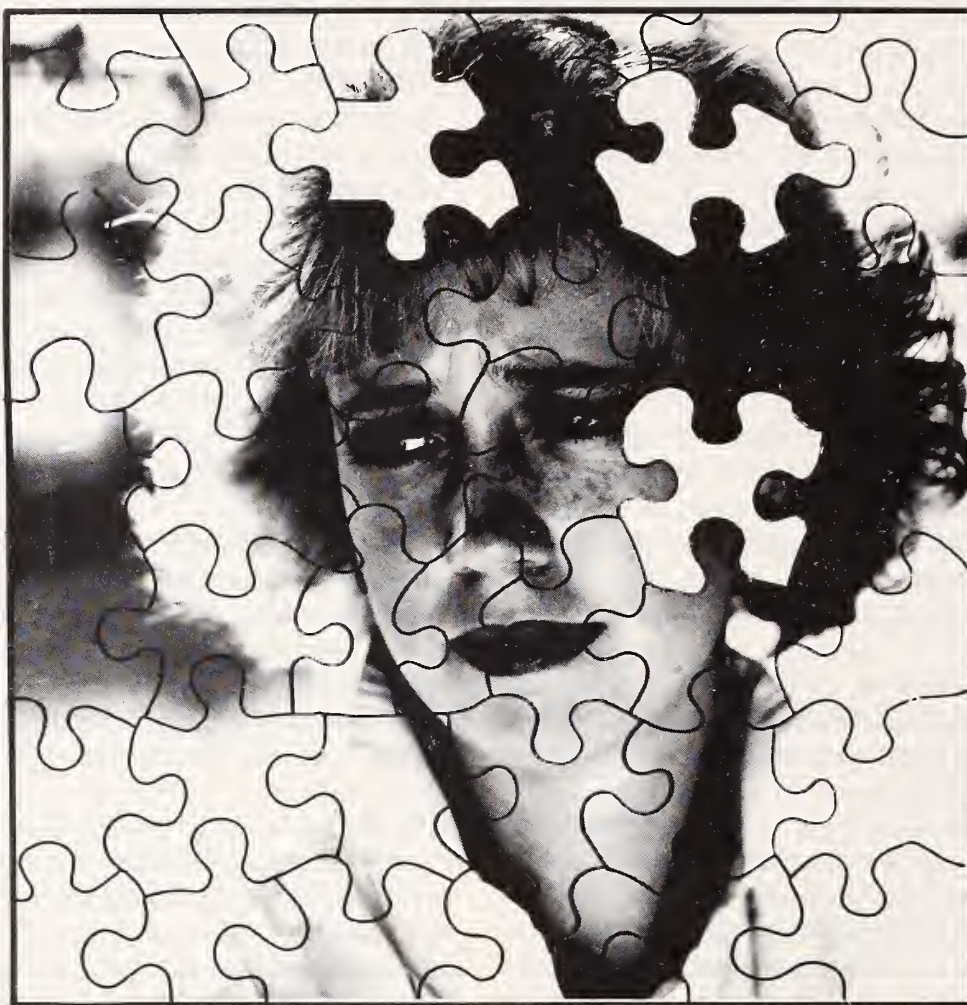
remains alert to them. The psychological impact and the direct effects of the virus on the brain are well documented and their management should be a part of the physician's treatment program. □

References

- 1 Council on Ethical and Judicial Affairs. Ethical issues involved in the growing AIDS crisis. *JAMA* 1988; 259:1360-1.
- 2 Morin SF, Charles KA, Malyon AK. The psychological impact of AIDS on gay men. *American Psychologist* 1984; 39:1288-93.
- 3 Forstein M. The psychosocial impact of the acquired immunodeficiency syndrome. *Seminars in Oncology* 1984; 11:77-82.
- 4 Nichols SE. Psychosocial reactions of persons with the acquired immunodeficiency syndrome. *Annals of Internal Med* 1985; 103:765-7.
- 5 Kubler-Ross E. *On death and dying*. New York: MacMillan Publishing Company, 1969.
- 6 Nichols SE. Psychiatric aspect of AIDS. *Psychosomatics* 1983; 24:1083-9.
- 7 Miller D. HIV counseling: some practical problems and issues. *J Roy Soc Med* 1987; 80:278-81.
- 8 Bickelhaupt EE. Psychosocial aspect of AIDS. *Kansas Med* 1986; 87:66-8,83.
- 9 Dilley JW, Ochitill HN, Perl M, et al. Findings in psychiatric consultations with patients with acquired immunodeficiency syndrome. *Am J Psychiatry* 1985; 142:82-6.
- 10 Holland JC, Tross S. The psychosocial and neuropsychiatric sequelae of the acquired immunodeficiency syndrome and related disorders. *Annals of Internal Med* 1985; 103:760-4.
- 11 Wolcott DL, Fawzy FI, Pasnau RO. Acquired immunodeficiency syndrome (AIDS) and consultation-liaison psychiatry. *Gen Hosp Psychiatry* 1985; 7:280-92.
- 12 Faulstich ME. Psychiatric aspects of AIDS. *Am J Psychiatry* 1987; 144:551-6.
- 13 Glass RM. AIDS and suicide. *JAMA* 1988; 259:1369-70.
- 14 Marzuk PM, Tierney H, Tardiff K, et al. Increased risk of suicide in persons with AIDS. *JAMA* 1988; 259:1333-7.
- 15 Navia BA, Price RW. Dementia complicating AIDS. *Psychiatric Ann* 1986; 16:158-66.
- 16 Navia BA, Jordan DD, Price RW. The AIDS dementia complex: I. Clinical features. *Ann Neurol* 1986; 19:517-24.
- 17 Navia BA, Price RW. The acquired immunodeficiency syndrome dementia complex as the presenting or sole manifestation of human immunodeficiency virus infection. *Arch Neurol* 1987; 44:65-9.
- 18 Navia BA, Cho ES, Petito CK, et al. The AIDS dementia complex: II. Neuropathology. *Ann Neurol* 1986; 19:525-35.
- 19 Folstein MF, Folstein SE, McHugh PR. "Mini-mental state." *J Psychiatric Res* 1975; 12:189-98.
- 20 Perry S, Jacobsen P. Neuropsychiatric manifestations of AIDS-spectrum disorders. *Hosp and Comm Psychiatry* 1986; 37:135-42.
- 21 Rundell JR, Wise MG, Ursano RJ. Three cases of AIDS-related psychiatric disorders. *Am J Psychiatry* 1986; 143:777-8.
- 22 Whiteford HA, Csernansky JG. Psychiatric aspects of acquired immune deficiency syndrome (AIDS). *Australian and New Zealand J Psychiatry* 1986; 20:399-403.
- 23 Fernandez F, Levy JK, Galizzi H. Response of HIV-related depression to psychostimulants: case reports. *Hosp and Comm Psychiatry* 1988; 39:628-31.

Alamance Psychiatric Center...

Helping Your Patients Put the Pieces of Their Lives Back Together



Sometimes things just move too fast, people lose control and their lives seem to shatter into a pile of mixed up pieces. That's when they need Alamance Psychiatric Center. We're here to help your patients put the pieces back together for a stable, productive life.

Our adult and adolescent units promote an atmosphere of caring and security to help your patients regain control of their own lives. Our inter-disciplinary approach uses innovative programs and individualized attention in working with people in need of help.

For more information and a free brochure, please call or write us. Putting the pieces together today.

Alamance Psychiatric Center
Alamance Memorial Hospital
Post Office Box 4008
Burlington, North Carolina 27215
919/229-2655

Alamance
Psychiatric
Center



Management of the Agitated Patient

A Pharmacological Update

James J. McGough, M.D., and Joseph R. Bona, M.D.

Acutely agitated patients are frequently encountered in psychiatric facilities, hospital emergency departments, intensive care units and general medical/surgical wards. Verbal reassurance and physical restraint are essential first interventions in controlling the agitated patient.¹ If these prove unsuccessful, a rational approach to pharmacotherapy is required for effective management.

In the 1930s bromides and barbiturates were utilized for sedation, but the risks of physical dependency, drug interactions and respiratory depression limited their safe use. An improved understanding of the biology of agitation and the development of newer medications have provided more effective means of pharmacological control. In this paper we review the major considerations in managing the agitated patient and present an update on pharmacological interventions useful in the acute setting.

General Considerations

Prior to initiation of pharmacological management, the physician must consider the course and etiology of agitation, the goal of treatment, the presumed disposition of the patient and the particular institutional policy regarding the use of forced medication.

The differential diagnosis of acute agitation is well described and will not be reviewed in depth.² Acute confusion, disorientation, mental slowness and abnormal vital signs suggest an organic process that necessitates a thorough medical workup. Auditory hallucinations, a clear sensorium, delusional but logical thought processes and presentation in young adults suggest a psychiatric disorder. Any available

history, particularly of past psychiatric illness or substance abuse, is helpful in the initial assessment.

It is best to avoid pharmacotherapy until a probable cause of agitation is determined. A general medical assessment, including full vital signs, must be obtained in every acutely agitated patient. Assessment may not be possible if the patient's disruptive state interferes with an adequate exam or if the patient and/or staff is at risk for harm. A physician should not order physical restraint or sedating medication without personally examining the patient.

Pharmacotherapies

When the underlying cause of agitation is clear, a specific treatment targeting the etiology can be initiated.³ Severe pain is best controlled with intravenous morphine at 2 to 10 mg/hr. Alpha-antagonists, such as clonidine, are useful in narcotic withdrawal and in blocking the major adrenergic effects of alcohol withdrawal. Benzodiazepines are indicated for alcohol withdrawal, delirium tremens and alcohol hallucinosis. Neuroleptics are primarily used for any psychotic process and general agitation.

When the specific cause of agitation is not evident, the clinician should administer sufficient medication to facilitate further assessment. Excessive medication can impede diagnosis particularly if the patient will be re-examined by a second physician or transferred to another service or treatment facility. This is especially true if the patient is to be committed to a state psychiatric hospital.

Neuroleptics

Neuroleptics are the most commonly used medications for control of agitated patients.⁴ Low potency neuroleptics, chlorpromazine (Thorazine) and thioridazine (Mellaril),

From Psychiatry Outpatient Clinic, Duke University Medical Center, Box 3812, Durham 27710.

provide increased sedation, but are associated with orthostatic hypotension and anticholinergic side effects. They are given orally or intramuscularly in doses of 25 to 50 mg. Management is complicated if repeated injections are required, as IM doses of low potency neuroleptics can cause local tissue necrosis.

High potency neuroleptics, haloperidol (Haldol), fluphenazine (Prolixin) and thiothixene (Navane), are more frequently utilized in the acute setting. Reliable control of agitation is provided without excessive sedation, hypotension or anticholinergic effects. High potency agents are associated with increased occurrence of extrapyramidal symptoms (EPS), which are easily managed by administration of an anticholinergic agent. All neuroleptics are associated with increased risk for development of tardive dyskinesia, particularly when used long-term.

For several years high loading doses of high potency agents were viewed as a means for rapid control of psychotic agitation.⁵ Neborsky et al showed that this is not correct. A true anti-psychotic response requires several days to weeks, and patients respond equally well to moderate versus high doses of drug.⁶ The "rapid tranquilization" achieved with high doses of neuroleptic is associated with an increased incidence of untoward effects. Tranquilization is better accomplished with use of agents intended for sedation.

Haloperidol is the most frequently used neuroleptic for acute control of agitated behavior. It is effective in oral (PO), intramuscular (IM) and intravenous (IV) forms. Generally, a 5 mg PO/IM dose, or a 2 mg IV dose, every four hours is sufficient for control of agitation. In extreme circumstances, the dose may be repeated at more frequent intervals, but rarely would a total daily dose greater than 30 mg be required.⁷ Oral doses are best given in concentrate form. If haloperidol is unavailable or contraindicated, equivalent doses of fluphenazine or thiothixene can be used. These drugs, however, are not available for IV use. Anticholinergic agents, such as diphenhydramine (Benadryl) 50 mg, benztropine (Cogentin) 2 mg or trihexyphenidyl (Artane) 5 mg, are used in PO or IM form should EPS occur.

Benzodiazepines

The utility of benzodiazepines in alcohol and sedative withdrawal has been mentioned. Benzodiazepines also provide an equally effective alternative to neuroleptics in the management of disruptive behavior. Studies indicate that in the first 24-hour period there is no difference between diazepam and haloperidol for control of psychotic agitation.⁸ Benzodiazepines have also proven useful in the acute management of mania.⁹ Unlike neuroleptics, there is no associated risk for development of EPS or tardive dyskinesia.

Therapeutic benefits of benzodiazepines include sedation, hypnosis, decreased anxiety, muscle relaxation and anticonvulsant activity. Untoward effects are rare in most

instances. Benzodiazepines can potentiate respiratory depression when combined with other central nervous system depressants. Mild hypotension can occur in severely intoxicated patients. Paradoxical disinhibition and increased confusion is reported in demented and elderly populations.¹⁰

Lorazepam (Ativan) is the most useful member of this class for the management of acute agitation. It is available in oral, intramuscular and intravenous forms. It is the only benzodiazepine with reliable IM absorption. Clinical effect is generally evident within 20 minutes. Unlike chlordiazepoxide (Librium), lorazepam's half-life is short and metabolites are renally excreted. It is therefore the preferred detoxification agent in patients with suspected liver disease.⁵

The dose of lorazepam administered depends upon the degree of agitation and the level of desired sedation. Lorazepam 1 to 2 mg PO/IM will generally provide light tranquilization. Doses of 2 to 4 mg PO/IM are usually effective for clinical sedation. Vital signs should be monitored regularly and the dose repeated every 30 minutes until the desired control is achieved.

Combination Therapy

Recent trials have utilized the antipsychotic potential of high potency neuroleptics with the sedative properties of benzodiazepines in a combination regimen.^{11,12} Rapid sedation and behavioral control is achieved with a relative absence of untoward effects. Over-sedation is reported in a small percentage of cases when medication was given more rapidly than recommended. Mean and total doses of medication required in combination were less than necessary when either drug class was administered alone. Additionally, benzodiazepines are known to potentiate the anti-psychotic response to neuroleptic treatment.⁷

Administration dosage and interval for combination therapy follow the same guidelines as with either medication alone. Haloperidol 5 mg and lorazepam 1 to 2 mg may be given orally or intramuscularly in a single syringe.¹³ The patient should be reevaluated every 30 minutes and additional doses given as indicated. Extrapyramidal symptoms, though rare, are managed with conventional anticholinergic agents. Should total dosage exceed 15 mg haloperidol and 6 mg lorazepam, the physician should reconsider an undiagnosed organic etiology.

Conclusion

Pharmacotherapy is indicated for acutely agitated behavior when less restrictive measures fail to produce necessary control. High potency neuroleptics and benzodiazepines are relatively safe and equally effective in the acute management of disruptive behavior. Neuroleptics and benzodiazepines in combination provide effective, rapid sedation with enhanced

anti-psychotic effect while minimizing total medication and associated side effects. □

References

- 1 Dubin WR. Evaluating and managing the violent patient. *Ann Emerg Med* 1981; 10:481-4.
- 2 Anderson WH, and Keuhnle JC. Diagnosis and early management of acute psychosis. *NEJM* 1981; 305:1128-30.
- 3 Young GP. The agitated patient in the emergency room. *Emerg Med Clinics North Am* 1987; 5:765-81.
- 4 Jacobs D. Evaluation and management of the violent patient in the emergency setting. *Psychiatric Clinics North Am* 1983; 6:259-69.
- 5 Dubin WR, Weiss KJ, Dorn JM. Pharmacotherapy of psychiatric emergencies. *J Clin Psychopharm* 1986; 6:210-22.
- 6 Neborsky R, Janowski D, Munson E, et al. Rapid treatment of acute psychotic symptoms with high and low dose haloperidol. *Arch Gen Psychiatry* 1981; 38:195-9.
- 7 Baldessarini RJ. *Chemotherapy in psychiatry*. Cambridge: Harvard University Press, 1985.
- 8 Lerner Y, Lwow E, Levitin A, et al. Acute high-dose parenteral haloperidol treatment of psychosis. *Am J Psychiatry* 1979; 136:1061-4.
- 9 Modell JG, Lenox RH, Weiner S. Inpatient clinical trial of lorazepam for the management of manic agitation. *J Clin Psychopharm* 1985; 5:109-13.
- 10 Feldman MD. Paradoxical effects of benzodiazepines. *NCMJ* 1986; 47:311-2.
- 11 Garza-Trevino ES, Hollister LE. Haloperidol combined with lorazepam for agitation. Presented at the 141st Annual Meeting of the American Psychiatric Association in Montreal, Quebec, Canada 1988.
- 12 Salzman C, Green AI, Rodrigues JF, et al. Benzodiazepines combined with neuroleptics for the management of severe disruptive behavior. *Psychosomatics* 1986; 27 (suppl):17-22.
- 13 Wyeth Laboratories, personal communication.

Will your Disability Insurance pay off?

*"If Inadequate Benefits
Don't Get You...
Policy Loopholes
Might."*

That was the title of an article that appeared in *Medical Economics*. How will your disability coverage pay at claim time? New concepts now available may mean that your current policy is out-dated.

Simply return the coupon for a **FREE Disability Insurance Audit**.

It costs nothing to investigate. Why not do it today.

COMPENSATION CONSULTANT

Specialists in Compensation Replacement

YES, I'd like more information about:

- ☐ Free Disability Insurance Audit
- ☐ Variable Premium Disability Income Plans
- ☐ Retirement Benefit Disability Income Plans
- ☐ Vanishing Premium Disability Income Plans
- ☐ Return of Premium Disability Income Plans

Name _____

Address _____

City _____ State _____ Zip _____

Telephone _____

Date of Birth _____

Mail coupon to:

Compensation Consultant • P.O. Box 9384 • Hickory, NC 28603

NCMJ2

*Financial services that will get
you in shape for the future.
That's Blue Chip.*

We have a variety of insurance and investment options to make sure your future is financially strong. For example:

- Tax shelters, to keep more of your money working for you;
- Annuities, to make money available at retirement or whenever you need it;
- Insurance, to protect your family, your business and your income.

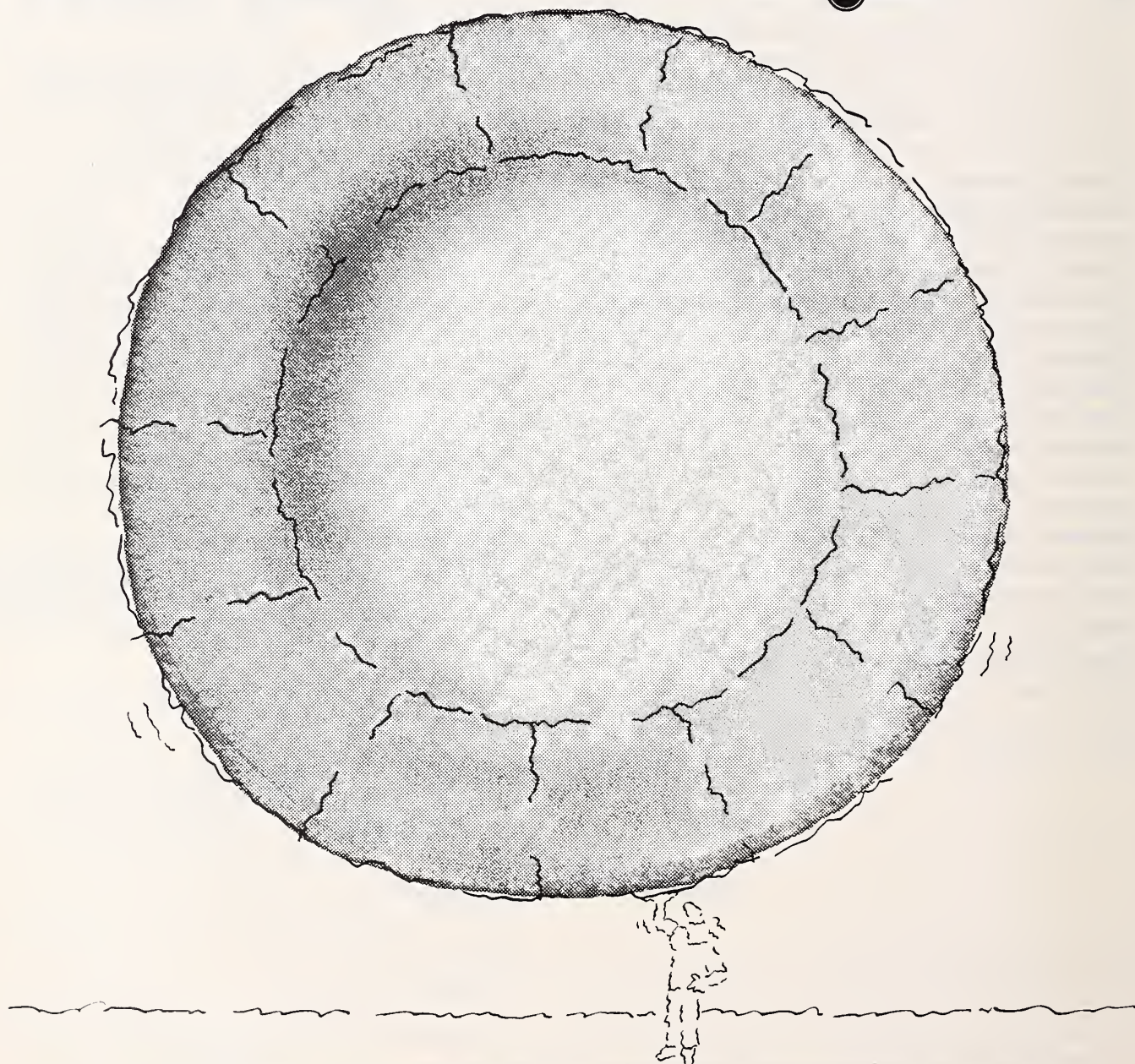
Our specialists will help you identify your needs and develop a program that's right for you.

Start shaping your future today.
Call or write us for details.

The Hinrichs Financial Group

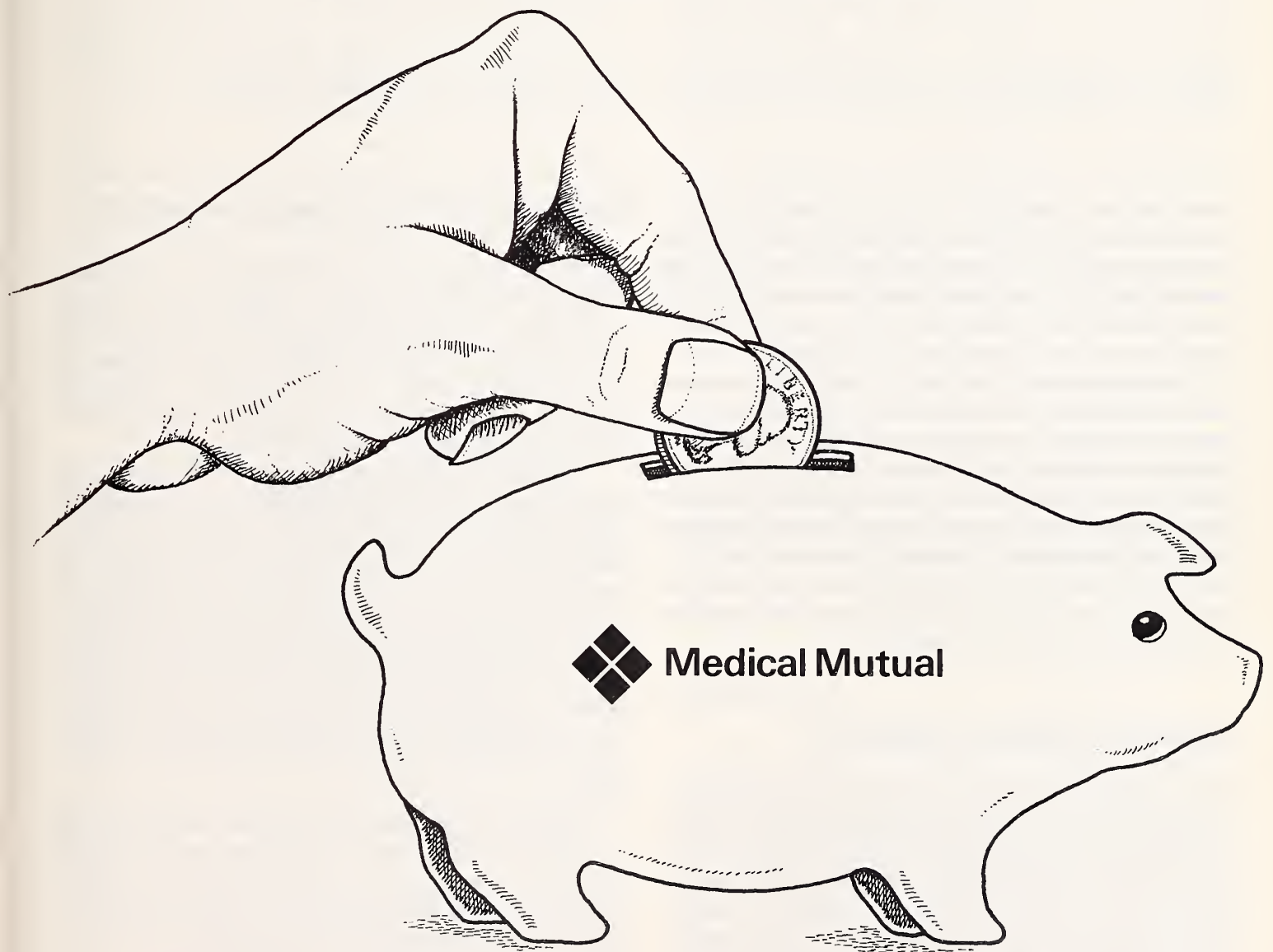
1600 Charlotte Plaza Charlotte, NC 28244
(704) 371-8600

An affiliate of the  **CM Alliance**



Connecticut Mutual Life Insurance Co. (Hartford CT) • Connecticut Mutual Financial Services, Inc. • CM Life Insurance Company • Diversified Insurance Services of America, Inc. and its affiliates

Medical Insurance Agency. It's Like Doing Business With Yourself.



Medical Insurance Agency is not like any other insurance agency. When you do business with us, the profits come back to you.

It's simple, really. Medical Insurance Agency is a subsidiary of Medical Mutual that provides a full line of insurance policies geared to physicians' needs. While Medical Mutual provides professional liability coverage on a break-even basis, the Agency serves as an income source, returning profits to the company.

Endorsements from both the North Carolina Medical Society and

North Carolina Dental Society have helped Medical Insurance Agency demonstrate its potential. In 1987 profits generated by the Agency benefited all Medical Mutual policyholders, in effect subsidizing each professional liability premium by \$32. Members of the North Carolina Medical Society save again through lower rates on premiums.

And that's just the beginning. The state's professional endorsements give Medical Insurance Agency great buying power, which results in special coverages and prices for our insureds.

This means that we can continue to enhance our policies to meet the unique needs of physicians, with special programs such as our non-cancellable disability income plan to protect your future earnings.

Doing business with Medical Insurance Agency. It's simply good business.



Medical Insurance Agency, Inc.

Subsidiary of Medical Mutual Insurance Company
of North Carolina

Suite 101 Lower Level, 222 North Person Street
Post Office Box 28388 Raleigh, NC 27611-6088
919/828-9336 1/800-822-6561

Approaches to Insomnia

Helping Patients, Avoiding Pitfalls, Doing No Harm

Jerry G. Gregory, M.D., Everett C. Simmons, M.D., and Bruce R. Berger, M.D.

Sleep problems, alone or in combination with other problems, are among the most frequently encountered symptoms in medical practice.^{1,2} An adequate history which considers the full range of disorders and conditions that may lead to sleep problems is necessary in order to make a correct diagnosis and choose appropriate interventions.³

Physicians must be careful not to succumb to the temptation to intervene with quick solutions which may, in the long run, increase the patient's problems. For example, reliance on hypnotic medications is fraught with potential difficulties. Hypnotics do not represent good long-term solutions and they can aggravate existing problems as well as create drug dependency.⁴ Adequate assessment should include the uncovering of underlying causes and, in the instance of psychological etiologies, the patient's possible contribution (e.g., denial of conflict).

Causes of Sleep Problems

Sleep complaints often are symptoms of the major common psychiatric disorders such as schizophrenia, the affective disorders and anxiety states. Medical problems such as narcolepsy or sleep apnea, or problems which create pain and discomfort, are other sources of sleep complaints. Medications which can contribute to sleep difficulties include adrenergic and dopaminergic agonists, steroids, thyroid hormone, antihypertensives, anticonvulsants, narcotics, cancer chemotherapeutic agents, antidepressants, and antipsychotics.⁵ Substance abuse with alcohol,^{6,7} central nervous system depressants, tobacco,⁸ or stimulants (including caffeine⁹) can cause sleep complaints.

Evaluation of the Sleep Complaint

The physician should obtain a full description of the sleep complaint early in the workup. Kales et al have recommended that this description include the characteristics and clinical course of the sleep problem; at a minimum, its duration, the circumstances under which it developed, precipitating or accentuating factors, previous treatment, and the impact of the problem on the patient's life.¹⁰

The time of the sleep problems and the regularity of the patient's sleep patterns may be helpful information in establishing a diagnosis. When the patient complains of difficulty falling asleep, the physician should pay attention to the patient's routine prior to going to bed and to the thoughts and feelings the patient experiences as he or she attempts to go to sleep. Middle insomnia (difficulty staying asleep) may be associated with physical discomfort and pain or with the nightmares of post-traumatic stress disorders and mood disorders. Late insomnia (early morning awakening) frequently is associated with major depression and mood disorders with psychosis.

Interviewing the patient's bed partner can help establish a diagnosis such as nocturnal myoclonus, characterized by vigorous movements during sleep, or sleep apnea, of which the bed partner is more aware than the patient. The bed partner also may help identify the interpersonal and emotional conflicts the patient is experiencing.

Narcolepsy is a specific disorder, characterized by sleep attacks, hypnagogic and hypnopompic hallucinations, cataplexy, and sleep paralysis. If the physician suspects sleep apnea, nocturnal myoclonus, or narcolepsy, laboratory sleep studies are indicated.¹¹

Interventions

The physician should communicate to the patient the need for thorough medical and psychological assessment prior to treatment. The latter is especially true with patients who wish to avoid discussion of sensitive interpersonal or intrapsychic

From Department of Psychiatric Medicine, East Carolina University School of Medicine, Greenville 27858-4354.

issues. The physician explores with the patient the possibility of psychological problems so that their connection to the sleep problem can be established. The physician must help the patient understand that these problems must be remedied before the sleep difficulties will disappear.

Acute transient insomnia often is self-correcting or safely responds to the brief use of sedatives (discussed below). Chronic psychologically-induced insomnia, however, may require intervention which involves close examination, by physician and patient, of psychological issues. Kales has described the chronic insomniac as someone who internalizes conflict. He says this leads to emotional arousal that results in physiologic arousal and insomnia. The patient inhibits, denies, or represses conflict during the day, but when defenses relax and regression occurs at night, anger and sadness may become conscious. The person struggles against these feelings and insomnia worsens. The result is a cycle of sleeplessness, anxiety and fear of insomnia at bedtime, increased physiologic arousal, and increased insomnia.^{5,12,13} Berlin, in writing about psychotherapy with chronic insomniacs, argues that the therapist must aggressively pursue areas of psychological conflict because of the patient's tendency to deny them.¹⁴

The chronic insomniac frequently presents sleep complaints as if he or she were a victim. This patient may pressure the physician to assume full responsibility for his or her sleep. The physician who enjoys the role of active problem-solver may readily assume this responsibility only to discover that this leads to poor long-term results. The responsive physician seeks solutions which allow the patient mastery and do not require continued intervention by the physician. The results are better when the physician actively involves the patient from the onset in the search for solutions, beginning with a history of the sleep problem through which the physician and patient explore possible interpersonal, medical, and psychiatric causes. A sleep diary maintained by the patient may help identify more accurately sleep/wakefulness patterns and increase the patient's awareness of his or her contribution to the problem.

The use of sedatives has been discussed by a number of researchers. Results of their studies suggest that sedatives should be utilized as adjunctive treatments and should not be regarded as the sole remedy to sleep complaints.¹⁵ Benzodiazepines are regarded as considerably safer than barbiturates and other sedative medications. There are three benzodiazepine drugs commonly in use: flurazepam (Dalmane), temazepam (Restoril), and triazolam (Halcion). Anthony and Joyce Kales summarize their effects as follows: Flurazepam is effective for the induction and maintenance of sleep; it shows some loss of effectiveness only with long-term use; daytime sleepiness is its most troublesome side effect. Temazepam is ineffective for the induction of sleep; it has slight to moderate effectiveness for the maintenance of sleep; with continued administration it is ineffective for the induction of sleep and has slight effectiveness for the maintenance of sleep; morning sleepiness and rebound insomnia are side

effects. Triazolam, pharmacologically the most potent benzodiazepine, is effective for the rapid induction of sleep; there is considerable loss of effectiveness with intermediate-term use; since it has a very short half-life, amnesia, early morning insomnia, daytime anxiety, and rebound insomnia are side effects.⁵

Choice of medication will depend upon the patient's life and work situation as well as individual responses to these drugs. Flurazepam may be—generally—the most useful and the safest of these medications. Flurazepam can be used with the chronic insomniac to give some relief and to restore confidence that he or she can obtain relief. Again, attempts should be made to utilize other modalities of assistance as the long-term reliance on medication can become problematic. In the depressed patient with early morning awakening, the more sedating antidepressants—amitriptyline, doxepin, or trazodone—may help restore normal sleep. If patients are made aware of the problems associated with the use of various hypnotics, they can understand and cooperate with the physician's suggestions regarding the use and limitations of the medications.

All of the above suggests that the physician must take additional time in the beginning with the patient who presents with sleep complaints. Active, directed questions to the patient about his or her interpersonal situation, emotional state, and physical health status are most productive. Ideally, the patient and physician should discuss formulating a workable solution and carrying it through. This approach helps alleviate the patient's sense of powerlessness and restores his or her confidence in self-help. □

References

- 1 Bixler EO, Kales A, Soldatos CR. Sleep disorders encountered in medical practice: a national survey of physicians. *Behavioral Medicine* 1979;6:1-6.
- 2 Bixler EO, Kales A, Soldatos CR, et al. Prevalence of sleep disorders in the Los Angeles metropolitan area. *Am J Psychiatry* 1979;136:1257-62.
- 3 Kales A, et al. Common shortcomings in the evaluation and treatment of insomnia. In Kagan F, et al, (eds), *Hypnotics: methods of development and evaluation*. New York: Spectrum Publications, 1975, pp. 29-40.
- 4 Consensus conference: drugs and insomnia: the use of medications to promote sleep. *JAMA* 1984;251:2410-4.
- 5 Kales A, Kales JD. *Evaluation and treatment of insomnia*. New York: Oxford University Press, 1984.
- 6 Issa FG, Sullivan CE. Alcohol, snoring and sleep apnea. *J Neurol Neurosurg Psychiatry* 1982;43:353-9.
- 7 Rundell OH, Lester BK, Griffiths WJ, et al. Alcohol and sleep in young adults. *Psychopharmacologia* 1972;26:201-18.
- 8 Soldatos CR, Kales JD, Scharf MB, et al. Cigarette smoking associated with sleep difficulty. *Science* 1980; 207:551-3.

- 9 Karacan I, et al. Dose-related sleep disturbances induced by coffee and caffeine. *Clinical Pharmacology and Therapeutics* 1976;20:682-9.
- 10 Kales A, Soldatos CR, Kales JD. Taking a sleep history. *Am Fam Physician* 1980;22:100-7.
- 11 Coleman RM, Roffwarg HP, Kennedy SJ, et al. Sleep-wake disorders based on a polysomnographic diagnosis: a national cooperative study. *JAMA* 1982;247:997-1003.
- 12 Kales A, Caldwell AB, Soldatos CR, et al. Biopsychobehavioral correlates of insomnia. II. Pattern specificity and consistency with the Minnesota Multiphasic Personality Inventory. *Psychosom Med* 1983;45:341-56.
- 13 Kales A, Caldwell AB, Preston TA, et al. Personality patterns in insomnia: theoretical implications. *Arch Gen Psychiatry* 1976;33:1128-34.
- 14 Berlin RM. Psychotherapeutic treatment of chronic insomnia. *Am J Psychother* 1985;39:68-74.
- 15 Kales A, Kales JD. Sleep laboratory studies of hypnotic drugs: efficacy and withdrawal effects. *J Clin Psychopharmacol* 1983;3:140-50.

Addiction causes multiple problems... We offer multiple solutions.

Addiction affects every person differently — it's a medical, spiritual and psychological problem. The Duke Alcoholism and Addictions Program, part of one of the nation's leading medical centers, has the resources to diagnose and treat the many aspects of addiction, both conveniently and confidentially.



For more information on how the Duke Alcoholism and Addictions Program can help, call 684-3850.

**Duke Alcoholism
& Addictions Program**

YOCON® YOHIMBINE HCl

Description: Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubiaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalamic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympatholytic and mydriatic. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.^{1,2} Also dizziness, headache, skin flushing reported when used orally.^{1,3}

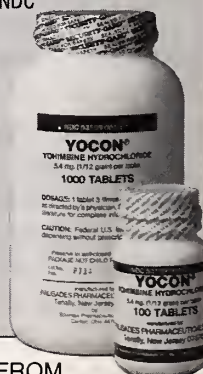
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.^{1,3,4} 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to 1/2 tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.³

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:

1. A. Morales et al., *New England Journal of Medicine*: 1221, November 12, 1981.
2. Goodman, Gilman — *The Pharmacological basis of Therapeutics* 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. *Weekly Urological Clinical letter*, 27:2, July 4, 1983.
4. A. Morales et al., *The Journal of Urology* 128: 45-47, 1982.

Rev. 1/85



AVAILABLE EXCLUSIVELY FROM
**PALISADES
PHARMACEUTICALS, INC.**
219 County Road
Tenafly, New Jersey 07670
(201) 569-8502
Outside NJ 1-800-237-9083

THE ARMY RESERVE OFFERS NEW FINANCIAL INCENTIVES FOR RESIDENTS.



If you are a resident in Anesthesiology or Surgery*, the Army Reserve has a new and exciting opportunity for you. The new Specialized Training Assistance Program will provide you with financial incentives while you're training in one of these specialties.

Here's how the program can work for you. If you qualify, you may be selected to participate in the Specialized Training Program. You'll serve in a local Army Reserve medical unit with flexible scheduling so it won't interfere with your residency

training, and in addition to your regular monthly Reserve pay, you'll receive a stipend of \$678 a month.

You'll also have the opportunity to practice your specialty for two weeks a year at one of the Army's prestigious Medical Centers.

Find out more about the Army Reserve's new Specialized Training Assistance Program.

Call or write your US Army Medical Department Reserve Personnel Counselor:

**Army Reserve Health Care Team
2634 Chapel Hill Blvd.
Suite 205
Durham, NC 27707-2875
(919) 493-1364 Collect**

* General, Orthopaedic, Neuro, Colon/Rectal, Cardio/Thoracic, Pediatric, Peripheral/Vascular, or Plastic Surgery.

ARMY RESERVE MEDICINE. BE ALL YOU CAN BE.



An average day for an average patient

She's 42 years old, married, a homemaker. And, she's depressed. Her symptoms include chronic fatigue, hopelessness, loss of appetite, loss of sleep. It's been going on for a long, long time. You've treated her physical complaints for years, but the symptoms persist.

You need results. The Adult Mental Health Unit of Craven Regional Medical Center provides a comfortable, confidential environment where patients get better. It's not an expensive, free-standing psychiatric facility, but a community hospital providing a full range of diagnostic and emergency medical treatment for psychiatric patients.

Staff psychiatrists and specially trained clinicians develop a cost-conscious treatment plan to discharge the patient back to you

as quickly as possible. Feeling better than they have in a long, long time.

For information about treatment programs, call our physicians' hotline at 800-682-0276 and ask for Adult Mental Health. (In Craven County, call 633-8203.)

Patients are admitted 24 hours a day • JCAH approved • DRG exempt • Non-county residents welcome • 24 private and semi-private beds • Involuntary admissions possible.

ADULT MENTAL HEALTH UNIT

Craven Regional Medical Center
P. O. Box 2157 • 2000 Neuse Boulevard
New Bern, North Carolina 28561
(919) 633-8203
(800) 682-0276 Toll Free in NC



**CRAVEN REGIONAL
MEDICAL CENTER**

Coastal Carolina's Choice

Panic Disorder and Agoraphobia

An Update For Primary Care Physicians

William L. Anixter, M.D.

"Doctor, the emergency room is on the phone. Mr. B. is down there again complaining of chest pain and shortness of breath. They have checked him over again just to be on the safe side, but EKG, chest X-ray, physical exam, and labwork are all normal. It's just like all the other times this has happened. What do you want them to do?"

"Doctor, I know you are going to think I'm crazy when I tell you this, but I have to tell someone. We were attending church a few weeks ago, just like we always do. Nothing unusual was happening. It was a normal Sunday service. I was just sitting there when suddenly I felt afraid, very afraid. My heart started beating so hard, I thought it was going to give out. I felt hot and I started to sweat. Then I felt like I couldn't breathe right. It was like I was going to suffocate, I didn't think I could fill my lungs with air. I began to feel dizzy and my hands got numb. I was sure I was going to die. I had to leave the service. By the time I got outside, the feeling started going away. Doctor, the strangest part is that there was nothing at all to be afraid of. I've attended that same church for years. Even though I knew that, I was still worried that if I went back to church, it could happen again. I told my family I was too sick to go the last couple of weeks, but I can't keep on making excuses. Doctor, what's wrong with me?"

These vignettes are examples of two closely related frightening and dramatic psychiatric conditions, Panic Disorder and Agoraphobia, which are very common. Because they present with such sudden and intense physical symptoms and associated fears, such patients will frequently be encountered in emergency rooms and primary care settings. It is important that primary care clinicians learn to recognize these disorders. With early diagnosis and treatment, Panic Disorder is one of the most treatable psychiatric illnesses.

Failure to recognize this disorder or to provide effective intervention can contribute to the development of complex and severe secondary difficulties.

Published outcome studies describe significant clinical improvement in 75% to 90% of patients treated pharmacologically. Most patients will require four to eight weeks to respond and need six to twelve months of treatment. There is a trend toward relapse after discontinuing pharmacological therapy. Published success rates of behavioral therapy without adjunctive medications are in the 60% to 70% range with sustained benefits up to five years after treatment. There is great interest in the combined use of pharmacotherapy and behavioral therapy to take advantage of beneficial aspects of both forms of treatment.

Clinical Presentation—Panic Disorder

The key to understanding this disorder is the central event, the panic attack (or anxiety attack). According to the American Psychiatric Association's current diagnostic system (DSM-III-R), Panic attacks are defined as "discrete periods of intense fear or discomfort, with at least four of the following characteristic associated symptoms:"¹ chest pains or pressure; shortness of breath or smothering sensation; dizziness, faint or unsteady feelings; palpitations or tachycardia; trembling or shaking; sweating; choking; nausea or abdominal distress; feeling that things aren't real or seem strangely detached; numbness or paresthesia; hot flashes or cold chills; fear of dying; or fear of going crazy or of doing something uncontrolled while having an attack.

Other commonly seen symptoms include: increased sensitivity to light, sound, and touch; blurred vision; muscle tension or pain; diarrhea; dry mouth; or mental confusion and trouble concentrating.

These attacks are sudden and short-lived. Typically they last minutes—rarely hours. The severity of a panic attack is so intense that patients generally have little difficulty describing these experiences as discrete and memorable events which they will do almost anything to avoid in the future.

Dr. Anixter is the Director of Panic, Anxiety, and Phobia Treatment, Highland Hospital, Box 1101, Asheville 28802, and assistant Consulting Professor of Psychiatry, Duke University Medical Center, Durham 27710.

Most people have had some personal experience with anxiety attacks. Norton surveyed 186 normal young adults and found that approximately 35% of them reported having at least one panic attack in the last year.²

Four key features define the clinically important panic attack. First, what separates the fright of which every person is capable from that of someone who becomes acutely anxious and who may develop a panic disorder is the patient's explanation for the experience. Symptoms of fear are reasonable and understandable reactions to discernible danger. If you were on an airplane that hit severe turbulence and the plane dropped quickly, you might feel acutely anxious. One look around would provide validation that the situation was frightening and that other people were also responding in an anxious manner. If you felt the same way in the absence of external validation, however, you might fear that something dangerous and potentially life-threatening was happening within your body.

Second, these attacks are unexpected, at least initially, and leave the person feeling vulnerable and out-of-control. It is not uncommon for patients to describe panics that wake them from deep sleep.

Third, in Panic Disorder, either the panic attacks occur frequently or the patient develops a persistent fear of having further attacks (anticipatory anxiety). The APA suggests that the diagnosis of Panic Disorder be made either when there have been four or more attacks in a month's time, or when one or more attacks have been followed by at least a month of

persistent fear of having another attack.

The final criterion for diagnosis of Panic Disorder is that usually no organic factor can be found to be responsible for the disturbance. In my experience, it is in making this determination that the primary care clinician faces the greatest clinical challenge. The list of medical conditions that can present with panic symptoms is long and varied (see table 1). Complete and exhaustive evaluation of all of the possibilities is time-consuming and expensive, requires multiple consultations with specialists, and is usually unnecessary. Keeping in mind the clinical picture of Panic Disorder and its prevalence in the community will help during the evaluation. Careful history taking with simple laboratory testing should assist the clinician in eliminating organic causes. CBC, screening blood chemistries, EKG, chest X-ray, thyroid screening tests, and urinalysis are worth obtaining routinely. Other tests such as Holter monitoring, echocardiogram, CAT Scan, MRI Scan, glucose tolerance testing, ENG, EEG, or 24-hour urine collections should be reserved for situations raising specific clinical suspicions. They may also be considered during further evaluation in the cases of treatment failure.

The most common organic basis for panic attacks is the category of sensitivity/toxicity/withdrawal effects. Substances that can be involved include prescribed therapeutic substances, like bronchodilators or decongestants; over-the-counter preparations, such as appetite suppressants or stimulants; as well as "recreational" drugs such as cocaine or

Table 1.
Medical Conditions that May Present with Symptoms Similar to Panic

<u>Endocrine</u>	<u>Cardiac/respiratory factors</u>	<u>Other factors</u>
Thyroid dysfunction	Mitral valve prolapse	Irritable bowel syndrome
Hypoglycemia	Angina	Anemia
Pheochromocytoma	Cardiac arrhythmias—hyperkinetic	Allergies
Hyperparathyroidism/hypoparathyroidism	heart syndrome	Sensitivity/toxicity to stimulants or drugs:
Cushing's Syndrome	Hypoxia—COPD—asthma	caffeine, amphetamines,
Postpartum disorders	Pulmonary embolism—recurrent	cocaine, marijuana, decongestants, bronchodilators, appetite suppressants
	Vasovagal syncope	Withdrawal effects of CNS depressants:
	Orthostatic hypotension	alcohol, sedatives, also nicotine withdrawal
		Nicotine withdrawal
<u>Neurologic</u>	<u>Other psychiatric illnesses</u>	
Partial complex seizures	Endogenous depression	
Vertigo—Meniere's Disease	Bipolar disorders	
Vestibular disturbances—benign positional vertigo	Post-traumatic stress disorders (including abuse syndromes)	
TIA's		
Brain tumors		

marijuana. It is also wise to ask the patient in detail about caffeine and alcohol consumption. There appears to be a high incidence of mitral valve prolapse (MVP) in patients with Panic Disorder. The clinical significance of this finding is not yet clear. The presence of MVP does not, however, preclude making the diagnosis of Panic Disorder.

Epidemiologic studies using these criteria show that Panic Disorder has a six-month prevalence of about 1%. Women are affected more than men. The age of onset is in the twenties and thirties and the age range 25 to 44 is most affected. The rates are lowest in persons over age 64. There is no consistent relationship to race or education. The condition is found more often in urban than in rural settings.³

Clinical Course of Panic Disorder

Left untreated, Panic Disorder can become chronic and deteriorating. Frequent panic attacks force the patient to find some way to cope. A common strategy is for the person to avoid any place or situation where he or she had previously experienced panics as well as any situation in which he or she would feel trapped should another panic occur. This pattern of avoiding situations out of fear of incapacitating symptom attacks is known as Agoraphobia. It is a common consequence of Panic Disorder. Each time a patient gives up an activity in order to help guard against panic, a degree of freedom is lost, and life becomes more and more constricted. In the most severe cases, this condition has caused people to be housebound for many years.

Another major complication of Panic Disorder is the development of depression. Exhausting symptom attacks, demoralization associated with a loss of freedom, dependency on others, and an increasing sense of vulnerability can combine to produce a full clinical depression. Recent data show that patients with both anxiety and depressive symptoms are at an increased risk for suicide compared to patients who suffer depression without anxious symptoms.⁴

Many panic patients discover that alcohol or tranquilizers reduce their symptoms of anxiety. The risk of abusing sedatives or alcohol, therefore, is significant. There are estimates that as many as 25% of panic-agoraphobic patients are problem drinkers and 10% to 15% are alcohol-dependent.⁵ Similarly, several studies have shown that approximately one-third of inpatient alcoholics have histories suggesting panic disorder preceding the onset of drinking behavior. Significant family and marital problems can develop when one family member becomes dysfunctional.

Etiology

The pathophysiology of panic disorder has been the subject of hundreds of research papers in the last ten years. (Those who are interested are referred to the excellent review in

Shear & Fyer.⁶) A wide variety of potential explanations has emerged. While there is no current consensus, there are some important trends to the research. Family studies have shown that panic disorders run in families. The lifetime risk of a first-degree relative of a patient with panic disorder is over 20%. Monozygotic twins show a concordance rate for panic significantly higher than dizygotic twins. Thus, there does appear to be an inherited biological vulnerability to panic. What is still not known is the nature of the vulnerability or whether such vulnerability is necessary or sufficient to develop the disorder.

There are two leading theories. One theory suggests an abnormality in central nervous system noradrenergic functioning, caused either by deficient alpha-2 receptors or by abnormalities in the Locus Coeruleus, a small noradrenergic nucleus in the base of the fourth ventricle. The second theory suggests an abnormality in central sensitivity to pH or CO₂, leading to susceptibility to changes in respiratory patterns or increased serum lactate levels. It is likely that in the large group of patients with panic disorder there are heterogeneous subgroups with different vulnerabilities. The concept of vulnerability as a biologically determined threshold should be discussed with patients. The higher the threshold, the more stress or pressure a person can tolerate without panic; the lower the threshold, the greater the risk.

Once a person has the vulnerability, what determines whether or not he or she will develop the disorder? There appear to be significant environmental and psychological factors that influence the clinical picture. Several studies have shown a high number of negative life events in the six months preceding the first panic attack in 80% of patients. Psychiatrists and psychologists recognize that the way a person responds to panic symptoms is influenced by personality factors and cognitive style. Patients with the most severe manifestations of the disorder are, in general, those who solve problems by imagining the worst-case scenario and planning accordingly. Those patients who catastrophically interpret a symptom—"My chest hurts, therefore, I'm having a heart attack"—are most at risk.

Clinical Presentation of Agoraphobia

Agoraphobia is defined as the "fear of being in situations in which escape might be difficult or in which help might not be available" in case the agoraphobic developed an incapacitating symptom. The six-month prevalence for agoraphobia ranges between 2.5% and 5.8%. Women outnumber men three to one. Agoraphobia can develop from multiple symptoms—as in panic disorder—or from single severe symptoms such as dizziness, chest pain, bowel urgency, or vomiting. In mental health clinics, the most common presentation is that of Agoraphobia secondary to Panic Attacks. Studies show, however, that Agoraphobia secondary to limited-symptom complexes—such as irritable bowel syndrome,

cardiac disease, syncope, or Meniere's disease—is more common than Agoraphobia secondary to Panic. These agoraphobics will usually be seen by primary care clinicians. The American Psychiatric Association suggests categorizing the illnesses as Panic Disorder, Panic Disorder with Agoraphobia, or Agoraphobia with limited symptom attacks.

Common situations that agoraphobic patients avoid include crowds, public transportation, busy stores, standing in lines, bridges, tunnels, airplanes, church, movies, restaurants, driving, and being alone outside the home. Many agoraphobic patients can go to these places with a trusted companion, and there is some evidence that the presence of the companion actually protects against the likelihood of an attack.

Treatment

Just as there have been various theories developed to understand and explain panic disorder, there have been a variety of treatment approaches described. Clinical researchers are publishing well-designed controlled studies examining different treatment strategies. The results from these studies are often simultaneously encouraging, contradictory, and confusing. To complicate matters, many patients are exposed to ideas about treatment through the media and come into an appointment with preconceptions: “you have to take medications to get well”; “if you take medications, you’ll never really get well”; and everything in between.

A sound approach to treatment involves four basic strategies: education, pharmacotherapy, behavior therapy, or psychotherapy. Before deciding on a course of treatment, the clinician may want to begin with the process of education. I have seen several patients who have improved just from the knowledge that the panic was not physically dangerous to them. The clinician may also want to recommend relevant reading materials (see “Patient Reading List” at the end of this article). The doctor and the patient can then decide together the most desirable approach to treatment.

The primary goal with pharmacotherapy is to block the panic attacks so the patient no longer experiences them, or has only mild and tolerable symptoms. This approach has an excellent track record and is easy for primary care physicians to supervise. Three groups of medications have been shown to have panic-blocking properties: tricyclic antidepressants, MAO inhibitors, and high potency benzodiazepines like alprazolam or clonazepam. Using these agents, a majority of panic patients can be successfully treated in the primary care setting.

Once the panic is in remission, the patients should be able, with some encouragement, to begin doing the things that they have been avoiding. It is important to instruct the patient who is responding to medications to make an active effort to find and to master their phobic situations, while

protected by the medications. This can help rebuild confidence and reduce anticipatory anxiety.

In a similar way, the clinician can use medication to control symptoms in the agoraphobic with limited symptom attacks, while encouraging him or her to re-enter the troubling situations. For example, a patient who has avoided car travel because of a problem with bowel urgency may be effectively treated with a combination of a motility-reducing medication such as Lomotil, and a benzodiazepine to reduce the anticipatory anxiety. Once these medications have shown some benefit, the patient must begin an active effort to enter as many problem situations as possible.

While pharmacotherapy is an effective strategy, there are some drawbacks. First, many panic disorder patients are afraid to take medications. Second, many of these medications are expensive, and all produce side-effects to which panic disorder patients are frequently sensitive. Third, the rate of relapse after discontinuation can be a problem. Estimates of relapse range from 25% after discontinuing tricyclics to 80% or more after stopping alprazolam. Finally, many of the panic patients are young women in their child-bearing years, for whom it is desirable to limit exposure to any medication.

Patients often ask about the risks of drug dependence and withdrawal associated with pharmacotherapy—especially with the benzodiazepines. Patients can be reassured that under proper medical supervision these medications are both safe and effective. When a course of treatment is completed, the careful, gradual reduction of medication will not lead to overwhelming withdrawal or long-term drug abuse problems. In some communities there are experts in behavioral therapy who may be able to provide help without relying on medications. If pharmacotherapy is the only treatment available in a given community, it is preferable to the untreated progression of the illness. Patients with significant degrees of depression appear to require pharmacotherapy to recover before behavioral therapy.

Clinicians using behavior therapy have shown that if a patient can be persuaded to enter a situation that causes panic and remain there until the sensations have subsided, the frequency and intensity of future panic attacks will diminish and phobic avoidance will begin to disappear. This approach is known as exposure therapy, and its mainstay is instilling in the patient the knowledge that the feeling of panic, while unpleasant, is not physically harmful. The therapist teaches the patient techniques of coping with the phobic situation, which the patient must practice daily. The clinical evidence for improvement with this approach is convincing. It also has drawbacks. First, some patients simply will not do the exposure exercises under any circumstances. Second, teaching the techniques for coping with panic often requires a great deal of time and expertise. Those patients who are motivated can learn through reading descriptions of the techniques in self-help books (again, see “Patient Reading List”). Patients can also learn these skills by attending self-help group meetings available in many areas, or by seeking help in

specialty clinics set up for phobic patients. Patients for whom prolonged exposure to high levels of arousal is medically unwise (such as angina sufferers or fragile asthmatics) should not utilize this approach.

One exciting new development involves desensitizing a patient to the actual sensations associated with panic. A patient with complaints of dizziness might be instructed to spin in a chair until dizzy, wait until the sensation subsides, then repeat the process. This technique is called Interoceptive Exposure, and early treatment results are excellent.

The third approach is psychotherapy, usually provided by a psychiatrist, psychologist, social worker, or counselor. Traditional analytic psychotherapy with an emphasis on exploring intrapsychic conflict may be helpful, but is often not necessary to treat panic disorder. This approach is best utilized when patients have failed with more targeted therapy.

Supportive psychotherapy may be more useful. The focus is on defining the situations in a patient's life that contribute to feelings of being trapped or out of control. Practical solutions to real-life problems are discussed with the therapist, who provides problem-solving strategies, objectivity, and friendly support.

Cognitive therapy, popularized by Beck,⁷ was originally developed as a treatment for depression, but has recently been adapted for work with panic-phobic patients. The authors have published excellent treatment results, but this is a specialized approach that requires specific training.

Both clinical evidence and practical experience point to the value of developing an individualized treatment plan for each patient. Such a treatment plan integrates selected elements of pharmacotherapy, behavioral therapy, patient education, and psychotherapy. It requires the clinician to be skilled with a number of treatment modalities or to develop working relationships with colleagues with skills in different areas.

It is the need to coordinate efforts of a team of clinicians with complementary skills that has led to the development of specialized anxiety treatment programs. While most cases of panic disorder can be effectively treated by primary care providers, treatment-resistant, difficult or complex cases can benefit from the multi-disciplinary integrated treatment approach.

In summary, Panic Disorder and Agoraphobia are common and often debilitating conditions. Together they may affect over 6% of the population in a six-month period. These patients frequently present to the primary care physician, who has the challenge of making the diagnosis. Left untreated, the illness often leads to incapacitation and con-

veys a significant risk for sedative-alcohol abuse or depression. The most widely accepted model of the disorder is that of an inherited biological vulnerability to panic, triggered by stressful life events. A variety of treatment approaches are available, pharmacotherapy, patient education, and reassurance being the main foci for the primary care clinician. Patients who desire the more complex behavioral therapies, who are treatment-resistant, or who present special difficulties, may benefit from consultation with psychiatrists who specialize in anxiety disorders or referral to specialty treatment clinics. □

Patient Reading List

- 1 Griest, Jefferson, and Marks. *Anxiety and its treatment*. Washington DC: American Psychiatric Press, 1986.
- 2 D. Sheehan. *The anxiety disease*. New York: Scribners, 1985.
- 3 I.M. Marks. *Living with fear*. New York: McGraw Hill, 1980.
- 4 Reid Wilson. *Don't panic*. New York: Harper & Row, 1986.

References

- 1 Diagnostic and statistical manual of mental disorders (DSM-III-R); 3rd edition - revised. American Psychiatric Association, Washington, DC, 1987, p. 235.
- 2 Norton R, Harrison B, Hauch J, et al. Characteristics of people with infrequent panic attacks. *J Abnorm Psychol* 1985; 94:216-21.
- 3 Weissman MM. The epidemiology of panic disorder. In Frances A, Hales R (eds), *Review of psychiatry*. Washington, DC: American Psychiatric Press, 1988.
- 4 Fawcett J. Is anxiety a precursor to suicide? Presented at *Consequences of Anxiety Symposium*. Orlando, FL, 1987.
- 5 Jacob RG, and Turner SM. Panic disorder: diagnosis and assessment. In Frances A, Hales R (eds), *Review of psychiatry*. Washington, DC: American Psychiatric Press, 1988.
- 6 Shear MK, and Fyer MR. Biological and psychopathologic findings in panic disorder. In Frances A, Hales R (eds), *Review of psychiatry*. Washington, DC: American Psychiatric Press, 1988.
- 7 Beck AT, and Emery G. *Anxiety disorders and phobias, a cognitive perspective*. New York: Basic Books, 1985.

When it comes to
there's no place like



tender, loving care... home.



No one likes being in the hospital. And no one likes paying a big hospital bill. This is especially true for companies and families wrestling with the high cost of health care.

As a result, more people are looking at home care as a viable option to prolonged hospital stays.

New technologies and services are making it possible for patients to be discharged from the hospital sooner, while continuing medical treatment in the comfort and convenience of the home or workplace.

Baxter is the largest supplier of health care products and services in the world and pioneered the concept of home therapy.

In the last year alone, we provided products and services to more than 40,000 home care patients. Patients requiring complex care. Patients on kidney dialysis and cancer chemotherapy. Patients receiving intravenous antibiotics and parenteral nutrition. Patients requiring immune deficiency therapy. And more.

We work closely with doctors, nurses, hospitals and insurers to make sure that their patients go home with confidence. And that they continue to receive quality care, personal attention and cost effective therapy for as long as it is needed.

So when your patients, employees or family members need some extra TLC, call Caremark Homecare. We believe it's possible to reduce the cost of health care *without sacrificing quality*. Baxter Healthcare Corporation, Caremark Homecare, Raleigh-Durham Pharmacy, 100 Perimeter Park Drive, Suite A, Morrisville, North Carolina 27560. Phone 800.245.2463.

Baxter

Admission, 1985

Pem Kahler, M.D.

What could eclipse the full moon, the pond,
double cream in morning cocoa,
nurses who pack brown-bag breakfasts,
housestaff who give me time to wash the EEG paste
out of my hair so I pass the night
clean after my spinal tap?

Nine days' house arrest, bullied by the attending—
whose purpose is to listen, to stand by,
to wait, to care for,
but who instead
makes up his mind, hears no history, takes no look,
cannot see what he doesn't believe,
refuses to call my doctor, doesn't read his chart.

Nine days, instead of calling for help,
instead of leaving,
I cooperate with supposed colleagues,
expecting the truth will emerge.
I don't yet know I will never be believed,
never be seen as vulnerable,
equally a doctor.
The consultant finds me
fat and ugly,
"And now look at you."
The attending tells me,
"Get well and get back to work."
He can't see I've worked my way into the hospital.

He cannot see the X-ray, blood counts, tests,
the wrinkled eye, not even photographs;
cannot believe signs observed by other doctors
or anything subjective or episodic.
He hides abnormal results, calling them
"negative studies."

One day MS, the next MMPI.
Patients have died of charts like mine.
"Stress. You can't tell when you have it,"
declares the neurologist, who sends me to the
neuropsychologist, who corrects him,
"Not stress; you're sick."
The word does not get back.

"Psychogenic," will say the attending
behind my back—
forked brain: forked tongue.
Knowing my chart and
the diagnostic criteria for lupus,
I fill in his omissions.
He'll reconsider if I get sicker on less medicine;

well, I do, and he doesn't.
No new fact can be taken in.
He cannot grasp
the severity,
the continuity,
the truth of the illness.

"Psychogenic": the notion is irresistible.
In exchange for a sham chance of health
I question the reality of years' experience.
Within my new status—
healthy, but delusional—
every pain, emotion, adaptation, intervention
constitutes sin.
I can't feel I'm making the best of a bad situation.
Instead of losing my career,
I have thrown it away.
I don't deserve a rest, my family's help, a doctor's time.
There is nothing good or true about me,
not even any strength in reserve.
Where my life had been riddled with illness,
now I am riddled with badness.
"Psychogenic"—I am beguiled, betrayed:
there is no forgiveness,
no thinking right that makes me well.
"Psychogenic" is by another name denial,
my own first approach,
before I ever saw a doctor.
Denial didn't cure me then,
and denial now keeps me from
seeing each day's difficulties and readjusting,
from mourning my losses.
In the confusion of bogus health with real disease,
I have trouble getting myself good care.

Why did I cooperate?
Did I owe that to my doctor?
Three years later memories intrude,
torturing me,
showing me how badly I must have
handled things at the hospital.
Since I can't figure out what went wrong,
the whole thing could happen again.
Was it a warning when
the housestaff described the attending,
"country boy, macho hunter"?
Which day should I have called for help,
or left?
Why can't people who see things my way

influence my chart?
 Why is my safety up to me?
 I'm uneasy, panicky;
 what if I get sicker?
 I'm terrified of seeing a new doctor.
 I think of giving a history and
 see small birds pecking flesh from my skinless ribcage;
 maybe they will taste the pleuritic chest pain.
 I feel hopeless and cry.
 Who would see me
 among the conflicting reports,
 take care of me?
 Patience and cooperation scare me.
 I see the most threatening meaning in charts and letters.
 Even from my own doctors,
 questions can feel like doubt, doubt
 all the way back
 to my first years ago asking for help.
 The tension of the admission captures me.
 I must answer now and correctly;
 this might be the question that makes the problem clear,
 makes me real, gets me well.
 (What question did I miss in the hospital?)
 I'm slow to go to doctors, or don't go,
 If what I suppose is wrong
 can't be seen or tested or treated.
 What will happen if my doctors feel confused and helpless?
 When things don't go right
 I'm afraid to be frank,
 afraid that if I lose my old doctors,
 there is no one else for me.
 What if I could understand the admission, forgive?
 The testimony against me remains the same;
 I need my fearfulness.
 (How kind if it were all distortion!)
 I hate myself for being sick,
 for needing the power of persons
 I can't rely on.
 Why did I ever become a doctor
 if we can't treat disease and human beings
 better than this?

You must understand,
 this happened at my medical center.
 Four years I worked there,
 every day hurting and tired,
 giving care to others.
 Now I can't be even a legitimate patient.
 On the strength of sloppy work I can't correct,
 I am officially a cheat.
 How can I return?
 I know what doctors think of patients like me.
 How sick would I have to be
 to get fair treatment
 where such a shadow falls across my chart?
 I'd love to have no reason to care,
 just to get well, as he said.
 Does he not know the only
 simple way out
 is suicide?

Pem Kahler is the pen name of Julia P. Kahler, M.D. Dr.
 Kahler's poetry has been published in *Psychiatry*. Correspondence: 312 Granville Road, Chapel Hill 27514.

YOU CAN KEEP THEM IN BALANCE— YOUR FAMILY LIFE AND YOUR MEDICAL PRACTICE.



We'd like to help you spend more time with your family yet receive professional satisfaction from your medical practice. As a member of the Air Force health care team, you'll be able to participate in our group practice concept which will free you of most administrative duties. Air Force benefits are also very attractive. You and your family will enjoy 30 days of vacation with pay each year plus many more Air Force advantages. Call

CAPT CHUCK HELVEY

919-850-9549

STATION-TO-STATION COLLECT



A Special Group Purchasing Program with the North Carolina Medical Society

Dillard

HEALTHCARE SERVICES

Distributor of Medical, Rest Room, Office, and Lab Supplies

From Such Companies As

- Ames • Baxter General Health • Davis & Geck • Kendall
- Monoject • Scott Paper Co. • Tidi

Divisions:

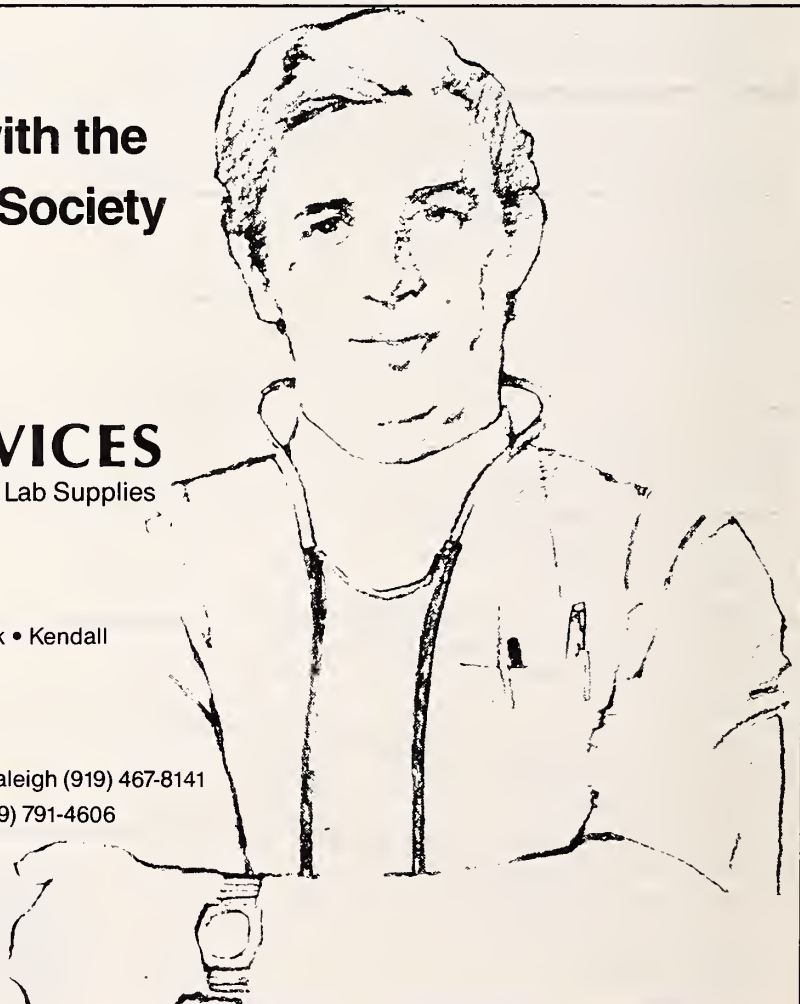
Charlotte (704) 392-6131 Greensboro (919) 299-1211 Raleigh (919) 467-8141

Winston-Salem (919) 768-4900 Wilmington (919) 791-4606

Greenville, SC (803) 269-2310



Endorsed by the North Carolina Medical Society



NORTH CAROLINA MEDICAL JOURNAL

For Patients

VOLUME 49 / NUMBER 10 / OCTOBER 1988

The Mental Illness Awakening

**JOHN BAGGETT, EXECUTIVE DIRECTOR
NORTH CAROLINA ALLIANCE FOR THE MENTALLY ILL**

This moment in history is an exciting one for professionals, families and consumers who must deal with mental illness. I call it "The Mental Illness Awakening." It is not a mental "health" awakening, but a mental "illness" awakening. Part of the significance of this moment is that the old model of a continuum from mental illness to mental health is giving way to a model which distinguishes between the mental health problems of life adjustment to which all of us are subject, and brain diseases, such as schizophrenia and manic depression, which, like other chronic diseases of the body, often devastate, disable, and condemn a select number of victims to lives of profound suffering.

The outward and visible sign of this Mental Illness Awakening is the National Alliance for the Mentally Ill (NAMI), a self-help consumer and advocacy organization made up primarily of families with seriously mentally ill members.

NAMI is the fastest growing self-help organization in the country. Since its start in Madison, Wisconsin, in late 1979 with around 200 families, it has grown to over 60,000 families and 850 local affiliate groups throughout the 50 states. In North Carolina, the Alliance (NC AMI) began in late 1983 and has grown to 39 affiliates located in 39 of our counties. In June, 1986 NC AMI opened a state headquarters in Raleigh to coordinate statewide support, education and advocacy.

From 4900 Waters Edge Drive, Suite 170, Raleigh 27606.

Historical Progress

Three historical realities have produced the Mental Illness Awakening. The first is the shift from a paradigm of blame to a paradigm of biology in the understanding of schizophrenia and the serious affective disorders. In the past decade a predominance of evidence has shown that schizophrenia and manic-depression are diseases of the brain, like multiple sclerosis and Alzheimer's disease. Their causes are biological, not experiential or social. Despite the continued existence of the family blame theories within and without the mental health community, families of the mentally ill have become increasingly aware of the biological nature of the disorders, and thus have been increasingly willing to emerge from the closet and become active in support groups and in educational and advocacy endeavors.

The second historical event which has produced the Mental Illness Awakening is deinstitutionalization. The primary burden of care for the mentally ill now falls upon their families. More than 60% of deinstitutionalized or non-institutionalized mentally ill people in North Carolina are cared for by their families. This burden is overwhelming. In addition to the constant economic and practical burden of caring for very disabled people without respite, there are the emotional burdens of personal grief over the effects of the illness, and of coping with disturbing and sometimes frightening behavior. These problems are exacerbated for parents

who have been providing care for 15 or 20 years and who are now anxiously asking, "What will happen to my ill relative when I am gone?" This inevitable anxiety helps to account for a sense of urgency and vigorous advocacy which is characteristic of Alliance families.

Figures derived from a recent Duke University epidemiological study indicate that more than 84,000 persons in North Carolina suffer from severe and persistent mental illness. Only a few hundred of the most disabled mentally ill citizens are now long-term patients in psychiatric hospitals. Of the remaining thousands, where are those who do not live with their families? Some live in nursing homes or board and care homes with little or no psychiatric care. A substantial number wander the streets of our cities and the highways of our countryside. Occasionally they make the headlines; more often they live and die in quiet desperation. Alliance families are committed to the development of a "continuum of care" that will alleviate the family burden and provide appropriate treatment and supportive services for all mentally ill citizens.

The third historical event behind the Mental Illness Awakening is the growth of "self-help" and "consumer" movements in America. Families of the mentally ill, with their special kind of personal grief and burden, need special kinds of support. Among self-help groups there is a feeling that empathetic support is better supplied by others with similar experience than by professionals. All local Alliance groups have support meetings where people share their experiences and provide strength and hope to one another. There is growing evidence that family participation in these groups not only helps the family, but has positive benefits for the mentally ill relative as well. Alliance families appreciate professionals who are sensitive to their suffering and responsive to their needs. There are several ways that professionals, and physicians particularly, can be of assistance to families with seriously mentally ill members. It is important to

recognize and respond to the fact that families of the mentally ill experience considerable stress and grief which may endanger their own health and well-being. It is vital that professionals assure families that a serious mental illness is not anyone's fault. Families need to be provided with literature about mental illness and referred to family support groups. (Literature and information about local support groups can be obtained by calling The North Carolina Alliance for the Mentally Ill at 1-800/451-9682. Families may also call this number for assistance with consumer and advocacy needs.)

Progress in North Carolina

The North Carolina Alliance seeks to make mental illness a priority on the state's agenda. As a result of the Alliance's efforts The Mental Health Study Commission, a commission of the state legislature, is currently creating a comprehensive plan to meet the needs of those suffering from severe and persistent mental illness. Now, for the first time in North Carolina, there is significant family and consumer participation in the development of mental health policy.

One component of the Commission's study addresses the issue of discrimination in health care insurance with regard to mental illness. Another part of the study is focused on the needs of dangerous patients and those who end up in the criminal justice system. The primary goal of the planning effort is the development in each community of a "continuum of care" to serve the needs of mentally ill persons. The Mental Illness Awakening offers those of us who are concerned about mentally ill persons an extraordinary opportunity. We have the challenge to end the era of misunderstanding and neglect and to usher in a new era of compassion and hope. It is an opportunity we dare not miss. □

Psychotherapy: One Perspective

CHARLES R. VERNON, M.D.

The most popular psychiatric treatment procedures in the United States today are psychotherapy and drug therapy, often in combination. Insulin coma and lobotomy are rarely used, and electroconvulsive therapy (ECT) is reserved for severe, life-threatening depression which is not responsive to drugs or the various psychotherapies.

Prior to World War II, psychotherapy in the form of psychoanalysis or psychoanalytic psychotherapy was the preferred treatment for virtually all mental disorders, even though there was little or no scientifically validated evidence of its effectiveness in any mental disorder.

With the advent of effective psychopharmacologic intervention, increased scientific explorations into the cause and treatment of mental disorders, and accompanying advances in the behavioral and neurosciences, psychoanalytic psychotherapy began to lose its favored status. Today psychoanalytic principles are employed in several forms of psychotherapy but so too are other treatments derived from the behavioral sciences. There is some debate about the value of psychological treatments even though billions of dollars are being spent on them.

Definitions of psychotherapy abound. Perlow has catalogued the names of more than 100 forms of psychotherapy. However, at this time, the most common use of the word refers only to psychological treatment, excluding such somatic treatments as drugs or ECT. In effect, psychotherapy is a specialized instructional, learning approach to a clinically diagnosed condition, whereby the therapist works with the patient to alter the ways in which the patient thinks, feels and behaves so that he or she is better adapted and experiences symptom relief.

The multitude of forms of psychotherapy and individual psychotherapy may, for the sake of simplicity, be classified into four general forms.¹ The first is characterized by the words "rapport" and "relationship," and is inherent in all psychotherapy. The second is what we traditionally call

informational or educational. The third is prescriptive psychotherapy. And the fourth is psychodynamic or psychosociodynamic psychotherapy.

Rapport

The first form is a part of all medical care, whether given explicit attention or not. Every doctor, or any helping agent, will have a psychological effect on the patient, generally salutary, but with a certain risk of untoward side effects. This psychotherapeutic effect is thought to emanate from the authority assigned to the doctor by the patient, supported by social consensus. No matter what treatment is being administered, medical or surgical, the quality of the relationship between patient and doctor has its impact. Perhaps this accounts for the placebo effect. Ongoing research is being conducted to identify the fundamental qualities of therapists that seem to make a helping effort successful. Qualities such as respect, empathy, understanding, acceptance and genuineness are attributes that have been proposed. In studies of psychotherapy itself, relationship factors may be more predictive of outcome than patient or therapist characteristics.²

Informed Consent

A second form of psychotherapy is purely informational. It, too, is a part of all helping methods, whether given specific attention or not. The physician has facts to present that would be helpful to the patient. It does not matter what treatment is being considered, the patient has a right to be informed (and to consent), and the physician has the obligation to inform. To be informed is to be psychologically treated. To be misinformed is to be psychologically maltreated. Thus informing the patient is a psychotherapeutic maneuver. Agreement between doctor and patient based on accurate information is now considered fundamental to all helping efforts and an essential part of the delivery of any health service. Effective transmission of information depends on

From 7230 Wrightsville Avenue, Wilmington 28403.

the existence of characteristics described above; that is, the patient has attributed authoritative integrity to the physician; a positive transference exists; rapport has developed. More attention is now being given to training physicians in the skills necessary to relay information accurately and to elicit consent.

Prescription

A third form of psychotherapy may be called prescriptive. This is the traditional function of the doctor directing the patient to act in a specific way. Ordinarily we think of a physician prescribing medicine, surgery, exercise, rest, or a special diet. But the psychotherapist may also prescribe certain behavior designed to relieve symptoms or alter the course of a disease process. Sex therapists have found this method helpful, for example, in dealing with certain sexual dysfunctions. And the prescription of exposure therapy for phobic conditions has gained popularity among psychotherapists in recent years. For example, Klein et al showed that this type of treatment is very effective in counteracting the dysfunctional avoidance of life situations that agoraphobic patients carry out, whereas it is not effective in the treatment of the panic states that bring on the agoraphobia and avoidance.³ Marks has shown that the prescription of self-exposure techniques in the virtual absence of further psychotherapeutic intervention is effective in treating phobias.

Rising in popularity in recent years is cognitive therapy. In this form therapist and patient identify cognitive patterns or styles of thinking which are pathological or dysfunctional and prescriptively direct the patient to form more realistic ones. Certain specific training efforts may also be included under the heading of prescriptive therapy: training in stress management, communication and socialization skills, assertiveness, relaxation and meditation techniques, or self-hypnosis. The directive approach of prescriptive therapy was frowned upon by the adherents of psychoanalytic theory, which dominated psychotherapy during the first half of this century, but it has now come back into its own. It is different from but often complementary to psychodynamic psychotherapy.

Psychodynamic

Psychodynamic psychotherapy must include all the fundamental attributes of psychotherapy listed above. In this category would fall a number of approaches that go under a variety of names, like humanistic or non-directive psychotherapy (Rogers), psychoanalysis (Freud, Jung, Adler, Rank, Sullivan, and others), transactional analysis (Berne), gestalt therapy (Perls), reality therapy (Glasser), rational emotive therapy (Ellis), psychotherapy based on self psychology (Kohut), and many others. General terms such as interpretive, expressive, or insight psychotherapy may often be used for these various approaches of psychodynamic psychotherapy. The goals of this form of psychotherapy are said to be more intensive and extensive in terms of changing emotional response, thinking patterns, and behavior; however, short-term, goal-limited psychodynamic psychotherapy (Strupp) and supportive psychotherapy have become more and more popular, perhaps with economic motivations being prominent.

In summary, psychotherapy is an essential part of all health-related care, whether medical, surgical or specifically psychiatric. Every doctor is a psychotherapist, good or bad, trained or untrained, consciously or unconsciously, just by virtue of the relationship with the patient—through the need for informed consent, by direct prescriptive action, or through psychodynamic understanding. □

References

- 1 Karasu TB. The specificity versus the non-specificity dilemma: toward identifying therapeutic change agents. *Am J Psychiatry* 1986; 143:687-95.
- 2 Luborsky L, Auerbach AH. The therapeutic relationship in psychodynamic psychotherapy. In: *APA Annual Review* vol. 4. APA Press, Inc., 1985, pp.550-61.
- 3 Klein DF, Ross DC, Cohen P. Panic and avoidance in agoraphobia. *Arch Gen Psychiatry* 1987; 44:377-85.

Panic Disorder With Agoraphobia

JAMES L. MATHIS, M.D.

Mrs. M., a 32-year-old homemaker, sitting in church one Sunday morning became short of breath. Her heart was racing, she was dizzy, and she felt as if she were choking. She began sweating profusely, felt a tightness in her chest as though a band were wrapped around her, and she rushed from the church in pure terror. Her husband immediately took her to the nearest emergency room where she was given a complete examination including laboratory work and an electrocardiogram. By the time the examinations, all of which were normal, were completed, her symptoms had abated. The physician assured her she had no physical illness, attributed her symptoms to "nerves" and gave her a prescription for a tranquilizing drug.

Mrs. M. took the medication faithfully, but had three similar attacks over the next month. Each lasted from 30 to 40 minutes and was a little more severe than the preceding spell. During each attack she was convinced she was going to die or "lose her mind." Repeated examinations and the reassurances of two physicians, including a cardiologist, did nothing to quell her fears. She began to be very uncomfortable in public places and to feel secure only when at home or with her husband. Shopping and her usual social activities became frightening and painful chores. Even when at home and symptom free, she began to be apprehensive about when the next attack would occur. A once competent, self-assured person had become a shattered, anxiety-ridden recluse.

Mrs. M. had developed a condition very aptly called Panic Disorder. She also was developing Agoraphobia, a morbid fear of being in public places or situations in which she anticipated an attack or in which she felt she might lose control of herself or be unable to receive help.

Panic Disorder is a period of spontaneous, episodic, intense anxiety during which the person may experience shortness of breath, palpitations, choking sensations, trembling, dizziness, sweating, nausea, chest pains, and a profound sense of doom. Few people will have all these symptoms, but four or more are required for the diagnosis. Most people with the disorder are convinced they are going to die or go "crazy" during the acute episode. The attack

usually lasts less than one hour and may occur three or more times per week. Many, but not all, victims develop Agoraphobia, as did Mrs. M. The condition may progress to complete inability to leave home without an escort.

Panic Disorder with Agoraphobia is believed to affect from 2% to 5% of the population to some degree. Heart specialists estimate that 15% to 20% of the people consulting them have this condition rather than organic heart disease. Panic Disorder alone occurs about equally in both sexes, but in combination with Agoraphobia, the most common type, it occurs more frequently in women. The onset may be at any age, but most patients will have the first episode in young adulthood.

There is strong evidence for a genetic predisposition. Fifteen to 20% of a patient's close relatives also will have the condition or some similar form of severe anxiety. The concordance rate for identical twins is over 80%, an almost certain indication of a genetic component.

What is inherited? No one knows exactly, but one hypothesis is that people who develop Panic Disorder may have a hypersensitivity of an area in the brain called the locus ceruleus, a collection of cells that produces norepinephrine. This neurochemical, a relative of epinephrine, is an important transmitter of nerve impulses. It is a powerful regulator of feelings and of many of the automatic functions of organs such as the heart, lungs, blood vessels, and stomach. Perhaps too much norepinephrine is produced at inappropriate times, or it could be that the individual has developed a hypersensitivity to the chemical.

Other studies show changes in blood flow in specific areas of the brain in persons susceptible to Panic Disorder. The precise meaning of this information is not known, but it adds to the evidence supporting an organic basis for the condition. An equally puzzling finding is that up to 50% of Panic Disorder patients will have a mitral valve prolapse. This condition, occurring in about 5% of the general population, is marked by a peculiar clicking noise in the mitral valve of the heart each time the heart beats. Ordinarily it has no clinical significance and will not affect the treatment of Panic Disorder.

Treatment

Treatment begins with a thorough physical examination to

From Department of Psychiatric Medicine, East Carolina University, School of Medicine, Greenville 27858-4354.

rule out conditions such as a hyperactive thyroid which can produce symptoms that mimic Panic Disorder. Once the diagnosis of Panic Disorder has been made, the examinations should not be repeated unnecessarily.

There are three major therapeutic modalities: medication, psychotherapy, and behavior therapy. The key to successful treatment is the proper mixture of these modalities in each patient.

Medication

The first goal of treatment is to control the distressing attacks of panic. The effective medications include antidepressant drugs, an antianxiety drug, alprazolam (Xanax), and the beta blockers. Two types of antidepressant drugs are available, but one of them requires a restricted diet which bothers some patients. Both types of antidepressants are effective in from 65% to 70% of the patients and, although they may have certain annoying side effects, they are remarkably safe when properly used. These drugs act slowly and may not produce notable improvement for three to four weeks.

The antianxiety drug, alprazolam, often is used with patients who do not respond to the antidepressants or for some reason cannot take them. Alprazolam is very effective and acts more rapidly than the antidepressants, and like all powerful drugs, it must be used only under strict medical supervision. The beta blockers may help patients in whom heart palpitations are a major problem, and these drugs can be used in combination with other medications. New data are emerging rapidly on other effective medications so that Panic Disorder patients can be virtually assured that one of the treatments will be effective.

The physician will need to caution the patient about caffeine and other stimulating chemicals. Most Panic Disorder patients are hypersensitive to these stimulants, yet may be taking large amounts through coffee, tea, soft drinks, chocolate or over-the-counter medications. Strenuous exercise also may be contraindicated until the attacks are under control.

Psychotherapy

Psychotherapy, "the talking treatment," is needed to help most Panic Disorder patients adjust to an environment that has unexpectedly become a danger to them. They may need to rebuild confidence in themselves and their world. Panic Disorder patients tend to have other anxieties and fears which may not respond to medication alone. It may be advisable to include the spouse or other significant family members in this phase of treatment. The panic episodes often have existed long enough to produce profound upsets in the family milieu and to undermine the victim's self-esteem and confidence. Many victims of Panic Disorder have been labeled erroneously as hysterics or hypochondriacs.

Behavior Therapy

Control of the panic attacks by medication alone does not guarantee the disappearance of the associated agoraphobic symptoms or the anticipatory anxiety. Even long after the last panic attack, some patients are unable to resume their previous activities because of a profound fear that the attacks will occur again. Desensitization involving gradually increasing exposure to the real or imagined frightening situations may be necessary for full return of functions. It may be helpful to teach the patients methods of relaxation which can be practiced at home.

The Outlook Is Hopeful

The good news is that Panic Disorder with Agoraphobia, a common and once crippling condition, can be treated successfully and most of its victims can resume normal activities. Although the condition is controllable, as yet there is no definitive and permanent cure. Many patients require maintenance doses of medication for indefinite periods. Research has given us a considerable amount of valuable information in the past few years, and there is reason to believe that new and better treatments will emerge in the near future. □

Adjustment Disorder

PEM KAHLER, M.D.

At Silver Lake Granddaddy built a dry rock wall—
 fitted together, stone by stone
 by sort and shape—no mortar.
Our car and trailer backed into the wall,
 which leaned out and out,
 but didn't fall.
When we pulled forward,
 the stones regained their old embraces.
A couple of stones tumbled down;
Granddaddy put them back in
 their accustomed beds.
A mortared wall holds and holds, then
 gives way breaking.
Fixing it takes time, mortar,
 likely more breakage, new stones.
The new wall is a patched one,
 not the old wall back again.
I could use temperament more like that dry rock wall,
 bending when forced,
 in time
 standing straight again.
A tumbled stone could be put back.
Even fallen in a jumble,
I could raise myself again.

Sun Sensitive

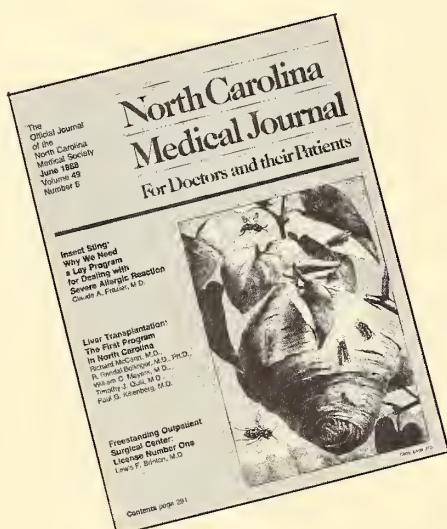
PEM KAHLER, M.D.

I miss the day's great light,
but one can live worse than
a night creature of the summer South,
 when the wind cools, and the air sings,
 and—owl flight, leaf shine,
 moon bright waves, lover's eyes—
the kisses of planets' and stars' light
bare small gifts as precious as large ones.

Pem Kahler is the pen name of Julia P. Kahler, M.D. Dr. Kahler's poetry has been published in *Psychiatry*. Correspondence: 312 Granville Road, Chapel Hill 27514.

North Carolina Medical Journal

Subscribe for yourself or a friend



Please enclose a check or money order for:

☐ \$12.60 (NC Residents; this includes 5% sales tax)

☐ \$12.00 (out-of-state subscribers)

☐ New ☐ Renewal

Send to NCMJ, Box 3910 DUMC
Durham 27710. (919/684-5728)

Please start my 1-year subscription:

My Name _____

Address _____

City/State/Zip _____

Please send a 1-year gift subscription to:

Name _____

Address _____

City/State/Zip _____

1 Out Of Every 4 Medic Computer Systems Is Bought To Replace Another System.



Here's Why.

Too many practices find out about weak support too late. The smallest glitch takes hours of searching for help that never comes. The distributor went out of business. The software people say it's the hardware. And the hardware people don't answer the phone.

With Medic, that can't ever happen. Since we are the system developers, we can provide all the hardware and software expertise you'll need.

We start by assessing your practice's current needs and even the space you've got for computer stations. Then we follow through, with everything from helping you custom design your bills to seminars on getting the maximum benefit from your system.

That's the security Medic provides to more than 6,000 doctors in 2,000 practices from coast to coast. And it's backed by a \$2.5 billion organization. Plus Texas Instruments hardware, with its excellent track record for reliability and expandability.

For a system you can start with and stay with, call Medic. Specialists in computer systems for America's medical community.



Please tell me how Medic Computer Systems can help my practice
Name _____
Address _____
City _____ State _____ Zip _____
Phone () _____ Number of physicians in practice _____
Specialty _____

Medic Computer Systems

8601 Six Forks Rd., Suite 300, Raleigh NC 27615 10/88NC



8601 Six Forks Rd., Suite 300, Raleigh, NC 27615, 919-847-8102. In NC Call: 1-800-877-5678. Outside NC Call: 1-800-334-8534.
Other Offices: Ann Arbor, Atlanta, Austin, Chicago, Cincinnati, Dallas, Denver, Ft. Lauderdale, Hartford, Houston, Jackson, Kansas City, Los Angeles, Minneapolis, Nashville, Oklahoma City, Orlando, Philadelphia, Phoenix, Pittsburgh, Richmond, San Antonio, San Diego, San Francisco, Tampa.

Pain Management Programs

Clinical and Research Perspectives

Francis J. Keefe, Ph.D., Karen M. Gil, Ph.D., and David A. Williams, Ph.D.

The problem of chronic pain is widespread. In this country alone it is estimated that there are 36 million arthritis patients, 20 million migraine headache patients, 70 million back pain patients and 800,000 cancer patients who suffer from persistent pain.¹ The costs of chronic low back pain alone are estimated to be over \$1 billion per year in the United States.² Statistics such as these, however, fail to convey the costs of chronic pain in terms of human suffering. Despite scientific discoveries during the twentieth century which have unlocked many of the mysteries of acute pain,³ only too typical is the following case description.

When Pain Persists

John Dalton, a 45-year-old, self-employed carpenter, is disabled by chronic back and leg pain. His pain began five years ago after an accident at a construction site. Mr. Dalton has had two operations on his back, and after each he tried, unsuccessfully, to return to work. He feels depressed and guilty because he is dependent on compensation payments and unable to support his family by working. He is withdrawn and does not participate in the care of his three small children. He spends most of his waking day in a recliner or bed. He sleeps only two to three hours a night and is physically and emotionally exhausted. Narcotic medication has been prescribed, but Mr. Dalton waits to take it until his pain is intolerable because he fears he may become addicted. Mrs. Dalton is upset about the changes she has seen in her husband. She reports he is very depressed and irritable and that the strain on the family is more than she or her children can bear any longer.

When pain persists, the influence of behavioral and psychological factors can be great.⁴ Depression, a tendency to deny emotional distress, and preoccupation with physical

symptoms can significantly increase the suffering experienced by chronic pain patients. Patients may inadvertently learn maladaptive forms of coping that prevent them from returning to higher levels of functioning.

A growing recognition of the role of behavioral factors in chronic pain has stimulated interest in treatment approaches that emphasize behavioral and psychological methods.⁵ Innovative pain management programs have been developed to address problems such as inactivity, physical deconditioning, and narcotic addiction that make the patient dependent on family and incapable of work. These programs also treat depression and the intense guilt, anxiety, self-blame and feelings of worthlessness that increase suffering.

In the past decade, a number of major medical centers have developed comprehensive behavioral and psychological assessment and treatment programs for chronic pain sufferers. In these programs, behavioral and cognitive therapy treatment are combined with conventional somatic treatments (e.g., analgesic and psychotropic medications, nerve blocks, transcutaneous nerve stimulators) in an effort to increase activity, reduce pain and decrease suffering.

This paper provides an overview of behavioral and psychological interventions used in inpatient and outpatient pain management programs. Although the focus is on the behavioral component of pain programs, readers should be aware that this component represents one part of a multidisciplinary treatment effort. We also discuss research activities carried out in pain management programs. To illustrate some of these research projects we briefly review our current research activities in the Duke Pain Management Program.

Behavioral Pain Management Methods

The methods of pain management vary according to patients' needs. The following is a general description of methods and resources of typical inpatient and outpatient pain management programs.

From the Department of Psychiatry, Duke University Medical Center, Durham 27710.

Inpatient Programs

Inpatient pain management programs are designed to provide intensive and coordinated treatment to a broad range of chronic pain patients. The problems typically seen include low back pain, neck pain, facial pain, chronic headaches, post herpetic neuralgia, reflex sympathetic dystrophy, phantom limb pain, abdominal and pelvic pain. Patients treated on an inpatient basis usually have persistent pain that significantly interferes with daily function and results in major psychosocial problems such as severe depression, anxiety, and marital discord.

Inpatient pain programs may be located on psychiatric, orthopaedic, neurosurgical or rehabilitation units. In most programs, each patient's primary physician serves as leader of a multidisciplinary team consisting of nurses, psychologists, social workers, physical therapists, recreation/occupational therapists and other specialists. The primary physician consults with other specialists when needed, such as orthopaedic surgeons, anesthesiologists, neurosurgeons, and internists. Psychologists with expertise in behavioral approaches often coordinate the behavioral interventions used in inpatient programs.⁶

Inpatient programs typically have two phases: assessment and treatment. The behavioral and psychological assessment process usually starts with a structured interview designed to evaluate pain severity and the patient's behavioral, cognitive, affective, and psychophysiological responses to pain. Direct observation methods are sometimes used to record pain behaviors such as guarding, grimacing, and rubbing of the painful area. In most programs diary records are given to the patient to record activity level (time spent out of bed or a recliner) and pain level (0 to 10 point scale). Psychophysiological evaluation may be used to examine physiological responses during activity and stress. A comprehensive evaluation of coping skills is often conducted by having the patient complete behavioral inventories such as the Coping Strategies Questionnaire.⁷ Other standardized instruments are also used, such as the SCL-90R and Beck Depression Inventory. The social and environmental context of the patient's pain problem is usually investigated by means of interviews with the spouse and other family members, and by observation of the patient on the unit.

Behavioral and psychological techniques for enhancing self-control are useful for chronic pain patients. Through these methods patients learn how to exert control over their own behavioral, affective, and psychophysiological reactions to pain. In order for these methods to work, patients must have the resources and motivation to learn and practice training procedures. Training in self-control may be carried out in group therapy, in individual therapy sessions, or in biofeedback lab settings.

Daily group therapy sessions are an important part of most inpatient pain management programs, and usually focus on three major areas. The first is patients' behavioral adjustment to pain. Patients review changes in behavioral

and social function that have occurred since the onset of their pain, and then they learn methods for improving their behavioral adjustment. These often include pacing of activities using time-contingent rest breaks and scheduling of pleasant activities. The second focus of group therapy is cognitive methods, such as cognitive restructuring and training in cognitive pain coping skills (imagery, distraction, meditation). These methods help patients recognize and change maladaptive cognitions. And third, patients learn pain management methods they can employ in home and work settings—such as identification of sources of resistance and likely obstacles to progress, and techniques of relapse prevention.

In many inpatient programs individual therapy is a means through which to focus on issues such as grief over loss of work with the goal of rebuilding self-esteem. In some cases, the patient's maladaptive pain behaviors are inadvertently maintained by positive social consequences such as attention from a solicitous spouse or family, or avoidance of unwanted work or home responsibilities. Individualized operant conditioning programs are often helpful in such cases.⁴

The goals of operant conditioning are increased activity, decreased pain behavior, and decreased narcotic intake. These pain behavior patterns are modified through the careful control of social consequences for pain and "well behaviors." Patients are usually placed on structured activation programs in which they are given a daily quota of time up and out of bed (uptime). Patients receive attention and praise from team members for achieving uptime goals, which are increased slightly each day. Avoidance of high levels of activity reduces the likelihood of excessive pain and pain behavior. If excessive pain behaviors do occur, they are given minimal attention. Medications are often given in a "pain cocktail" that is delivered on a time-contingent rather than a complaint-contingent basis (PRN). As patients become more active, the social reinforcement for well behavior is decreased. Ready, at this point, to take more responsibility for their operant treatment programs, patients usually begin to participate more fully in self-control aspects of the programs such as relaxation or biofeedback training (described in "Outpatient Programs" below).

Family involvement in inpatient programs is crucial to maintenance and generalization of therapeutic improvements. Many programs refuse to admit patients whose family members refuse to attend treatment sessions. In most programs, at least one session with the family is scheduled to explain the rationale for the patient's program and to identify ways in which family members can help. Optimally, the family is involved on multiple occasions during treatment. Usually a patient will develop a home program to schedule pain management activities into his or her day. The home program is reviewed with family members to ensure that it is understood and supported by all.

Several methods, such as follow-up telephone calls and scheduled, regular return visits, are typically used to help

monitor and reinforce progress following discharge.

Published reports on outcome of inpatient pain management are available for treatment programs at a number of university-affiliated hospitals, including the University of Washington School of Medicine, the University of California-San Diego Veterans Administration Hospital, The Casa Colina Hospital, the Portland Pain Center, the Mayo Clinic, the Miller-Dwan Hospital, and the Duke University Medical Center.⁵ The data indicate that most programs achieve clinically and statistically significant increases in activity level and decreases in narcotic medication intake. Reductions in pain ratings maintained over a one-year period average in the 30% to 40% range. We studied the responses of 111 chronic low back pain patients treated in our program,⁸ and found that there were significant reductions in measures of pain, EMG activity, and tension. To examine individual differences in pain relief, we compared the 28 patients reporting the greatest decrease in pain with the 28 who had the smallest decrease in pain. Patients having the best outcomes had continuous pain for fewer years, were less likely to have had multiple surgeries, and were less likely to be on disability. Researchers have not been able to identify patient characteristics that reliably predict successful outcome of inpatient pain management. Our clinical impression is that patients who have shorter histories of pain and variability in pain, and who do not suffer from personality disorders, respond more positively.

Outpatient Programs

Patients suffering from a wide variety of chronic pain conditions are treated on an outpatient basis in pain management programs. As is the case with the inpatient programs, behavioral methods for managing pain are usually combined with traditional medical approaches. Outpatient treatment is often useful for patients who have persistent pain but who have managed to stay active, employed and free of severe depression, and for patients who have chronic, episodic pain. Most programs treat adult patients suffering from neck pain, myofascial pain dysfunction syndrome, arthritis pain, and low back pain, and children suffering from migraine and muscle contraction headaches.⁹ Many programs emphasize biofeedback and relaxation training.

Biofeedback and relaxation methods are designed to enhance the ability of patients to control muscle tension and other physiological and behavioral responses to pain, typically through a series of training sessions in a laboratory setting. In the early sessions, patients are seated in a comfortable recliner in a quiet room in a biofeedback laboratory. Sensors are taped to the skin to monitor the activity of relevant physiological responses (e.g., upper trapezius muscles in a neck pain patient). The procedure is non-invasive, and patients are reminded that the equipment is used to monitor bodily responses in order to enhance control of these responses. Biofeedback, usually in both a visual

form (e.g., a needle moving on a meter) and an audio form (e.g., a beeping tone), provides immediate, ongoing information about changes in physiological response that occur during the training session. To increase control over muscle tension, patients are typically given progressive relaxation training. This involves a series of tense-relax exercises starting with muscle groups in the feet and legs and progressing to muscles of the trunk, neck, shoulders and scalp. Most programs provide patients with a relaxation tape to assist them in their home practice.

After three to four sessions of relaxation-assisted biofeedback training, patients usually have mastered the ability to relax while reclining in a laboratory. Training may shift at this point to teaching the patient how to relax during daily activities. A portable biofeedback unit may be useful to patients learning to relax while they stand, walk, climb stairs or engage in other functional activities. An effort is sometimes made to have patients practice their skills in relaxation during the particular activities that cause them difficulty. For example, a secretary with neck and shoulder pain may use biofeedback as she sits working at a computer terminal or talks on the phone. This emphasis on applying biofeedback and relaxation skills to daily activities is the hallmark of our program. Our experience has taught us that many chronic pain patients find it difficult to generalize their skills in relaxation to daily situations if they are not given intensive biofeedback training in these situations.

The final phase of biofeedback training involves a gradual tapering of the frequency of sessions. Patients are typically seen weekly for their first four to six weeks of training. If they are progressing well, they are then placed on a schedule of visits with gradually decreasing frequency (e.g., every two weeks to every four weeks to every three months) for a total of 10 to 12 visits.

Most outpatient programs also have patients participate in behavioral psychotherapy sessions. The therapy methods used in these sessions are similar to those employed in the group sessions described above for the inpatient programs. One major difference is that outpatient individual therapy sessions are usually scheduled weekly, rather than daily, and this gives the patients the opportunity to use their new skills in their homes and work environments between sessions.

Some outpatient programs have begun using biofeedback and relaxation training to treat children who have persistent migraine headaches.⁹ These children, who typically range in age from eight to fifteen, have failed to respond to medication management and are having academic problems because of frequent school absences. Biofeedback and relaxation training procedures for children are modified to make them more understandable and reinforcing. At the time of the initial evaluation, for example, the interviewer might demonstrate the biofeedback device to allay a patient's fears about having a sensor placed on the skin. Modelling may be used to teach relaxation. A relaxation tape is made for each patient using words and phrases the child understands. The sessions are typically broken up into shorter time periods to

accommodate children's shorter attention span and to allow them time to rest. In many programs, parents are asked to provide their children with encouragement and simple rewards for regular practice.

Many of the techniques used for children with headaches can also be used to help children with other recurrent pain problems, such as sickle cell disease pain, and to reduce the pain, tension, and emotional distress accompanying invasive medical procedures, such as repeated bone marrow aspirations or blood drawings.

Patients seen in outpatient pain programs are almost always referred by local physicians, on a consultation basis. At completion of treatment, a summary of the program and recommendations for maintaining progress are usually made available to the referring physician. Follow-up consultation is usually available as needed.

Outpatient programs for pain management are a relatively recent development, and data on outcome are not available for many of them. However, controlled treatment outcome studies of methods commonly employed in these programs have been conducted for patients suffering from headaches, low back pain, and rheumatoid arthritis pain.¹⁰⁻¹² These studies have shown that a combination of behavioral techniques and medical management produces results superior to those obtained with medical management alone.

Research Activities

Continuing clinical research is essential to improve our ability to assess and treat the complex problems experienced by patients enduring chronic pain. Such research is underway in several major university pain research centers.

The Duke research program focuses on the cognitive and behavioral strategies that chronic pain patients use to cope with pain, and on the development of interventions that train patients to employ more effective strategies. We have developed two assessment techniques that are central to much of our research. These are a Coping Strategies Questionnaire⁷ and an observation system for recording pain behavior.¹² Both are reliable and valid, and both are simple to administer.

Ongoing research involves patients with osteoarthritis,¹³ rheumatoid arthritis and sickle cell disease in children and adults. In all of this research we combine medical evaluation with the psychological and behavioral assessment strategies described here. The aim of our research is to develop effective individual and group treatment that can be employed with inpatients and outpatients to alter cognitive states, provide pain coping skills, educate in the development of new and more effective strategies, and introduce social supports. Follow-up studies are an essential part of the research which, it is hoped, will reveal optimal strategies for intervention in these difficult problems.

Conclusions

The behavioral and psychological methods of pain management have much to offer patients suffering from chronic pain. However, although behavioral methods of pain management have improved, some patients are not helped by them. We and others have found that despite intensive treatment efforts, some patients report little or no relief and continue to have major difficulties in coping with pain. It is hoped that advances in pain research and therapy made by pain management programs such as ours may eventually provide these patients with a more effective means of reducing pain and suffering.

References

- 1 Bonica JJ. *Advances in Neurology. International Symposium on Pain*. New York: Raven Press, 1947.
- 2 Loeser JD. *Low Back Pain*. In: Pain, JJ Bonica (ed.). New York: Raven Press, 1980.
- 3 Bonica JJ. Neurophysiologic and pathologic aspects of acute and chronic pain. *Arch Surgery* 1977;112:750-61.
- 4 Fordyce WE. *Behavioral Methods for Chronic Pain and Illness*. St. Louis: C.V. Mosby, 1976.
- 5 Keefe FJ, Gil KM, and Rose SC. Behavioral approaches in the multidisciplinary management of pain: programs and issues. *Clinical Psychology Review* 1986;6:87-113.
- 6 Houpt JL, Keefe FJ, and Snipes M. The clinical specialty unit: the use of the psychiatry inpatient unit to treat chronic pain syndromes. *Gen Hosp Psychiatry* 1984;6:65-70.
- 7 Rosenstiel, AK, and Keefe FJ. The use of coping strategies in chronic low back pain patients: relationship to patient characteristics and current adjustment. *Pain* 1983;17:33-44.
- 8 Keefe FJ, Block AR, Williams RB, and Surwit RS. Behavioral treatment of chronic low back pain: clinical outcome and individual differences in pain relief. *Pain* 1981;11:221-31.
- 9 Bangash IH, Keefe FJ, and D'Souza BJ. Treatment of headaches in children. In: K.M.Foley and R. Payned (Eds.), *Current Therapy of Pain*. New York: B.C. Decker (in press).
- 10 Keefe FJ, and Hoelscher T. Biofeedback in the management of chronic pain syndromes: Biofeedback Society of America task force report. In: J.P. Hatch, J.G. Fisher and J.D. Rugh (Eds), *Biofeedback: Studies in Clinical Efficacy*. New York: Plenum Press, 1987, pp. 211-54.
- 11 Turner JA, and Clancy S. Comparison of operant behavioral and cognitive-behavioral group treatment for chronic low back pain. *J Cons and Clin Psychology* 1988;56:261-6.
- 12 Bradley LA, Young LD, Anderson KO, et al. Effects of psychological therapy on pain behavior of rheumatoid arthritis patients: treatment outcome and six-month follow-up. *Arthritis and Rheumatism* 1987;30:1105-14.
- 13 Keefe FJ, Caldwell DS, Queen KT, et al. Pain coping strategies in osteoarthritis patients. *J Cons Clin Psychology* 1987;28:309-21.

FOR ALCOHOLISM AND CHEMICAL
DEPENDENCY

SOMETIMES STAYING NEAR

HOME
SWEET
HOME

Offering
EXECUTIVE
RECOVERY
MANAGEMENT
Program

MAKES

GOOD
CLINICAL
SENSE

P.O. BOX 240197
1715 SHARON ROAD WEST
CHARLOTTE, NC 28224
704/554-8373

JCAHO Accredited
Member NAATP
Member NCHA

Charlotte
Treatment
Center 
IS AMETHYST*

JACK E. HARVILLE
EXECUTIVE DIRECTOR

*Amethyst - from the Greek: **NOT DRUNKEN**

In North Carolina, when you decide to prescribe Librium,

To protect your prescription...



**You sign
on the right.**

Librium[®] 5-mg, 10-mg, 25-mg capsules
brand of
chlordiazepoxide HCl/Roche [®]



Copyright © 1987 by Roche Products Inc., Manati, Puerto Rico 00701. All rights reserved.

A Summer Clearance Sale at Emerald Isle!



Coast Realty announces clearance prices on some exceptional properties! Here are the real bargains everyone has been waiting for all year. We've got something for everyone. Take a look!

This spacious OCEANFRONT luxury condo is perfect for your family. With 4 BRMS and 3 BATHS, you'll have plenty of room. Amenities include beach, hot tub, 2 solariums. \$174,900.

This 4 BRM, 2 BATH, 3rd row cottage needs a new owner. Previous owner's have transferred and want an offer. Only two years old with fully enclosed garage. Only \$99,900.

This new 3 BRM, 2 BATH SOUNDFRONT home has been reduced for you. Peach-tree doors, tiled fireplace, and superb views of the ocean and sound! Reduced to \$165,000.

This quaint Cape Cottage is located in an exclusive subdivision. 3 BRMS, and 2 BATHS with ocean view from second story porch. Easy beach access. Beautifully furnished, Jenn-aire grill. All for only \$98,500.

These offerings won't last long. So if you are thinking about PROPERTY AT THE BEACH, give us a call. We will be pleased to talk with you about existing homes or construction on a new home.

For further information:

Coast Realty and Construction Company
7703 Emerald Drive
Emerald Isle, North Carolina 28594
(919) 354-3700

**ROSALYN P. STERLING-SCOTT, M.D.**

Assistant Professor of Surgery, UCLA School of Medicine and Drew University of Medicine and Science, Los Angeles

Associate Surgeon, Department of Cardiovascular & Thoracic Surgery, Centinela Hospital Medical Center, Los Angeles

Major, U.S. Army Reserve

EDUCATION Rensselaer Polytechnic Institute, Troy, NY, B.S. Chemistry; NYU School of Medicine, New York, M.D.

RESIDENCY Boston University School of Medicine (Cardiovascular); Saint Vincent's and St. Claire's Hospitals, New York City (General Surgery)

FELLOWSHIP First Mary A. Fraley Cardiovascular Surgical Research Fellow at the Texas Heart Institute, Houston

OUTSTANDING ACHIEVEMENTS Author of numerous articles, including "Indications for Early Bypass Grafting Following Intracoronary Streptokinase"; author of "The Female Surgeon—Dawn of a New Era," chapter in *A Century of Black Surgeons—The U.S.A. Experience*; Board of Directors, Association of Black Cardiologists; Secretary, Drew Society

“The caliber of physicians you meet in the Army Reserve exposes you to new ways of looking at a problem. It's easy for young surgeons to become entrenched in one method, but in the Army Reserve you'll have the chance to work with outstanding physicians in your own specialty, and often learn new ideas that will help you to improve your own approach to clinical or research problems,” says Dr. Sterling-Scott.

The Army Reserve can offer physicians a variety of challenging options such as teaching, research, unique training programs, and the opportunity to practice in prestigious Army medical centers.

“Joining the Army Reserve enabled me to take advantage of a number of conferences, including one at Walter Reed, where I worked with thoracic surgical colleagues, while conducting my own research project.”

We understand the time demands on a busy physician. So the Army Reserve offers training programs that will allow you to be flexible about the time you serve.

For more information about specific programs, call tollfree 1-800-USA-ARMY.

**ARMY RESERVE MEDICINE.
BE ALL YOU CAN BE.**



THE LOWER RESPIRATORY TRACT— More vulnerable to infection in smokers and older adults



Experience counts

Ceclor[®] Pulvules[®]
250 mg
cefaclor
think of it first

For respiratory tract infections due to susceptible strains of indicated organisms.

Summary.
Consult the package literature for prescribing information.

Indication: Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A β -hemolytic streptococci).

Contraindication: Known allergy to cephalosporins.

Warnings: CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:

- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in

moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.

- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:

- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] and toxic epidermal necrolysis or the above skin manifestations accompanied by arthritis/arthralgia, and frequently, fever): 1.5%; usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%, and, rarely, thrombocytopenia.

Abnormalities in laboratory results of uncertain etiology

- Slight elevations in hepatic enzymes.
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis; elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clintest[®] tablets but not with Tes-Tape[®] (glucose enzymatic test strip, Lilly).

[061088L]

Additional information available from
Eli Lilly and Company, Indianapolis, Indiana 46285.



Eli Lilly Industries, Inc
Carolina, Puerto Rico 00630

Eating Disorders: Evaluation and Treatment

W.J. Kenneth Rockwell, M.D.

The term "Eating Disorders" has come to refer to a pair of illnesses that have received increasing attention during the past 20 years, Anorexia Nervosa and Bulimia. Whereas the former illness was named by Gull in 1874,¹ and apparently had been known for centuries, the latter was distinguished only in 1980,² and has been renamed Bulimia Nervosa since then.³ Between 1980 and 1987 several changes have been made in the diagnostic criteria for both illnesses, reflecting both the rapid development in understanding of these disorders and a supposition that much is yet to be learned.

Over time many different treatment methods have been tried, particularly for anorexia nervosa, and during the past several years for bulimia nervosa as well, but there has not been found one uniformly successful treatment method for either illness, some patients benefiting from one type of treatment or combination of treatments, others from another. Unfortunately, precise criteria have not yet been established for matching patient to treatment, so some trial and error may be necessary. After what appears to be a reasonably good match has been achieved, the most important ingredient is persistence.

The identification by physicians and others of increasing numbers of individuals with the symptoms of an eating disorder has led to speculation about a true rise in incidence, and if there is a rise, what the cause(s) might be. There is some suggestive evidence for an increase in anorexia nervosa,⁴ but for bulimia nervosa baseline data have only just begun to be collected. In the relatively well-to-do adolescent or young adult female population (some 95% of patients are female), the prevalence of anorexia nervosa may be 1% and bulimia nervosa 3%.⁴

Patients with anorexia nervosa almost never refer themselves for treatment of the condition, and they will continue to deny that there is any problem whatsoever even in the face of frank emaciation. Signs, symptoms, and behaviors are furtively concealed or attributed to some other circumstance when revealed. Patients with bulimia nervosa almost always practice concealment early in the illness, but they are more likely eventually, with great shame, to divulge their symptoms and their struggles to control them to a friend, parent, or even a therapist.

Eating disorders are diseases of unknown, but presumably multifactorial, etiology for which the diagnostic criteria are as follows. Anorexia nervosa: (A) Refusal to maintain body weight over a minimal normal weight for age and height, e.g., weight loss leading to maintenance of body weight 15% below that expected; or failure to make expected weight gain during period of growth, leading to body weight 15% below that expected. (B) Intense fear of gaining weight or becoming fat, even though underweight. (C) Disturbance in the way in which one's body weight, size, or shape is experienced, e.g., the person claims to "feel fat" even when emaciated, believes that one area of the body is "too fat" even when obviously underweight. (D) In females, absence of at least three consecutive menstrual cycles when otherwise expected to occur (primary or secondary amenorrhea). (A woman is considered to have amenorrhea if her periods occur only following hormone, e.g., estrogen, administration.)

Bulimia nervosa: (A) Recurrent episodes of binge eating (rapid consumption of a large amount of food in a discrete period of time). (B) A feeling of lack of control over eating behavior during the eating binges. (C) The person regularly engages in either self-induced vomiting, use of laxatives or diuretics, strict dieting or fasting, or vigorous exercise in order to prevent weight gain. (D) A minimum average of two binge eating episodes a week for at least three months. (E) Persistent overconcern with body shape and weight. A residual category exists which is now designated Eating Disorder Not Otherwise Specified.

Dr. Rockwell is Director of the Anorexia Nervosa/Bulimia Treatment Program, Duke University Medical Center, Box 3245, Durham 27710.

Diagnosis

The differential diagnosis may be difficult early in these illnesses, either because the syndrome has not become full-blown or because the individual is able to conceal so much of the picture. Endocrine, gastrointestinal, depressive, and schizophrenic disorders should be considered in the differential diagnosis. If the obvious features of these illnesses are missing, a positive diagnosis of an eating disorder can often be made when, under specific inquiry, the story of characteristic attitudes and behaviors emerges. The attitudes include terror of gaining weight, and preoccupation with food, eating, and body size and shape. The behaviors will be found to have as their essential aim the prevention of calories being absorbed into the body. These behaviors include restriction of intake, vomiting with or without bingeing (ipecac is dangerous if used to induce vomiting), chewing and spitting out of food, and laxative abuse. Excessive exercise is used to burn off those calories that might have been absorbed, and diuretics (and laxatives, again, for the same effect) are used to eliminate signs and feelings of bloat.

Treatment

Eating disorders are curable, and furthermore an undetermined percentage remit spontaneously, but it is current opinion that the sooner recognition and treatment take place, the less prolonged treatment is likely to be and the better the overall prognosis. Data for anorexia nervosa accumulated up to the present time have shown mortality rates increasing as length of follow-up increases, with 10% a reasonable figure for truly long-term (several decades) studies.^{5,6} Another 15% to 25% of anorectics have been found in such studies to have been chronically more or less impaired by some aspect of their illness. There has not been time to amass such long-term data for bulimia nervosa. Case reports indicate that it often becomes chronic, sometimes persisting for decades, but even then can remit. Nevertheless, clinical experience with both illnesses suggests that they have self-reinforcing and self-perpetuating features, an indication for vigorous and persistent treatment initiated as soon as possible.

Whether treatment should be taking place on an outpatient or inpatient basis at any given moment depends on the circumstances. Indications for hospitalization specific to eating disorders include the following. Weight loss to 20% to 25% below Ideal Body Weight (IBW); failure of outpatient treatment: no substantial weight increase after six months or no substantial alteration in the pattern of bulimic behaviors; severe metabolic abnormality with particular reference to potassium depletion, such as repeated serum K⁺ levels below 2.5 mEq/L, or one or possibly two episodes of K⁺ below 2.0 mEq/L. Also, some anorectics may make it clear on initial evaluation that their current weight, although not dangerously low, will continue to fall or will never rise

unless they are afforded such structure as only a hospital can provide. Finally, hospitalization may be required to reverse or control patterns of vomiting or medication abuse.

Many therapists⁷⁻¹⁰ now working with large numbers of eating disordered patients recommend a multifocal and multimodal approach in treatment of these illnesses. The foci of treatment (usually in descending order of emphasis, as follows) are: correction of dangerous physiological abnormalities (e.g., electrolyte depletion); disordered eating behaviors and their concomitants (e.g., vomiting and laxative abuse); and accompanying disturbed attitudes, both immediately apparent and underlying. Treatment modalities include individual, group, and family psychotherapies; behavioral techniques; counseling and education in nutrition; self-help and social support systems; and medication.

Often all of these treatment modalities are employed simultaneously in the hospital. A treatment team is usually required. With close supervision and encouragement most patients are able to achieve an improved eating pattern. The struggle over food intake and control of weight, usually most intense at the outset, may require 24-hour 1:1 nursing support. Even thus, a very few patients may be unable to eat or to retain any oral intake and may need an initial period of nasoduodenal tube feeding. Improvement brings to the eating disorder patient a greater range of and greater control over day-to-day activities, but it occurs relatively slowly and may depend upon an elaborate set of "privileges" and "rewards," established to reinforce eating and other behaviors.

Most eating disorder patients are experts on the caloric content of food items, but some lack a broader knowledge of good nutritional practice. Although their major problem with respect to their bodies and food is a perceptual one, regular contact with a dietician provides nutritional re-education, which helps break down and reorganize faulty thought patterns regarding food. Individual and group psychotherapies address problems of low self-esteem, cognitive processes such as all-or-nothing thinking, and mechanisms of coping with stress in ways other than through the mishandling of food. Family involvement is essential if the patient is to return to the home to live, and may be essential even if she isn't. Medication is not needed to assist in weight gain or to help control bingeing in the hospital, but is occasionally useful in treating symptomatic anxiety or a concomitant depression.

One fact should be emphasized with patients and their families: no one is cured in-hospital; inpatient treatment is one phase of an overall treatment plan. In the follow-up to in-hospital treatment, or in outpatient therapy, the combination and sequencing of the treatment modalities discussed above should be individualized according to the age, circumstances, and condition of the patient.

In outpatient treatment, just as in inpatient, a multi-focal approach is maintained. Behavioral methods, such as maintenance of food diaries, self-imposed structures and environmental manipulations, have been found useful. For patients

living at home or in close contact with it, parental involvement, at least at the outset, is almost always essential. In some cases, particularly those of early adolescents, family therapy may be the sole modality. With some of these younger patients and with older ones, concomitant individual psychotherapy is indicated. As the patient begins to achieve some separation and individuation she becomes better able to make use of individual and group psychotherapy, alone or in combination. The use of antidepressant medication in the treatment of bulimia nervosa has met with some success in the outpatient setting.¹¹⁻¹⁴ These medications have enabled some patients to reduce the frequency of their bingeing and/or vomiting behaviors.

Successful treatment of a well-established eating disorder requires a long time and a great deal of effort. Patients and their families will need repeated support and encouragement over this prolonged course in order to sustain that effort. □

References

- 1 Gull WW. Apepsia hysterica: anorexia nervosa. *Trans Clin Soc Lond* 1874; 7:22.
- 2 Diagnostic and Statistical Manual of Mental Disorders (DSM III). Am Psychiatr Assoc, 3rd Ed, 1980.
- 3 Diagnostic and Statistical Manual of Mental Disorders (DSM III-R). Am Psychiatr Assoc, 4th Ed-Rev, 1987.
- 4 Pyle RL. The epidemiology of eating disorders. *Pediatrician* 1985; 12:102.
- 5 Hsu LKG. Outcome of anorexia nervosa. *Arch Gen Psychiatr* 1980; 37:1041.
- 6 Tolstrup K, Brinch M, et al. Long-term outcome of 151 cases of anorexia nervosa. *Acta Psychiatr Scand* 1985; 71:380.
- 7 Andersen AE. Practical comprehensive treatment of anorexia nervosa and bulimia. Baltimore: The Johns Hopkins University Press, 1985.
- 8 Garfinkel PE, Garner DM. Anorexia nervosa - a multidimensional perspective. New York: Brunner/Mazel, 1982.
- 9 Larocca FEF. Eating disorders: effective care and treatment. St. Louis: Ishiyaku EuroAmerica, Inc., 1986.
- 10 Powers PS, Fernandez RC (eds). Current treatment of anorexia nervosa and bulimia. Basel (Switzerland): S. Karger, 1984.
- 11 Pope HG, Hudson JI, et al. Bulimia treated with imipramine: a placebo-controlled, double-blind study. *Am J Psychiatr* 1983; 140:554.
- 12 Mitchell JE, Groat R. A placebo-controlled, double-blind trial of amitriptyline in bulimia. *J Clin Psychopharm* 1984; 4:186.
- 13 Walsh BT, Stewart JW, et al. Treatment of bulimia with phenelzine. *Arch Gen Psychiatr* 1984; 41:1105.
- 14 Hughes PL, Wells LA, et al. Treating bulimia with desipramine - a double-blind, placebo-controlled study. *Arch Gen Psychiatr* 1986; 43:182.

PHYSICIANS FINANCIAL SERVICES

"Specializing in Diagnostic and Prescriptive
Tax, Investment and Financial Planning
for the Medical Profession™"

For more information contact:

CON T. McDONALD

P.O. Box 32249 Raleigh, NC 27622
(919) 831-2370

Securities through Capital Investment Group, Inc. of the Carolinas,
A Registered Broker-Dealer.

Clinical Problems in Geriatric Psychiatry

The Relationship Between Dementia of the Alzheimer's Type and Depression

Burton V. Reifler, M.D., M.P.H.

Dementia of the Alzheimer's Type (DAT) and depression appear to be the two most common psychiatric disorders in old age and can exist as separate entities or may both be present in the same patient. Since depression can cause cognitive impairment and since DAT patients may be depressed, clinical investigators have been looking for ways to improve diagnostic accuracy. This paper will provide a brief overview of clinically relevant research.

Pseudodementia: A Controversial Term

An early paper on this subject, entitled "Pseudo-dementia," was written by Kiloh in 1961, and included a description of ten patients who had functional psychiatric disorders mimicking dementia.¹ He described one patient who he regarded as a case of depression simulating dementia, but careful review of this case history shows that there was no objective evidence of full recovery and the six-month follow-up would now be regarded as too short to adequately rule out the possibility of a dementia. Although hindsight suggests that Kiloh's presumed "classical case" of pseudodementia could easily have been a true dementia with superimposed depression, his paper did serve the very useful purpose of focusing clinicians' attention on careful diagnosis and evaluation in confused patients rather than assuming they had an irreversible illness which required nursing home placement.

A widely cited paper on pseudodementia by Wells appeared in 1979.² He also described ten patients with supposed functional disorders mimicking dementia, but he

made an important point that has not been sufficiently appreciated. He commented that depression is more of a caricature than an imitator of dementia, such that depressed patients often complain how bad their memory is but on objective testing it is frequently the case that no deficits can be found.

The term pseudodementia now appears to have outlived its usefulness for at least three reasons.³ First, depression simply does not give a good imitation of DAT, the most common form of dementia with which it is said to be confused. Alzheimer's is a slow, gradual, progressive loss of cognitive function generally occurring over several years, and when depression causes dementia-like symptoms these are generally of recent onset with the history dating back only weeks to months. Second, the term pseudodementia implies either dementia or depression and thus has the semantic property of ignoring the possibility that the same patient might have both DAT and depression. Finally, although Kiloh and Wells both emphasized that pseudodementia was purely a descriptive term and had no place in any diagnostic nomenclature, unfortunately it has come to be used as a diagnostic term by some clinicians.

Research on the Relationship Between Alzheimer's Disease and Depression

A study by Reifler et al.⁴ was based on the outpatient psychiatric assessments of 103 patients evaluated during a one-year period. Of the 103 patients, 88 were cognitively impaired (most had DAT), and 20 (23%) of this group were also depressed. Using the mental status questionnaire as a measure of severity of cognitive impairment, and DSM-III criteria for depression,⁵ the results showed that nine (33%) of 27 mildly impaired patients were depressed, compared with eight (23%) of 35 moderately impaired, and three (12%) of

Professor and Chairman, Department of Psychiatry and Behavioral Medicine, Bowman Gray School of Medicine, Wake Forest University, Winston-Salem 27103.

26 severely impaired patients. These findings suggested that depression was a common coexisting condition in DAT and was more likely to occur in mildly demented patients than in those who were severely demented.

Out of the total of 20 depressed and cognitively impaired patients, three (15%) were diagnosed as having depression only, while 17 (85%) had depression superimposed on an underlying dementia. Since there are no completely satisfactory criteria for making this distinction, the diagnosis was based on the details of the clinical presentation, such as whether the dementia clearly predated depressive symptoms.

In another study related to this area, Reifler et al. evaluated the medical records of 178 patients who presented for evaluation of memory problems.⁶ Of this total, 154 were demented, 55 were depressed, and 44 were both demented and depressed. This study was a retrospective chart review with the problems inherent in studies of this type, such as lack of interrater reliability testing, reliance on clinical impressions of improvement rather than objective measures, and the possibility of bias in interpretation of the clinic notes.

Only nine patients improved by three or more points on the Mini-Mental State Examination, a test of cognitive function ranging from a perfect score of 30 to a minimum of 0.⁷ Of the remaining 46 depressed patients (i.e., those who did not improve by at least three points), 23 received antidepressant therapy. Of these, 19 showed improvement in affective (but not cognitive) symptoms.

These findings were encouraging in their suggestion that the depression seen in DAT patients might be successfully treated, and this led to a double-blind prospective study.⁸ This double-blind trial of imipramine versus placebo in DAT patients with and without depression was designed to address three primary questions: (1) Can the depression seen in about 25% of DAT patients be successfully treated? (2) Does treatment affect cognitive function either for better or for worse? Treating the depression seen in Alzheimer's patients could lead to either improvement or worsening of cognitive function. If the depression was aggravating cognitive dysfunction, then antidepressant treatment might produce cognitive improvement with resolution of the depression. On the other hand, since DAT is well known to involve decreased activity of the cholinergic system, giving a tricyclic antidepressant with anticholinergic properties might cause cognitive function to become worse due to further inhibition of the cholinergic system. (3) Do some DAT patients have a "masked" depression contributing to their cognitive impairment? There have been comments in the literature suggesting that some demented patients who did not appear to be depressed might actually be suffering from some atypical or unrecognized form of depression causing their cognitive impairment.⁹

There were 61 subjects with DAT enrolled in the study, including 27 who were depressed and 34 who were not. Subjects from each group were randomly assigned to imipramine or placebo for an eight-week study period. Scores on the 27-item Hamilton Depression Scale improved from

19.3 to 11.5 in the imipramine group and from 18.6 to 10.8 in the placebo group, or approximately eight points in each treatment condition. There was a small yet statistically significant improvement on the Mini-Mental State score for depressed subjects in both treatment conditions, but this did not appear to be clinically significant. Mean dosage at the completion of the study was 83 mg per day for the depressed group and 82 for the non-depressed group. Blood levels were at the lower end of the generally accepted therapeutic range for adults. There were no cases of reversal (or even dramatic improvement) of cognitive impairment which would have suggested that the dementia was being significantly aggravated by depression.

The three primary conclusions from this study are as follows: (1) Depression is not an inevitable or untreatable consequence of DAT. While it remains to be seen what is the most effective treatment (since imipramine and placebo were both effective), when depression is present it can often be relieved. (2) Moderate depression does not seem to add to the cognitive impairment of DAT, and careful use of a tricyclic antidepressant does not appear to worsen symptoms of dementia. (3) There is no evidence that masked depression gives a convincing imitation of Alzheimer's Disease. If a DAT patient has no clear evidence of depression, antidepressant therapy is unwarranted.

A New Classification for Mixed Cognitive-Affective Disturbances in the Elderly

In recognition of the fact that the overlap between dementia and depression can be confusing, and the term pseudodementia is not terribly useful, there is room for a better descriptive classification system. One such possibility is to classify patients with mixed cognitive-affective symptoms as Type I or Type II,¹⁰ a simple mnemonic: Type I patients have one diagnosis (depression), whereas Type II patients have two diagnoses (DAT and depression). In Type I cases the entire difficulty is due to depression and the hallmark is generally that the patient is clearly depressed, and the cognitive difficulties are coincident with the development of depression. In such cases the cognitive impairment is usually very mild, fairly recent in onset (weeks or months as opposed to years) or both. In Type II cases the patient has a history of slow, gradual, progressive loss of cognitive ability completely consistent with DAT, and is also depressed. In many Type II cases, the cognitive impairment clearly predates the depression.

Excess Disability in Dementia

In a broader perspective, depression should be viewed as simply one potential source of excess disability in demented

elderly outpatients. Other sources of excess disability include overmedication, Parkinson's Disease, hypothyroidism, or any of the medical or social problems seen in this group of patients.

This principle is reflected in the Rule of Halves proposed by Reifler and Larson.¹¹ This Rule states that approximately half of all patients evaluated for dementia will have some coexisting illness which had not been previously detected, approximately half of this group will have transient improvement of at least one month when the coexisting condition is treated, and roughly half of this group will have persistent improvement of at least one year. These figures may prove to be too conservative since so few interventions have been tested for specific symptoms or coexisting conditions in Alzheimer's Disease.

In summary, depression is seen in roughly 25% of DAT patients and can often be effectively relieved. This should serve as a reminder to carefully evaluate all demented patients, not only to look for curable causes but to relieve needless suffering. While there are many incurable diseases, there are no untreatable patients. □

References

- 1 Kiloh LG. Pseudo-dementia. *Acta Psychiatr Scand* 1961; 37:336-50.
- 2 Wells CE. Pseudodementia. *Am J Psychiatry* 1979; 136:895-900.
- 3 Reifler BV. Arguments for abandoning the term pseudo-dementia. *J Am Geriatrics Soc* 1982; 30:665-8.
- 4 Reifler BV, Larson E, Hanley R. Coexistence of cognitive impairment and depression in geriatric outpatients. *Am J Psychiatr* 1982; 139:623-6.
- 5 Diagnostic and Statistical Manual of Mental Disorders, 3rd ed. Washington, DC: American Psychiatric Association, 1980.
- 6 Reifler BV, Larson E, Teri L, Poulsen M. Dementia of the Alzheimer's Type and depression. *J Am Geriatrics Soc* 1986; 34:855-9.
- 7 Folstein MF, Folstein SE, McHugh PR. Nimi-Mental State: a practical method for grading the cognitive state of patients for the clinician. *J Psychiatr Res* 1975; 12:189-97.
- 8 Reifler BV, Teri L, Raskind MA, et al. Double-blind study of depressed Alzheimer's patients. Paper presented at Annual Meeting of Am Psychiatr Assoc, Chicago, IL, May 1987.
- 9 Spar JE, Gerner R. Does the dexamethasone suppression test distinguish dementia from depression? *Am J Psychia-*

try 1982; 139:238-40.

- 10 Reifler BV. Mixed cognitive-affective disturbances in the elderly: a new classification. *J Clin Psychiatry* 1986; 47:354-6.
- 11 Reifler BV, Larson E. Excess disability in demented elderly outpatients. *J Am Geriatrics Soc* 1988; 36:82-3.

Advances in Biological Psychiatry and Psychotherapy Are Not Mutually Exclusive

Charles B. Nemeroff, M.D., Ph.D., and W. Edward Craighead, Ph.D.

Advances in neurobiology in the last several years have had an increasing impact upon biological psychiatry. Studies concerning the pathophysiology of manic-depressive illness and schizophrenia have resulted in the identification of novel diagnostic adjuncts as well as novel treatment approaches. These advances have been paralleled by advances in psychotherapy research, especially in cognitive-behavioral psychotherapy. The same vigorous scientific standards must be applied to clinical efficacy studies of both psychotherapy and somatic treatments. Scrutiny of the available literature highlights the need for the careful and judicious use of both biological and psychological therapies in many patients with major psychiatric disorders.

No one familiar with the burgeoning area of neurobiology research can deny the remarkable advances that have occurred in the last several years. Using a number of multidisciplinary research approaches including neuroanatomical, electrophysiological, neurochemical, and behavioral methods, more than 75 neurotransmitters and neuromodulators have been isolated and characterized in the mammalian brain.¹ These include such well-known transmitters as acetylcholine, the catecholamines (norepinephrine, dopamine, and epinephrine), serotonin, certain amino acids (glutamate, γ -aminobutyric acid, aspartate), and a relatively novel class of neuroregulators, the neuropeptides (endorphins, neurotensin, substance P, and the hypothalamic hypophysiotropic hormones such as thyrotropin-releasing

hormone [TRH]). In addition, neural circuits containing specific neurotransmitters have been described in several brain areas. For example, we now know that dopamine (DA) neurons in the midbrain that originate in the substantia nigra (A_9 cell group) project to the neostriatum. The nearby A_{10} DA neurons in the ventral tegmental area project to limbic areas of the brain including the nucleus accumbens and amygdala, as well as to the frontal cortex (mesolimbocortical system). The former DA circuit is known to degenerate in Parkinson's disease and primarily to be involved in the control of movement. The latter, mesolimbocortical system, is known to be involved in brain reward mechanisms including the reinforcing effects of drugs of abuse.

In addition, considerable information concerning the regulation of anterior pituitary gland secretion by the brain has been elucidated. Neuropeptides synthesized in neurons in the diencephalon are released from nerve endings in the median eminence into the primary plexus of the pituitary portal system. They are then transported to the anterior pituitary gland where they release or inhibit the release of the pituitary trophic hormones such as growth hormone (GH) and adrenocorticotropin (ACTH). Thus, the brain controls the secretion of all of the endocrine glands including the thyroid, adrenals, gonads, etc. Moreover, the secretions of these endocrine glands, including cortisol and the sex steroids, act directly on the brain to regulate the activity of their respective endocrine axis and also to influence behavior. We could, of course, describe other findings in basic neurobiology but the point we wish to make is that many chemically defined neuronal pathways have been described, and the behavioral consequences of increased or decreased synaptic availability of a particular neurotransmitter are currently being elucidated. Using neuroanatomical, neurochemical and behavioral techniques, the neural circuits that modulate a number of behaviors including eating and drinking, sexual

From Departments of Psychiatry (CBN) and Pharmacology (CBN, WEC), Duke University Medical Center, Durham. Correspondence to Dr. Nemeroff, Box 3859 DUMC, Durham 27710.

behavior, locomotion, and even higher cognitive processes are under intense investigation.

These advances in neurobiology are constantly being applied to psychiatry to contribute to the discipline of biological psychiatry. They have had and will continue to have considerable impact on the processes of diagnosis and treatment of major psychiatric disorders. In the area of affective disorders, a number of putative biological markers of depression, based upon preclinical investigations, have been discovered in recent years. These include measurement of platelet receptors (e.g. [³H]-imipramine and α -adrenergic receptor binding), the dexamethasone suppression test, certain sleep measures (REM latency), and others. Currently, several research groups are intensively investigating other diagnostic adjuncts such as position-emission tomography (abnormalities in glucose utilization in the parahippocampal gyrus have been observed in panic disorder), brain electromagnetic activity mapping (BEAM), magnetic resonance imaging (MRI), neuroendocrine challenge tests (TRH and CRF stimulation tests; see Evans et al, this issue), and so on.

Thus for the major psychiatric disorders such as manic-depressive illness and schizophrenia for which a genetic basis for vulnerability has been established, a number of abnormalities in the central nervous system (CNS) have been demonstrated, and some of these have been used as diagnostic adjuncts. In addition, somatic treatments such as tricyclic antidepressants, lithium, and electroconvulsive therapy for affective disorders, and antipsychotic drugs for schizophrenia, which have well-established neurochemical effects, have been shown in rigorous clinical trials to be effective in treating these devastating disorders. However, as all experienced clinicians know, somatic treatment in the absence of concomitant psychological and social treatment is poor clinical practice which results both in more frequent relapses and in a poorer life adaptation. Schizophrenia provides a good example. Neurobiological approaches to this disorder are clearly the most efficacious approach, but antipsychotic drug therapy, while allowing patients to live outside of the hospital, does not accomplish a cure. One can, of course, reasonably argue that antipsychotic drugs still represent a less than perfect treatment for schizophrenia. However, we would suggest that even if we could administer a "magic bullet" that would completely normalize the brain of a 25-year-old schizophrenic patient who first became ill at age 17, psychotherapy would be essential to help the patient assimilate and adjust into any reasonably normal, productive lifestyle.

We now address recent advances in psychotherapy itself, which are due in large part to a shift in the methods of clinical efficacy studies. Early attempts at psychotherapy research generally failed to demonstrate the effectiveness of psychotherapy. Recent research has shown, however, that the ineffectiveness lay not in the approaches and techniques of psychotherapy, but in the methods of evaluation. These early efforts failed to show mechanisms of outcome for psychotherapeutic intervention because they merely evaluated a broad-spectrum or "non-specific" psychotherapy applied to

a variety of clinical problems. The correction of this generalized assessment resulted in advances in psychotherapy research.

Current studies of therapeutic outcome specifically define the clinical population to be treated, prescribe treatment procedures and strategies via treatment manuals, and train therapists to specified levels of competence in the therapy employed. Recent data have indicated that such psychotherapeutic research strategies have produced dramatic changes in problems in living and the demoralization that frequently accompanies those problems. For example, cognitive-behavioral and interpersonal psychotherapies have been found to alleviate depression.² More traditional behavior therapy and cognitive-behavior therapies have been demonstrated to be extremely effective for generalized anxiety disorders, phobias, and more recently panic attacks.³ In fact, the use of behavior therapy developed by Foa and her colleagues⁴ for treatment of obsessive-compulsive disorder is the only concurrent form of psychological therapy excluded by Ciba-Geigy in its ongoing clinical trial of chlorimipramine to treat that disorder. Finally, recent evaluations of treatment outcome with children suggest that traditional broad-spectrum psychotherapy applied across the board to children's problems may not only be ineffective, but that in some instances it may be harmful.⁵ Although the data are less convincing with children, the applications of specific therapies to specific disorders in children provide considerable reason for optimism.⁶

We are not, however, suggesting that psychotherapies should be universally employed to treat clinical disorders; nor should somatic-based therapies receive ubiquitous application. The following scenario seems to reflect reasonable clinical practice. With many patients some form of somatic treatment will be essential; these patients would either not respond or respond too slowly to any form of psychotherapy. Other distressed individuals may require only psychotherapy. Many, if not most, individuals with clinical problems will profit from simultaneous psychological and somatic intervention.

The major revolution in psychiatry will be brought about by developing an understanding of the interrelationships of biological and psychological factors; not the development of one to the exclusion of the other. The theoretical and empirical work must be based on an understanding of the biological basis of psychiatric disorders. Indeed, as we have noted, significant advances have been and continue to be made in this area. One could hardly characterize accurately the current biological knowledge as a non-entity or psychological knowledge as a "ghost." Even though much more "grass roots" work must be produced before they can occur, the truly revolutionary changes⁷ in clinical psychiatry and psychology will develop as the interfaces of the biological and psychological domains are unveiled. Indeed the basic science literature clearly supports the hypothesis that the brain alters behavior, and moreover, behavioral alterations, such as stress, alter the brain. □

Acknowledgments

The authors are supported by NIMH MH-39415, MH-42088, MH-40159, MH-40524 and NIA AG-05128. We are grateful to Shelia Walker and Beverly McNeil for preparation of this manuscript.

References

- 1 Nemeroff CB. In: Textbook of geriatric psychiatry, Busse EW and Blazer DG. Washington, DC: APA Press (In press).
- 2 Hollon, SD and Najavits, L. Review of empirical studies on cognitive therapy. In: American Psychiatric Association review of psychiatry, Vol. 7, cognitive therapy. Rush AJ and Beck AT (eds.). Washington, DC: American Psychiatric Press, Inc., (in press).
- 3 Barlow DH. Panic, anxiety and the anxiety disorders. New York: Guilford Press (in press).
- 4 Grayson JB, Foa EB and Steketee G. Obsessive-compulsive disorder. In: Handbook of clinical behavior therapy with adults. Hersen B and Bellack AS (eds.), New York: Plenum, 1985, pp.133-65.
- 5 Weisz JR and Weiss B. Assessing the effects of naturally-occurring psychotherapy with children and adolescents. (Submitted for publication).
- 6 Meyers AW and Craighead WE. Cognitive behavior therapy with children. New York: Plenum, 1984.
- 7 Kuhn TS. The structure of scientific revolutions, 2nd edition. Chicago: The University of Chicago Press, 1970.

Winchester

"SERVICE SINCE 1919"

Winchester Surgical Supply Company

P.O. Box 35488 Charlotte, NC 28235
704/372-2240 or 800-868-5588

Winchester Home Healthcare

Medical supplies and equipment for your patients at home

Charlotte, N.C.	Greensboro, N.C.	Hickory, N.C.
704/332-1217	919/275-0319	704/324-0336
704/547-0708		

Serving the Medical Profession and their patients

Our salesmen are located in all parts of North Carolina.

We have DISPLAYED at every N.C. State Medical Society Meeting since 1921 and advertised CONTINUOUSLY in the N.C. Journal since January 1940 issue.

HIV: Psychoimmunologic and Neuropsychiatric Relationships

Paul D. Zislis, M.D., Robert N. Golden, M.D.,
Cort Pedersen, M.D., and Dwight L. Evans, M.D.

Acquired Immunodeficiency Syndrome (AIDS) is a fatal illness caused by the Human Immunodeficiency Virus (HIV). This virus attacks the body's immune system and disables it, leaving the patient predisposed to the development of opportunistic infections and neoplasms.

Psychiatry's role in the treatment of AIDS patients has largely been one of providing emotional support along with psychopharmacotherapy when indicated. The newly developing field of Psychoneuroimmunology, however, has proposed possible links between psychological states and the immune system. It would therefore be reasonable to explore the effects of psychotropic medications on the psychiatric and immunologic status of patients whose illnesses may compromise both, such as AIDS patients. Research in this area is only beginning but it seems to offer promise of new insights into the relationship between affective states and immune diseases.

Neuropsychiatric Manifestations of AIDS

The Centers for Disease Control announced a new criterion for the diagnosis of AIDS which is of particular relevance to psychiatry: the presence of dementia in a patient who is seropositive for antibody to HIV and who has no other known etiology for the presence of dementia.¹ Dementia and motor disturbances in AIDS patients may occur as a result of the neurotropic propensity of HIV. There is evidence that HIV directly infects the brain and produces a subacute encephalopathy.²⁻⁵ HIV has been found to localize in the superficial

cortex and hippocampal regions of the brain.⁶

Snider first identified neurologic complications associated with AIDS.⁷ Since then, others have reviewed the neurologic and psychiatric manifestations of AIDS.^{2,8-16} To summarize briefly, early manifestations of dementia and encephalopathy in AIDS patients may include forgetfulness, impaired concentration, decreases in interest and libido, apathy, social withdrawal, psychomotor retardation, organic psychosis, tremors, ataxia, dysarthria, loss of coordination, impaired handwriting, and paraparesis, with greater lower extremity weakness. Late manifestations may include disorientation, confusion, agitation, organic psychosis, mutism, myoclonus, urinary and fecal incontinence, pyramidal tract signs (spasticity, hyperreflexia, extensor plantar reflexes), seizures and coma. Associated laboratory findings may include mild, generalized, cortical atrophy, frequently with ventricular enlargement, and evidence of focal lesions (secondary to parasitic infections or neoplasms) on computed tomographic and magnetic resonance imaging scans of the brain; diffuse mild slowing on electroencephalogram and mild protein elevations with pleocytosis in the cerebrospinal fluid.

In addition to HIV associated dementia, AIDS patients may experience organic mental disorders related to the effects of central nervous system neoplasms and opportunistic infections as well as fever, hypoxia, and the use of narcotics, steroids, chemotherapy, and interferon. Other psychiatric conditions which may be present in HIV infected patients include adjustment disorder or major depression with associated suicidality, and increased manifestations of previous psychiatric illnesses and personality disorders.

The Possible Relevance of Psychoneuroimmunologic Concepts in the Treatment of AIDS

Recent advances have been made in understanding the complex relationship between psychological or emotional

From the Departments of Psychiatry (PDZ*, RNG, CP, DLE) and Medicine (DLE), University of North Carolina, Chapel Hill 27514. (*Fourth-year Resident at the time this paper was written).

states and the body's physiologic mechanisms. Much work is underway in an attempt to delineate the effects of emotional stress and depression on the immune system.¹⁷⁻²⁹

The hypothalamic-pituitary-adrenal (HPA) axis is thought to be perturbed in many patients with major depression.³⁰⁻³² The HPA axis also appears to interact with the immune system. Neurotransmitters (e.g., norepinephrine and acetylcholine), play a role in the regulation of the hypothalamus. The hypothalamus normally secretes corticotropin releasing hormone (CRH) which stimulates production of adrenal corticotropin hormone (ACTH) by the pituitary gland. This in turn stimulates production of glucocorticoids, including cortisol, by the adrenal gland. Normally cortisol is secreted with a diurnal variation, with peak levels in the early morning hours and lower levels throughout the remainder of the day. The production of cortisol is ordinarily suppressed by the administration of the synthetic glucocorticoid dexamethasone, due to feedback inhibition of the pituitary and hypothalamus. However, in depression, a dysregulation of the HPA axis has been observed. The usual diurnal variation is often lost, blood and urine cortisol levels may be elevated, and dexamethasone does not produce the usual suppression of serum cortisol. This is the basis of the Dexamethasone Suppression Test (DST) developed by Carroll, et al., used in the assessment of depression.³³

Thus cortisol is frequently elevated in depression (as well as in times of stress), and this steroid hormone has been reported to inhibit the immune system.^{19,34} Selye observed that stress results in hypertrophy of the adrenal gland and hyperproduction of cortisol which in turn produces involution of the thymus gland.¹⁷ The thymus is responsible for converting immature lymphocytes (or stem cells) produced in the bone marrow into mature T cells which are responsible for cell mediated immunity, and helper T cell lymphocytes also help regulate the function of B cells which are responsible for antibody production by the immune system.

Kronfol, Stein, et al., and Keicolt-Glaser independently demonstrated that in patients suffering from major depression or stress, there may be diminished function of T lymphocytes.^{19,20,23} There may also be diminished numbers of T lymphocytes in depression, but the evidence for this has been inconsistent.^{19,20}

Diminished NK activity has also been observed.^{23,29} Evans and associates have demonstrated decreased NK cell numbers in depressed patients.²⁵ Stein, Schleifer and Keller found that alterations in immunity may be related to the state or severity of depression.^{20,27}

Antidepressant Pharmacotherapy

If immune deficits are related to the state of depression, could antidepressant pharmacotherapy improve the state of depression and also result in an improvement in associated immune

deficits? A plausible mechanism for such improvement might be related to antidepressant mediated normalization of the neuro-endocrine-immunologic pathways which are frequently altered in depression.

Lithium carbonate is used both in the treatment of bipolar affective disorder and as an adjuvant to antidepressant therapy in treatment-resistant depression.^{35,36} Lithium carbonate has been reported to enhance the immune system.^{37,38} This enhancement is reflected by lithium carbonate producing an increase in the number of polymorphonuclear cells *in vivo*, as well as by its promoting augmentation of lymphocyte response to mitogen stimulation when lymphocytes are exposed *in vitro* to lithium. In addition to promoting neutrophilia and blastogenic responsiveness in lymphocytes, lithium appears to enhance macrophage and PMN phagocytosis. There have also been related anecdotal reports of improved immune status in immunocompromised patients treated with lithium.^{37,38} However, other studies of *in vivo* lithium-induced immunoenhancement have not been so conclusive.³⁹

Livingstone reviewed the evidence that lithium appears to enhance lymphocyte function (as measured by blastogenic response to mitogenic stimulation) via its ability to inhibit adenylate cyclase activity with resultant diminished levels of intracellular cyclic adenosine monophosphate (cyclic-AMP). Cyclic-AMP has been shown to play an inhibitory role in lymphocyte, macrophage, and polymorphonuclear leukocyte function. Such substances as epinephrine, norepinephrine, ACTH and prostaglandin E1 have been found to activate adenylate cyclase in various cell populations.³⁷ Calabrese confirmed previous findings of elevated plasma levels of prostaglandin E in depressed patients and observed diminished T lymphocyte functions in that population.²¹

It is possible that in states of stress and depression, HPA axis-mediated augmentation of levels of catecholamines, ACTH, cortisol and possibly prostaglandin E may promote adenylate cyclase activation and cyclic AMP production with resultant immunosuppression. Lithium carbonate's ability to inhibit adenylate cyclase and thereby to increase lymphocyte function has been suggested to have therapeutic potential in selected patients with immune deficiencies related to elevated levels of C-AMP.³⁷ Thus lithium might possibly have therapeutic potential in patients who are immunocompromised and depressed.

Furthermore, in addition to its role in the treatment of affective disorders and its conceivable ability to potentiate immune function, lithium has been found to have antiviral properties. Skinner, et al., and Patton, et al. demonstrated that in *in vitro* studies, lithium chloride is an effective inhibitor of replication and infectivity of Herpes Simplex Virus (a DNA virus).^{40,41} However, preliminary studies undertaken at the University of North Carolina at Chapel Hill demonstrated that lithium neither enhanced nor inhibited replication of HIV (a retrovirus).⁴² Further studies to assess lithium potential for inhibition of HIV infectivity are important.

Conclusions

AIDS compromises immunologic function with singularly fatal results. Some patients suffering from HIV infection have been noted to experience depressive states. It is possible that any immune dysfunction resulting from depression may further compromise the immune status of an HIV infected patient or may facilitate the progression of the patient's illness. The psychoneuroimmunologic relationships outlined above might suggest a potential role for the use of antidepressants and lithium in the treatment of patients who have HIV infection and who experience symptoms of depression.

Although depression has been shown to compromise immunologic status, it has not yet been demonstrated that treatment of depression with antidepressants and/or lithium results in normalization of the immune system alterations associated with depression. Furthermore, it is not known if the immunologic alterations found in depression are clinically significant. However, Evans and associates found that the rates of DST non-suppression in cancer patients were similar to those in non-melancholic, non-psychotic, major depressed psychiatric patients.²⁵ Thus they suggest that alterations of immune function, as mediated by endocrine function and as related to psychological state, could conceivably influence the development and course of malignancy.

To the extent that depression may further compromise the immunologic status in HIV infected patients, treatment of the depression, particularly in the early stages of infection, might be of some benefit in delaying the deterioration of the immune system. Fernandez reported improvement in both depression and cognition in HIV infected patients treated with the psychostimulants methylphenidate and dextroamphetamine.^{43,44} Assessment of the impact of these agents on the immune system, in addition to the effects of antidepressants, would be worthwhile. Finally, quite apart from any effects on the immune system, antidepressant usage in the treatment of depressed HIV infected patients may be of benefit in treating their depression and in improving their quality of life, as Evans, et al., have observed in the treatment of depressed cancer patients.⁴⁵ (See Evans, et al., in this issue.)

Thus, increasing knowledge about the relationship between psychological states and the immune system may provide a new and valuable strategy in the management of HIV infection and AIDS. Admittedly, much of what we have proposed is speculative, but all of it is plausible. The immense impact of this catastrophic epidemic makes the development of new treatment approaches of utmost importance. □

References

- 1 Centers for Disease Control. Revision of the CDC surveillance case definition for Acquired Immunodeficiency Syndrome. *Morbidity and Mortality Weekly Review* 1987; 36(suppl):1-15.
- 2 Navia B, Price R. Dementia complicating AIDS. *Psychiatric Ann* 1986; 16:158-66.
- 3 Shaw G, Harper M, Hahn B, et al. HTLV-III infection in brains of children and adults with AIDS encephalopathy. *Science* 1985; 227:177-82.
- 4 Levy J, Shimabukuro J, Hollander H, et al. Isolation of AIDS associated retroviruses from cerebrospinal fluid and brain of patients with neurological symptoms. *Lancet* 1985; ii:586-8.
- 5 Stoler M, Eskin T, Benn S, et al. Human T cell lymphotropic virus type III infection of the central nervous system. *JAMA* 1986; 256:2360-4.
- 6 Hill J, Ruff M, Sacerdote P, et al. Neuropeptides and HIV receptor. *Neuroendocrinology Letters (Abstracts)* 1987; 9:168.
- 7 Snider W, Simpson D, Nielson S, et al. Neurologic complications of acquired immunodeficiency syndrome: analysis of 50 patients. *Ann Neurol* 1983; 14:403-18.
- 8 Levy R, Bredsen D, Rosenblum M. Neurologic manifestations of AIDS: experience at UCSF and review of the literature. *J Neurosurg* 1985; 62:475-95.
- 9 Koppel B. A clinician's guide to neurologic complications of AIDS, Part I. *Hosp Physician* 1988; 24:25-39.
- 10 Holland J, Tross S. The psychosocial and neuropsychiatric sequelae of the acquired immunodeficiency syndrome and related disorders. *Ann Int Med* 1985; 106:760-4.
- 11 Dilley J, Ochitill H, Perl M, Volberding P. Findings in psychiatric consultation with patients with acquired immune deficiency syndrome. *Am J Psychiatry* 1985; 142:82-6.
- 12 Perry S, Jacobson P. Neuropsychiatric Manifestations of AIDS-spectrum disorders. *Hosp Comm Psychiatry* 1986; 37:135-42.
- 13 Detmer W, Lu F. Neuropsychiatric complications of AIDS: a literature review. *Int J Psychiatry in Med* 1986-87; 16:21-9.
- 14 Dwyer B. AIDS. *The Psychiatric Times* 1987; IV, No. 1.
- 15 Faulstich M. Psychiatric aspects of AIDS. *AM J Psychiatry* 1987; 144:551-6.
- 16 Frierson R, Lippman S. Suicide and AIDS. *Psychosomatics* 1988; 29:226-31.
- 17 Selye H. Stress and disease. *Science* 1955; 122:625-31.
- 18 Ader R. (ed.). *Psychoneuroimmunology*. New York: Academic Press, 1981.
- 19 Kronfol Z. Depression, cortisol and immune function. *Lancet* 1984; 1026-7.
- 20 Stein M, Keller S, Schleifer S. Stress and immunomodulation: the role of depression and neuroendocrine function. *J Immunol* 1985; 135:827-33.

- 21 Calabrese J, Skwerer R, Barna B, et al. Depression, immunocompetence, and prostaglandins of the E series. *Psychiatry Res* 1986; 17:41-7.
- 22 Edelstein B. The stress factor: exploring the possibility of a psychological component to cancer. *Jefferson J Psychiatry Res* 1986; 4:22-7.
- 23 Keicolt-Glaser J, Glaser R. Psychological influences on immunity. *Psychosomatics* 1986; 27:621-4.
- 24 Calabrese J, Kling M, Gold P. Alterations in immunocompetence during stress, bereavement and depression: focus on neuroendocrine regulation. *Am J Psychiatry* 1987; 144:1123-34.
- 25 Evans D. Endocrine and immune aspects of neoplastic disease. *Neuroendocrinology Letters (Abstracts)* 1987; 9:156.
- 26 Lloyd R. Explorations in psychoneuroimmunology. Grune & Stratton, Inc., 1987.
- 27 Schleifer S, Keller S, Stein M. Clinical studies of immune function in psychiatric disorders. *Neuroendocrinology Letters (Abstracts)* 1987; 9:169.
- 28 Solomon G. Psychoneuroimmunology: interactions between central nervous system and immune system. *J Neurosci Res* 1987; 18:1-9.
- 29 Irwin M, Daniels M, Risch S, et al. Plasma cortisol and natural killer cell activity during bereavement. *Biol Psychiatry* 1988; 24:173-8.
- 30 Carroll B, Mendels J. Neuroendocrine regulation in affective disorders. In: *Hormones, Behavior and Psychopathology*. E.J. Sachar, (ed.). New York: Raven Press, 1976.
- 31 Prange A, Lipton M, Nemeroff C, Wilson I. The role of hormones in depression. *Life Sci* 1977; 20:1305-18.
- 32 Golden R, Potter W. Neurochemical and neuroendocrine dysregulation in affective disorders. *Psychiatric Clinics of North America* 1986; 9:313-27.
- 33 Carroll B, Feinberg M, Gredeu J, et al. A specific laboratory for the diagnosis of melancholia. *Arch Gen Psychiatry* 1981; 38:13-22.
- 34 Claman H. Corticosteroids and lymphoid cells. *N Engl J Med* 1972; 287:388-97.
- 35 Montigny C, Courmoyer G, Morissette R, et al. Lithium carbonate addition in tricyclic antidepressant resistant unipolar depression. *Arch Gen Psychiatry* 1983; 40:1327-34.
- 36 Heninger G, Charney D, Sternberg D. Lithium carbonate augmentation of antidepressant treatment. *Arch Gen Psychiatry* 1983; 40:1335-42.
- 37 Livingstone C. Lithium as an immunologic adjuvant. *Medical Hypothesis* 1980; 6:1-6.
- 38 Borbowsky W. Adjuvant-like effects of lithium on peripheral blood mononuclear cells. *Adv Exp Med Biol* 1980; 27:417-27.
- 39 Greco F. Lithium and immune function in man. *Adv Exp Med Biol* 1980; 27:463-5.
- 40 Skinner G, Haretley C, Buchan A, et al. The effect of lithium chloride on the replication of herpes simplex virus. *Med Microbiol Immunol* 1980; 168:139-48.
- 41 Paton G, Crow J, Taylor G. The effects of psychotropic drugs on synthesis of DNA and the infectivity of herpes simplex virus. *Biol Psychiatry* 1986; 21:1221-5.
- 42 Golden RN, et al. University of North Carolina, Chapel Hill, unpublished data.
- 43 Fernandez F, Levy J, Galizzi H. Response of HIV-related depression to psychostimulants: case reports. *Hosp Comm Psychiatry* 1988; 39:628-31.
- 44 Fernandez F, Adams F, Levy J. Cognitive impairment due to AIDS-related-complex in its response to psychostimulants. *Psychosomatics* 1988; 29:38-46.
- 45 Evans D, McCartney C, Haggerty J, et al. Treatment of depression in cancer patients is associated with better life adaptation: a pilot study. *Psychosom Med* 1988; 50:72-6.

Depression in Cancer Patients

Diagnostic and Treatment Considerations

Dwight L. Evans, M.D., Cheryl F. McCartney, M.D., Charles B. Nemeroff, M.D., Ph.D., John J. Haggerty, Jr., M.D., Jeffrey S. Simon, M.D., Cort A. Pedersen, M.D., Valerie Holmes, M.D., Marion Droba, M.D., George A. Mason, Ph.D., David Raft, M.D., Wesley C. Fowler, M.D., and Robert N. Golden, M.D.

A high percentage of patients with cancer have clinical depression, but depression is both underdiagnosed and often inadequately treated in cancer patients. Our research group at the University of North Carolina at Chapel Hill has been investigating clinical and neuroendocrine characteristics of depression in cancer patients as well as in depressed psychiatric patients. We review here our findings of a high prevalence of depression in cancer patients, and we discuss the clinical and neuroendocrine similarities between depression in cancer patients and depression in psychiatric patients. In addition, we review our pilot data suggesting that antidepressant medication treatment of the depressed cancer patient is associated with improvement in depression as well as with better quality of life and better psychosocial adjustment to oncologic illness.

From Departments of Psychiatry (DLE, CFM, JJH, CAP, GAM, DR, RNG), Medicine (DLE, DR), and Obstetrics and Gynecology (CFM, WCF), UNC School of Medicine, Chapel Hill 27514; Departments of Psychiatry, Pharmacology and the Center for Aging and Human Development (CBN), Duke University Medical Center, Durham 27710; Department of Psychiatry (JSS), University of Wisconsin, Milwaukee Clinical Campus, Mt. Sinai Samaritan Medical Center, Milwaukee 53233; Department of Psychiatry (VH), State University of New York-Stony Brook, Stony Brook, NY 11790; Department of Psychiatry (MD), University of Pennsylvania School of Medicine, Philadelphia 19104. Supported in part by Public Health Service Grant R25 17973, awarded by the National Cancer Institute to Drs. Evans, McCartney, and Raft; by a University of North Carolina United Way research grant and North Carolina mental health research funds to Dr. Evans; by NIMH Grant MH 33127 to Dr. Evans; and by NIMH Grant MH-40159 and MH-42088 to Dr. Nemeroff.

Depression in Cancer Patients

Clinical Characteristics

It is often difficult to detect depression in the cancer patient because the diagnostic criteria for major depression include signs and symptoms that can be attributed to the patient's malignancy (e.g., appetite loss, weight loss, insomnia, loss of interest and loss of energy). Recent studies have found a high prevalence of depression in cancer patients.^{1,2} However, physicians may underestimate the severity of depression in cancer patients,³ and relatively few cancer patients are referred for psychiatric consultation.⁴ Furthermore, there is evidence that depressed cancer patients do not receive adequate antidepressant medication treatment.⁵ Thus, the detection and treatment of major depression in cancer patients must be considered less than optimal.⁶ Accordingly, our research group is currently investigating the potential utility of a patient self-report instrument to identify oncology patients who should be evaluated for co-existing depression.⁷

It has been suggested that depression in cancer patients may differ from the depressive syndrome as seen in psychiatric patients with primary depression.⁸ Although earlier investigations have focused on diagnostically heterogeneous groups of cancer patients, we have studied a more uniform population of patients with recently diagnosed, non-ovarian gynecologic cancer.⁶ We studied 83 patients and found that 47% had evidence of significant depression: 23% of the patients studied met clinical criteria for major depression,⁹ and 24% of the patients met criteria for minor depression. Seven percent of the patients met criteria for other diagnoses, and 46% did not fulfill criteria for any psychiatric diagnosis.

The clinical characteristics of major depression in these cancer patients resembled the clinical features seen in a

subgroup of major depressed psychiatric inpatients.¹⁰ The major depressed cancer patients did not exhibit symptoms of the melancholic subtype of major depression (anhedonia, marked psychomotor retardation, excessive guilt, early morning awakening, diurnal mood variation). Furthermore, thoughts of suicide were rare and none of the cancer patients was acutely suicidal, nor did any exhibit psychosis. Thus, the clinical characteristics of depression in cancer patients appear to resemble the characteristics of acutely ill psychiatric inpatients who have the less severe form of major depression without melancholic features, and without psychotic features.⁶

Neuroendocrine Characteristics

Two neuroendocrine tests for major depression, the dexamethasone suppression test (DST)¹¹ and the thyrotropin releasing hormone (TRH) stimulation test¹² have been used as possible biological markers of depression. The combined use of these two tests identifies as many as 86% of psychiatric patients with major depression.¹³ Because of the difficulty of assessing depression in patients with malignancies, a biological test for depression could have particular clinical utility.

We have preliminary findings using these two neuroendocrine tests in our study of 83 patients with gynecologic cancer.⁶ Six of the 15 major depressed cancer patients (40%) showed hypercortisolism as measured by a one milligram overnight DST. This rate of non-suppression of serum cortisol following dexamethasone is very similar to the non-suppression rate we found in the non-melancholic depressed psychiatric inpatients.¹⁰ In addition to the similar rate of non-suppression between the depressed cancer patients and the depressed psychiatric patients, the post-dexamethasone serum cortisol concentrations at 4:00 p.m. and 11:00 p.m. were similar in these two patient groups.

Results of the TRH stimulation test in cancer patients with major depression were similar to previous findings in psychiatric patients.¹² Twenty-nine percent of the cancer patients with major depression, compared to 8% of the cancer patients with no psychiatric diagnosis, showed a blunted TSH response to TRH.

It should be noted that the medical exclusion rate for the use of these tests in cancer patients was nearly twice that found in our studies of depressed psychiatric patients,^{10,14,15} and the combined effect of tumor load and weight loss may affect the interpretation of DST results in depressed cancer patients. Thus, it is premature at this time to suggest routine clinical use of the DST and TRH tests for the diagnosis of depression in cancer patients. Nonetheless, these preliminary neuroendocrine results complement the clinical findings and suggest a similar neuroendocrine alteration as well as clinical similarity of depression in depressed psychiatric patients and depressed cancer patients.

Antidepressant Medication Treatment of Depression in Cancer Patients

Although there have been no controlled clinical trials assessing the efficacy of antidepressant medication treatment in depressed cancer patients, it has been our clinical practice to prescribe antidepressant medications for cancer patients with significant depressive symptoms. We now have preliminary findings from a naturalistic study which suggest that cancer patients with major depression benefit from antidepressants: the patients showed improved psychosocial adjustment to cancer following antidepressant medication treatment.¹⁶

We were able to follow longitudinally a subset of the depressed patients from the initial cancer study,⁶ and we assessed the response to antidepressant treatment by evaluating the degree of depression and quality of life of these patients. We compared depressed patients who received adequate antidepressant treatment with depressed patients who received inadequate or no antidepressant medication. Both those patients with major depression and those patients with minor depression were referred for treatment. Adequate treatment was defined as a dose of imipramine (or its equivalent) of 150 mg per day or greater for at least four weeks of treatment. Patients were evaluated an average of nine months following their initial evaluation and treatment. Patients received both a standardized depression rating instrument¹⁷ and a Psychosocial Adjustment to Illness Scale (PAIS).¹⁸ The PAIS has been validated and used to assess life adaptation in cancer patients as well as in other medically and surgically ill populations.

Preliminary findings from this pilot study suggest that depressed cancer patients who receive adequate antidepressant medication treatment show significant improvement in depression as measured by standard depression rating scales. The major depressed cancer patients who received adequate treatment also showed better life adaptation as measured by the PAIS when compared to depressed cancer patients who remained untreated. Cancer patients with minor depression who received adequate antidepressant treatment had similar levels of psychosocial adaptation.

These findings suggest that major depressed cancer patients (and perhaps minor depressed cancer patients) benefit from antidepressant medication treatment and experience a better quality of life than depressed cancer patients who did not receive antidepressant treatment or who received inadequate antidepressant treatment. It should be noted that although there is increasing evidence suggesting alterations in immune functions in patients with major depression,¹⁹⁻²¹ the clinical relevance of these findings is unknown. Thus, the possible significance of a relationship between depression and immune function in the cancer patient awaits further study.²²

Conclusion

Increasing evidence suggests that depression exists in a high percentage of patients with cancer. Clinical and neuroendocrine investigations suggest a similarity between major depression in psychiatric patients and major depression in cancer patients. These findings support the view that cancer patients should be evaluated carefully for depression. Preliminary findings from an uncontrolled clinical trial suggest that depressed cancer patients benefit from antidepressant medication treatment as regards both improvement in depression and improvement in quality of life and adaptation to illness.

Further controlled study will be required to confirm the potential benefits of antidepressant medication treatment in cancer patients with major and minor depression and to determine if the diagnosis and treatment of depression has any effect on the process of cancer and the progression of cancer. □

References

- 1 Petty F, Noyes R, Jr. Depression in cancer. *Biol Psychiatry* 1981; 16:1203-21.
- 2 Bukberg J, Penman D, Holland JC. Depression in hospitalized cancer patients. *Psychosom Med* 1984; 46:199-212.
- 3 Derogatis LR, Abeloff MD, McBeth CD. Cancer patients and their physicians in the perception of psychological symptoms. *Psychosomatics* 1976; 17:197-201.
- 4 Levine PM, Silverfarb PM, Lipowski ZJ. Mental disorders in cancer patients. *Cancer* 1978; 42:1385-91.
- 5 Derogatis LR, Feldstein M, Morrow G, et al. A survey of psychotropic drug prescriptions in an oncology population. *Cancer* 1979; 44:1919-29.
- 6 Evans DL, McCartney CF, Nemeroff CB, et al. Depression in women treated for gynecological cancer: clinical and neuroendocrine assessment. *Am J Psychiatry* 1986; 143:447-52.
- 7 Golden RN, McCartney CF, Haggerty JJ, et al. The detection of depression by patient self-report in women with gynecologic cancer. Submitted for publication.
- 8 Plumb MM, and Holland J. Comparative studies of psychological function in patients with advanced cancer, 1: self-reported depressive symptoms. *Psychosomatic Medicine*, 1977; 39:264-76.
- 9 American Psychiatric Association. Diagnostic and statistical manual of mental disorders. 3rd ed. Washington, D.C., 1980.
- 10 Evans DL, Nemeroff CB. The clinical use of the DST in DSM-III affective disorders: correlation with the severe depression subtypes of melancholia and psychosis. *J Psychiatric Res* 1987; 21:185-94.
- 11 Carroll BJ, Mendels J. Neuroendocrine regulation in affective disorders. In: Hormones, behavior, and psychopathology, Sachar EJ (ed.). New York: Raven Press, 1981.
- 12 Loosen PT, Prange AJ Jr. Serum thyrotropin response to thyrotropin-releasing hormone in psychiatric patients: a review. *Am J Psychiatry* 1982; 139:405-16.
- 13 Gold MS, Pottash ALC, Extein I, et al. Diagnosis of depression in the 1980s. *JAMA* 1981; 245:1562-4.
- 14 Evans DL, Burnett GB, Nemeroff CB. The dexamethasone suppression test in the clinical setting. *Am J Psychiatry* 1983; 140:586-9.
- 15 Evans DL, Nemeroff CB. Use of the dexamethasone suppression test using DSM-III criteria on an inpatient psychiatric unit. *Biol Psychiatry* 1983; 18:505-11.
- 16 Evans DL, McCartney CF, Haggerty JJ, et al. Treatment of depression in cancer patients is associated with better life adaptation: a pilot study. *Psychosomatic Medicine* 1988; 50:72-6.
- 17 Hamilton M. A rating scale for depression. *J Neurology, Neurosurgery, and Psychiatry* 1960; 25:56-62.
- 18 Derogatis LR. The psychosocial adjustment to illness scale (PAIS). *J Psychosom Res* 1986; 30:1:77-91.
- 19 Schleiffler SJ, Keller SE, Siris SG, et al. Depression and immunity. *Arch Gen Psychiatry* 1985; 42:129-33.
- 20 Evans DL, Pedersen CA, Folds JD. Progress in neuropsychopharmacology and biological psychiatry (in press).
- 21 Pedersen CA, Folds JD, Evans DL. Dexamethasone effects on numbers of cells in lymphocyte sub-populations: changes associated with major depression and DST non-suppression. Submitted for publication.
- 22 Evans DL, Golden RN, Nemeroff CB, et al. Depression in the cancer patient: antidepressant treatment response, neuroendocrine, and immune relationships. Submitted for publication.

The New Antidepressants

Robert N. Golden, M.D., Terry M. Brown, D.O., Helen Miller, M.D.,
and Dwight L. Evans, M.D., M.S.

Thirty-one years ago, at an international meeting in Zurich, Kuhn presented the first scientific report documenting the efficacy of a tricyclic medication, imipramine, in the treatment of depression.¹ At about the same time, the antidepressant activity of another class of compounds, the monoamine oxidase inhibitors, was described by Kline and his colleagues.² Since then, the tricyclic antidepressants (TCAs) and the monoamine oxidase inhibitors (MAOIs) have provided considerable relief for the hundreds of thousands of Americans who suffer from depressive illness. The safety and efficacy of these medications, when prescribed for accurately diagnosed depressed patients, in adequate doses, and for adequate periods of time, has been firmly established. Why then is there a need for new antidepressant therapies?

Several limitations in the use of TCAs and MAOIs prevent them from being ideal. While the majority of depressed patients respond to pharmacotherapy with these agents, a significant minority (20% to 30%) do not.³ Even among responders, there is a lag period of one to three weeks before clinical response is attained. The TCAs are associated with troublesome and potentially dangerous side effects, including anticholinergic and cardiovascular side effects; these can be of particular concern in the elderly, the medically ill and other vulnerable populations. The MAOIs share some of these properties and in addition require specific dietary and other medication restrictions. Both TCAs and MAOIs have relatively narrow therapeutic margins; toxic

doses of TCAs, for example, are only three- to four-fold greater than therapeutic doses, making these compounds particularly dangerous following overdose. Finally, because these drugs and their active metabolites affect multiple neurotransmitter systems (e.g., norepinephrine, acetylcholine, serotonin), they have limited utility as research tools for advancing our understanding of the pathophysiology of depression through the testing of specific biochemical hypotheses. Thus any new compound which could outperform the conventional antidepressants in one or more of these areas would be a welcomed addition.⁴

Beginning in the early 1980s, "second generation" antidepressants began to become available for general clinical use in the United States. The steady stream of new agents will probably continue for some time; many potential new agents are undergoing clinical trials as this paper is being written. Below, we will discuss each of the "second generation" antidepressants which have been released for clinical use in this country, emphasizing the available data regarding efficacy and side effects. Information regarding dosing and administration will not be provided; details regarding these aspects are contained in several recent reviews.^{5,6}

Second Generation Antidepressants

Maprotiline

Maprotiline (Ludiomil) was one of the first "second generation" antidepressants to be released for clinical use in the United States, and the promotion campaign for this drug emphasized that it was the first "tetracyclic" antidepressant available in this country. In spite of the modification of the standard TCA structure which leads to maprotiline's "tetracyclicity" (i.e., the addition of an ethylene bridge across the middle ring), this compound is quite similar to conventional secondary amine TCAs. It inhibits the reuptake of norep-

From the Department of Psychiatry, University of North Carolina School of Medicine, Chapel Hill 27514. Reprint requests to Dr. Golden. Supported in part by NIMH grants MH-42145 and MH-33127 and by a research grant from the Foundation of Hope for Research and Treatment of Mental Illness.

inephrine at nerve terminals, and has relatively weak anticholinergic effects.

Maprotiline is considered to be as effective as conventional antidepressants, although a surprising number of comparison studies did not include placebo control groups. Claims for a faster onset of clinical response have been refuted by several large studies which suggest the usual "lag period" for therapeutic response.⁷ Maprotiline has a relatively long half-life (approximately two days, or about twice as long as the half-life of most TCAs) and therefore requires a longer period of time for reaching steady state.⁸

Marketing campaigns for maprotiline have stressed the lower incidence of cardiovascular side effects compared to many conventional TCAs. Maprotiline does possess less alpha-adrenergic and cholinergic blocking activity *in vitro* than some tricyclics (e.g., amitriptyline, imipramine);^{9,10} however, several studies have failed to find a difference between maprotiline and TCAs in regard to cardiovascular side-effects or EKG effects.^{11,12}

After its release for clinical use in this country, maprotiline was implicated in the occurrence of grand mal seizures in apparently neurologically healthy patients.¹³ By the early 1980s, the British Committee on Safety and Medicines received more reports of drug-associated seizures with maprotiline than with any other antidepressant, despite maprotiline's relatively small market share in that country. In the United States, preliminary results from a recent retrospective study suggest an increased risk of seizures in hospitalized depressed patients treated with maprotiline compared to TCAs (15.6% vs. 2.2%).¹⁴ In response to concerns about seizures, the manufacturer now recommends initiating treatment with low doses and refraining from dose escalation until after two weeks on the initial dose. Because of maprotiline's relatively long half-life, the drug will actually accumulate during the initial dosing period until reaching steady state after approximately five half-lives (about 10 days). In sum, maprotiline does not seem to possess any striking advantages compared to conventional TCAs, and the putative risk of seizures appears to place it at a disadvantage.

Amoxapine

Amoxapine (Asendin) is a dibenzoxapine tricyclic that rapidly gained widespread use after its introduction in 1980; within a few years, over one million prescriptions had been filled. It is a strong inhibitor of norepinephrine reuptake with no significant effects on serotonin and relatively weak anticholinergic activity. Amoxapine is a metabolite of the antipsychotic drug loxapine. What is more important from a clinical standpoint, however, is that the 7-hydroxy metabolite of amoxapine has strong dopamine blocking activity. *In vitro*, the radioreceptor assay technique has demonstrated that amoxapine is nearly as potent as the phenothiazine thioridazine (Mellaril) in neuroleptic activity; 7-hydroxy-

amoxapine is roughly equal to haloperidol (Haldol).¹⁵ Clinically, amoxapine has been associated with neuroleptic-like side effects, including galactorrhea with hyperprolactinemia, acute dystonia, akathisia, akinesia, parkinsonism, tardive dyskinesia, and neuroleptic malignant syndrome.¹⁶⁻²⁰

The clinical efficacy of amoxapine is similar to that of conventional antidepressants. Despite claims in an early marketing campaign that amoxapine has an earlier onset of action than TCAs, controlled double-blind trials have failed to demonstrate any advantage in this regard for amoxapine compared to conventional antidepressants.²¹ Unfortunately, amoxapine potentially is a strikingly lethal agent; it was found to be associated with a disproportionate number of deaths and seizures in a retrospective study of antidepressant overdoses.²² While amoxapine has less anticholinergic activity than some of the conventional TCAs, it shares many similar side effects (e.g., sedation, orthostatic hypotension) in addition to the neuroleptic side effects described above. In theory, the neuroleptic properties of amoxapine could be advantageous in specific situations. For example, psychotic or delusional depressions rarely respond to treatment with TCA alone but often respond to a combination of an antidepressant plus an antipsychotic.²³ Anton and colleagues have described several cases of psychotic depression which responded to amoxapine,^{24,25} a predictable response given amoxapine's biochemical profile. Also, our group recently described the successful treatment of psychogenic vomiting associated with depression; the antidopaminergic activity of amoxapine therapy probably was responsible for the nearly immediate cessation of vomiting seen in our patients.²⁶ Use of amoxapine in these types of situations, however, is similar to the prescription of any "fixed combination" medication in that the clinician surrenders the ability to control and titrate the individual components of the treatment independent of one another.

In summary, amoxapine appears to share the efficacy, onset of action, and side effects of conventional TCAs. In addition, it has neuroleptic-like side effects, thus making it less desirable as an antidepressant in most clinical situations.

Trazodone

Trazodone (Desyrel) is a triazolopyridine derivative that differs chemically and pharmacologically from other currently available antidepressants. It is a relatively selective but weak inhibitor of serotonin reuptake, and also blocks serotonin and alpha-adrenergic receptors. Its active metabolite, m-chlorophenylpiperazine is a potent serotonin agonist.²⁷ *In vitro*, it is virtually devoid of anticholinergic activity; *in vivo*, the incidence of anticholinergic effects is similar to that seen with placebo.

Trazodone is inactive in several of the conventional preclinical animal behavioral screening tests for antidepressant activity (e.g., the behavioral despair/forced swim model,

reversal of reserpine-induced effects, potentiation of yohimbine toxicity). However, it does demonstrate activity in behavioral screens for sedation, analgesia, and anti-anxiety effects.

In approximately two dozen double-blind placebo-controlled clinical trials in Europe and in the United States, the clinical efficacy of trazodone has been found to be superior to placebo and similar to conventional TCAs when it is prescribed in equivalent doses (about two times the dose of amitriptyline). The most common side effects seen with its use are sedation and orthostatic hypotension. Because of the lack of substantial anticholinergic activity trazodone is more readily tolerated than first generation antidepressants in depressed patients who have benign prostatic hypertrophy or closed angle glaucoma or who simply cannot tolerate the constipation, dry mouth, blurred vision, or tachycardia associated with more anticholinergic compounds.

Initially, there was great optimism regarding trazodone's safety in treating cardiac patients. In fact, at therapeutic doses there is no negative inotropic effect on the heart and therefore no tendency to cause pump failure. However, there are several case reports of cardiac arrhythmias developing in association with trazodone therapy, both in patients with pre-existing mitral valve prolapse (a condition that is associated with TCA-induced arrhythmias) and in patients with negative personal and family histories of cardiac disease.^{28,29}

Trazodone appears to be *relatively* less lethal in cases of overdose compared to conventional antidepressants. Still, it needs to be prescribed with appropriate caution in this regard, since depressed patients are at increased risk for suicide attempts and since many deliberate overdoses involve multiple, potentially interacting medications. A rare but dramatic side effect reported with trazodone therapy is priapism.^{30,31} To date, 57 cases of trazodone-associated priapism have been reported to the FDA; this would suggest a risk of approximately one in 10,000 for male patients.³² Of the approximately one dozen cases described in the literature, almost half have required surgical detumescence. Also, there is a report of three women who experienced increased libido above premorbid levels during trazodone treatment of depression; two of them were reluctant to discontinue the drug because of this side effect.³³

In summary, trazodone does not appear to be more efficacious in the treatment of depression compared to the "first generation" antidepressants. Its side effect profile, especially its lack of anticholinergic effects, sometimes makes it more tolerable for those patients who cannot accept side effects of TCAs and MAOIs, but who can tolerate the sedation and orthostatic hypotension that can accompany trazodone therapy.

Alprazolam

The addition of a nitrogen-containing ring to the basic benzodiazepine structure yields a new class of compounds,

the triazolobenzodiazepines. The first representative of this group of medications to become available for clinical use in this country is alprazolam (Xanax), which was introduced as an anxiolytic in 1981. Unlike the classic benzodiazepines, however, alprazolam appears to possess antidepressant activity when prescribed at relatively high doses (i.e., greater than 2.5 mg/day). In preclinical studies, pretreatment of animals with alprazolam prevents reserpine-induced increases in beta-adrenergic receptors,³⁴ and high dose, but not low dose, alprazolam leads to down-regulation of beta receptors,³⁵ a nearly universal characteristic of classic antidepressants.

To date, six controlled double-blind studies of alprazolam in the treatment of depression have been published.³⁶ Four of these six studies included only outpatients and found alprazolam to be as effective as TCAs, but with fewer and less severe side effects. One of the two studies which included hospitalized depressed patients found alprazolam to be superior to placebo;³⁷ the other study found amitriptyline to be superior to alprazolam.³⁸ In a small study of inpatients which did not include a placebo control group, imipramine was superior to alprazolam.³⁹ Some of the earlier alprazolam trials had methodologic flaws, most notably the use of fairly low doses of tricyclic (i.e., mean imipramine dose of 128 mg/day) compared to relatively high doses of alprazolam (i.e., mean daily dose of 2.6 mg/day).⁴⁰ Reports of earlier onset of clinical response may reflect the early-occurring anxiolytic activity and sedating side effects rather than true early antidepressant activity. Overall, the data to date suggest that for depressed outpatients, and probably for inpatients, alprazolam appears to have antidepressant activity. It should be noted, however, that the FDA has not yet approved alprazolam's use as an antidepressant. We routinely mention this to patients and document that this has been discussed as part of the process of obtaining informed consent prior to starting therapy.

Alprazolam has a shorter half-life (approximately 11 hours) compared to most TCAs, and should be prescribed on a b.i.d. or t.i.d. schedule. It does not possess anticholinergic activity, and its side effect profile is relatively mild; the most common side effect is sedation. There are numerous reports of alprazolam-associated withdrawal reactions, including the emergence of severe anxiety, autonomic arousal, perceptual distortions, and seizures.^{41,42} While most of these cases have followed abrupt discontinuation of the drug, Mellman and Uhde⁴³ have observed withdrawal syndromes following relatively gradual tapering of alprazolam. The manufacturer recommends a taper schedule that should not exceed 0.5 mg every three days. We follow an even more conservative protocol, decreasing alprazolam by 0.5 mg every three days until reaching a total daily dose of 2.0 mg, and then decreasing by 0.25 mg every three days.

In sum, alprazolam appears to be an effective antidepressant when prescribed at doses that are greater than the usual anxiolytic doses. It has a fairly benign side effect profile, but the clinician must carefully warn and monitor

patients regarding the risk of withdrawal reactions following hasty discontinuation of the drug.

Nomifensine

Nomifensine (Merital) became available for clinical use in July 1985; a few months later, it was abruptly withdrawn from the market because of reports of relatively rare but extremely severe liver and hematopoietic toxicity. Nomifensine is (was) a tetrahydroisoquinoline compound that is chemically distinct from other antidepressants. In vitro, it is a strong inhibitor of dopamine, as well as norepinephrine, reuptake. Not surprisingly, then, its pharmacologic effects in animal models include those seen with dextroamphetamine (e.g., stereotyped behaviors) as well as those associated with conventional TCAs. In pre-marketing trials, the most common side effects included amphetamine-like activity (sleep disturbance, restlessness, tachycardia, decreased appetite) as well as the more common side effects seen with first generation norepinephrine reuptake inhibitors (relatively mild sedation and anticholinergic activity).⁴⁴

Nomifensine has a fairly short half-life (about two to four hours in patients with normal renal functioning);⁴⁴ while this would require more frequent administration compared to the TCAs, it also offered the hope that in overdose situations, nomifensine could be eliminated more rapidly than conventional antidepressants. The dramatic removal of nomifensine from clinical use serves to underscore an important point about any new antidepressant: potentially serious but relatively rare side effects might not be identified until after the drug has entered the market and has been administered to tens of thousands of patients.

Fluoxetine

Fluoxetine (Prozac) is the newest of the new antidepressants; it became available for clinical use earlier this year. Fluoxetine is a bicyclic compound that is a specific and potent inhibitor of serotonin reuptake. Unlike the original tertiary amine tricyclics, fluoxetine retains its specificity for serotonergic systems in that its active metabolite, norfluoxetine, also specifically inhibits serotonin reuptake with minimal effects on norepinephrine reuptake.^{45,46}

In double-blind clinical trials, fluoxetine has been shown to be clearly superior to placebo and comparable to TCAs in regard to efficacy in the treatment of major depression. Fluoxetine, unlike the TCAs, has minimal if any anticholinergic effects. Further, based on premarketing clinical studies, fluoxetine appears to have minimal cardiovascular side effects. However, one must recall the experience of trazodone (see above); understandably, very few, if any, patients with significant cardiac pathology enter phase III drug trials, and the true safety of new components for depressed patients with coexisting medical disease is often

not clear until extensive experience is gained in the first several years of general clinical use.

The side effect profile for fluoxetine is relatively favorable compared to conventional antidepressants. The most common complaints associated with treatment are nausea and anxiety. Other side effects include insomnia, nervousness, diarrhea, anorexia, headache, and drowsiness.⁴⁷ While weight gain and increased appetite can be especially upsetting for some patients receiving TCAs, fluoxetine appears to suppress appetite and facilitate weight loss,⁴⁸ and thus may have a more desirable side effect profile for obese patients.

An interesting feature of fluoxetine, and one which has important clinical implications, is its pharmacokinetic profile. This drug has a rather long elimination half-life (two to four days) and its active metabolite, norfluoxetine, has an even longer half-life of seven days, on average.⁴⁷ It is important for clinicians to appreciate that a drug which is given more frequently than its half-life will accumulate until steady state is reached after the passage of approximately five half-lives. This means that one should not increase the dose of fluoxetine every two to three days, as one might with a conventional TCA; by giving a constant dose every day for the first two weeks of treatment, one is, in a way, increasing the dose. The manufacturer recommends an initial trial of 20 mg administered once a day; if there is no response after several weeks, the dose can then be increased. Because of fluoxetine's long half-life, the elimination of the drug following overdose will be longer than that of antidepressants with shorter elimination half-lives. Fortunately, the limited experience to date suggests that fluoxetine is *relatively* less toxic than conventional TCAs. Prior to marketing, none of the patients who overdosed with fluoxetine alone died, including one patient who ingested 37 times the maximum recommended dose. However, two patients who overdosed with fluoxetine in combination with other drugs died.⁴⁸

Fluoxetine is an effective antidepressant with a relatively "clean" biochemical profile as a specific serotonin reuptake inhibitor. Its side effect profile is striking for its absence of anticholinergic activity, although the complete definition of its side effect profile, especially in regard to possible rare effects, requires further experience.

The Next Generation of Antidepressants?

Prognostications regarding future pharmacologic developments are tricky; "exciting and promising" new agents undergoing investigation may never reach the market for a variety of reasons, including the sudden, unexpected discovery of rare but serious toxicity. Like most successful fortune tellers, we will confine our predictions to generalizations rather than committing ourselves to specifics.

We believe that additional biochemically "clean" drugs will become available over the next several years. These will include serotonin reuptake inhibitors, similar to fluoxetine, as well as specific inhibitors of norepinephrine reuptake,

which also are devoid of anticholinergic activity. We also expect, and hope, that "second generation" monoamine oxidase inhibitors will become available for clinical use. These should include specific MAO inhibitors—like the experimental drug clorgyline, which specifically affect MAO type A, the enzyme which preferentially degrades norepinephrine and serotonin—as well as reversible MAO inhibitors. Finally, we predict that the void that was created by the sudden withdrawal of nomifensine will be filled soon. That is, an activating agent that suppresses appetite, probably a drug that increases dopaminergic transmission, will become available; bupropion is the most visible candidate.^{49,50}

Conclusions

A number of new agents have become available for the treatment of depressive illness; many more will probably follow. Are the new agents any better than the old? In terms of efficacy and onset of action, there appears to be no consistent substantial difference. In some ways, the "second generation" is less attractive than the first. We have seen how rare, yet serious, side effects are sometimes not discovered until new medications have been administered to thousands of patients; such was the case for nomifensine, as well as for zimelidine, a serotonin reuptake inhibitor which was found to be associated with Guillain-Barre syndrome only after hundreds of thousands of European patients had been treated with it. The new antidepressants tend to be quite expensive. At our local pharmacy, a one month supply of fluoxetine costs \$39.69, while a comparable regimen of generic imipramine costs \$9.59. Finally, we are not aware of any published studies that have demonstrated a strong relationship between clinical response and plasma concentrations for most of the new agents. Such a relationship exists for some of the TCAs (e.g., nortriptyline, imipramine)⁵¹ and can be utilized by the clinician; dosing for the new antidepressants remains empirical.

In spite of these limitations, the new antidepressants are welcome additions in several important ways. Many have different and milder side effect profiles compared to TCAs and MAOIs and therefore might be safer and more readily tolerated by some patients. It is possible that some of the agents are relatively less toxic following overdose. Most important, however, is that they offer hope for patients who have failed to respond to first-line therapy with conventional antidepressants. □

References

- 1 Kuhn R. The imipramine story. In: Discoveries in biological psychiatry. Ayd F and Blackwell B (eds.). Baltimore: Ayd Medical Communications, 1984, pp. 205-17.
- 2 Kline NS. Monoamine oxidase inhibitors: an unfinished picaresque tale. In: Discoveries in biological psychiatry. Ayd F and Blackwell B (eds.). Baltimore: Ayd Medical Communications, 1984, pp. 194-204.
- 3 Davis JM. Overview: maintenance therapy in psychiatry II: affective disorders. *Am J Psychiatry* 1976; 133:1-13.
- 4 Rudorfer MV, Golden RN, Potter WZ. Second generation antidepressants. *Psychiatric Clin N Am* 1984; 7:519-34.
- 5 Golden RN, Gualtieri CT. A clinician's guide to the new antidepressants. *Resident and Staff Physician* 1983; 29:65-72.
- 6 Blackwell B. Newer antidepressant drugs. In: Psychopharmacology: the third generation of progress. Meltzer H (ed). New York: Raven Press, 1987, pp. 1041-50.
- 7 Editorial. Maprotiline (Ludiomil): another antidepressant. *Med Lett* 1981; 23:58-9.
- 8 Rudorfer MV, Potter WZ. Metabolism of drugs used in affective disorders. In: Pharmacotherapy of Affective Disorders: Theory and Practice. Dewhurst WG, Baker GB (eds). London: Croom Helm, Ltd., 1985, pp.382-448.
- 9 Settle EC. Maprotiline: update 1981. *Psych Ann* 1981; 11:384-90.
- 10 Pinder RM, Brogdon RN, Speight TM, et al. Maprotiline: a review of its pharmacological properties and therapeutic efficacy in mental depressive states. *Drugs* 1977; 13:321-52.
- 11 Burckhardt D, Raeder E, Muller V. Cardiovascular effects of tricyclic and tetracyclic antidepressants. *JAMA* 1978; 239:213-6.
- 12 Hrdina PD, Rovei V, Henry JF, et al. Comparison of single-dose pharmacokinetics of imipramine and maprotiline in the elderly. *Psychopharmacology* 1980; 70:29-34.
- 13 Strawn SK, Evans DL, Pedersen CA, Burnett GB. Maprotiline associated seizures. Submitted for publication.
- 14 Bryan GE, Marsh EE, Jabbari B, et al. Incidence of seizures in patients receiving tricyclic and tetracyclic antidepressants. *Ann Neurol* 1983; 14:153.
- 15 Lydiard RB, Gelenberg AJ. Amoxapine: an antidepressant with some neuroleptic properties? A review of its chemistry, animal pharmacology and toxicology, human pharmacology, and clinical effects. *Pharmacotherapy* 1981; 1:163-75.
- 16 Steele TE. Adverse reactions suggesting amoxapine-induced dopamine blockade. *Am J Psychiatry* 1982; 139:1500-1.
- 17 Ross DR, Walker JI, Peterson J. Akathisia induced by amoxapine. *Am J Psychiatry* 1983; 140:115-6.
- 18 Thornton JE, Stahl SM. Case report of tardive dyskinesia and parkinsonism associated with amoxapine therapy. *Am J Psychiatry* 1984; 141:704-5.
- 19 Huang CC. Persistent tardive dyskinesia associated with amoxapine therapy. *Am J Psychiatry* 1986; 143:1069-70.
- 20 Taylor NE, Schwartz HI. Neuroleptic malignant syndrome following amoxapine overdose. *J Nervous Mental Dis* 1988; 176:249-51.
- 21 Prusoff BA, Weissman MM, Charney D. Speed of

- symptom reduction in depressed outpatients treated with amoxapine and amitriptyline. *Curr Ther Res* 1981; 30:843-55.
- 22 Litovitz TL, Troutman WG. Amoxapine overdose: seizures and fatalities. *JAMA* 1983; 250:1069-71.
 - 23 Spiker DG, Weiss JC, Dealy RS, et al. The pharmacologic treatment of delusional depression. *Am J Psychiatry* 1985; 142:420-36.
 - 24 Anton R, Sexauer J. Efficacy of amoxapine in psychotic depression. *Am J Psychiatry* 1983; 140:1344-7.
 - 25 Anton R, Boggan W. Plasma HVA during amoxapine treatment of major depression with psychotic features. Paper presented at 43rd Annual Meeting, Society of Biological Psychiatry 1988.
 - 26 Golden RN, Janke I, Haggerty J Jr. Amoxapine treatment of psychogenic vomiting and depression. *Psychosomatics* 1988; 29:352-4.
 - 27 Maj J, Palider S, Rawlaw A. Trazodone, a central serotonin antagonist and agonist. *J Neural Transmission* 1979; 44:238-48.
 - 28 Janowsky D, Curtis G, Zisook S, et al. Ventricular arrhythmias possibly aggravated by trazodone. *Am J Psychiatry* 1983; 140:796-7.
 - 29 Lippman S, Bedford P, Manshadi M, et al. Trazodone cardiotoxicity. *Am J Psychiatry* 1983; 140:1383.
 - 30 Scher M, Krieger JN, Jurgens S. Trazodone and priapism. *Am J Psychiatry* 1983; 140:1362-3.
 - 31 Gelenberg AJ. More problems with trazodone (desyrel). *Biol Therapies in Psychiatry* 1984; 7:1-4.
 - 32 Warner MD, Peabody CA, Whiteford HA, Hollister LE. Trazodone and priapism. *J Clin Psychiatry* 1987; 48:244-5.
 - 33 Gatrell N. Increased libido in women receiving trazodone. *Am J Psychiatry* 1986; 143:781-2.
 - 34 Sethy VH, Hodges DH. Role of beta-adrenergic receptors in the antidepressant activity of alprazolam. *Res Commun Chem Pathol Pharmacol* 1982; 36:329-32.
 - 35 Pandey GN and Davis JM. Treatment with antidepressants and down regulation of beta-adrenergic receptors. *Drug Dev Res* 1983; 3:393-406.
 - 36 Warner MD, Peabody CA, Whiteford HA, Hollister LE. Alprazolam as an antidepressant. *J Clin Psychiatry* 1988; 49:148-50.
 - 37 Imlah NW. An evaluation of alprazolam in the treatment of reactive or neurotic (secondary) depression. *Br J Psychiatry* 1985; 146:515-9.
 - 38 Rush AJ, Erman MK, Schlessler MA, et al. Alprazolam vs. amitriptyline in depressions with reduced REM latencies. *Arch Gen Psychiatry* 1985; 42:1154-9.
 - 39 Lenox RH, Shipley JE, Peyser JM, et al. Double-blind comparison of alprazolam versus imipramine in the inpatient treatment of major depressive illness. *Psychopharm Bulletin* 1984; 20:79-82.
 - 40 Fabre LF, McLendon DM. A double-blind study comparing the efficacy and safety of alprazolam with imipramine and placebo in primary depression. *Curr Ther Res* 1980; 27:474-82.
 - 41 Noyes R Jr., Clancy J, Coryell WH, et al. A withdrawal syndrome after abrupt discontinuation of alprazolam. *Am J Psychiatry* 1985; 142:114-6.
 - 42 Brier A, Charney DS, Nelson JC. Seizure induced by abrupt discontinuation of alprazolam. *Am J Psychiatry* 1984; 141:1606-7.
 - 43 Mellman TA, Uhde TW. Withdrawal syndrome with gradual tapering of alprazolam. *Am J Psychiatry* 1986; 143:1464-6.
 - 44 Brogden RN, Heel RC, Speight TM, et al. Nomifensine: a review of its pharmacological properties and therapeutic efficacy in depressive illness. *Drugs* 1979; 18:1-24.
 - 45 Wong DT, Bymaster FP, Horng JS, Molloy BB. A new selective inhibitor for uptake of serotonin into synaptosomes of rat brain. *J Pharmacol Exp Ther* 1975; 193:804-11.
 - 46 Fuller RW, Snoddy HD, Perry KW, et al. Importance of duration of drug action in the antagonism of p-chloramphetamine depletion of brain serotonin: comparison of fluoxetine and chlorimipramine. *Biochem Pharmacol* 1978; 27:193-8.
 - 47 Sommi RW, Crismon ML, Bowden CL. Fluoxetine: a serotonin-specific, second generation antidepressant. *Pharmacotherapy* 1987; 7:1-15.
 - 48 Dista Products Company. Prozac: comprehensive monograph. 1988.
 - 49 Golden RN, Rudorfer MV, Sherer M, et al. Bupropion in depression: biochemical effects and clinical response. *Arch Gen Psychiatry* 1988; 45:139-43.
 - 50 Golden RN, DeVane L, Laizure SC et al. Bupropion in depression: the role of metabolites in clinical outcome. *Arch Gen Psychiatry* 1988; 45:145-9.
 - 51 American Psychiatric Association Task Force. Tricyclic antidepressants-blood level measurements and clinical outcome: an APA task force report. *Am J Psychiatry* 1985; 142:155-62.

Letters to the Editor

In Appreciation of Dr. Beard.

To the Editor:

I received in the mail today the articles about Dr. Joe Beard (Bridges R McA 1985;46:303-9; and Sealy W 1986;47:37-8). I sincerely appreciate your efforts in making these available to me. I can hardly wait to get home this evening to read them. I had the good fortune to work as private secretary for two of Duke's greatest men—Dr. Ivan Brown and Dr. Joe Beard. They certainly enriched my life. I always looked forward to each working day and, most of the time, regretted to see the day end. They shall always live in my heart.

Bettye H. Herd

Department of Surgery
Duke University Medical Center
Durham 27710

Two responses to Dr. Stead's article.

To the Editor:

I am a neurologist and am very interested in electronics and computers in medicine. I appreciated seeing your brief article in the July issue (49:360). I am writing to be sure that you are aware that the National Library of Medicine Database has been formatted and adapted to CD-Rom technology. The CD music discs that we use in our stereos contain up to 550 million bytes of information. CD-ROM is coded digitally for data rather than music. It is played in a device that is quite similar to your CD player except that it hooks up to a board in a slot in an IBM PC computer. I have been looking at the National Library of Medicine's Database and CD-ROM for several months now. It is very efficient to search. It is very time-efficient since I can look at it any time I want to without fear of incurring huge charges. The system allows me to get hard copy printouts or to transfer the data to ASCII files so that it can be manipulated in a word processor.

The cost of the device is approximately \$600. The cost of the CD-ROM service is approximately \$1,000 per year for quarterly updates. The Database includes the eight supplements and goes back approximately three years. The CD-ROM is called BiblioMed and is marketed by Digital Diagnostics, Inc., 601 University Avenue, Suite 255, Sacramento, CA 25825. The CD-ROM driver is marketed by Hitachi, Amdex, Sony and others. They can be purchased for discount rates as low as \$600. I am in the process of reviewing this disk and will submit the review to one of the neurology journals. Additionally, I would like to let you know that I have finally received my first copy of the PDR on CD-ROM. It includes all the standard prescription drugs, ophthalmic drugs, and generic or over the counter drugs. This Database can be searched by Trade name, generic name, side effect and drug interactions. The drug interactions area seems particularly fruitful for a neurologist such as myself who has to deal with anticonvulsant drug interactions.

J. Ross Shuping, M.D.

Eastern Carolina Neurological Associates, Inc.
425 Stantonsburg Rd.
Greenville 27834

To the Editor:

I read with interest your article in the July issue (49:360) encouraging small community hospitals to utilize the National Library of Medicine's extensive data files. I thought you might like to know that our AHEC has applied for a grant from the Duke Endowment which would enable the eleven hospitals in our AHEC's six-county area to have rapid access to clinical information from 40 other libraries in North Carolina including the state's medical school libraries and major research libraries in the Triangle and Piedmont

Triad areas. A copy of our grant proposal is enclosed.

If we are successful in obtaining this grant, we would very much like to have you visit us here at the Greensboro AHEC to observe the grant's implementation.

Donald D. Smith, M.D.
Director, Greensboro AHEC

Editor's Note:

The essence and flavor of the proposal can be obtained from the abstract attached to the grant:

"Microcomputers combined with modems, printers, and telefacsimile (fax) equipment will electronically link the eleven hospital libraries within the Greensboro AHEC region and provide rapid access to forty other libraries in North Carolina. These include the state's medical school libraries and major research libraries in the Triangle and the Piedmont Triad areas. Needed documents can be quickly identified through online database searches and borrowed via fax or mail. User friendly online search packages will allow medical personnel to perform their own searching if they desire. Computerized library operations will permit hospital personnel to utilize local materials more effectively. Telefacsimile machines will be accessible during specified hours for hospital personnel to transmit documents and correspondence."

Eugene A. Stead, Jr, M.D., Editor

On NC doctors and AIDS patients.

To the Editor:

The North Carolina Medical Society is on record as supporting the position that the physicians who belong to the Society will take care of AIDS patients. Unfortunately, the epidemic of AIDS patients is upon us and it is estimated that North Carolina may have as many as 750 cases of AIDS in the coming year.

The Acquired Immunodeficiency Syndrome (AIDS) is a devastating infectious disease, and it is now recognized that the majority of persons who become HIV infected will go on to get clinical AIDS. Unfortunately, the actual day to day care of many AIDS patients is not being assumed by their local physician. Increasingly, these patients and almost all patients who are tested as HIV positive are being referred to the big teaching hospitals in the State. I sympathize with the problems facing the practicing physician:

(1) He has not been educated in AIDS. (2) He is not I.D. trained. (3) These patients are sicker than many of the ones he sees in his practice. (4) He doesn't want to get labeled as an AIDS doctor. (5) He worries about what his other patients will think of having these people in the Waiting Room.

So, the easiest thing seems to be to refer the patient on. Unfortunately, this has resulted in several patients having to drive over 200 miles each way to obtain care. Acute care cannot be provided to such patients.

My suggestions for managing this are based on the following facts: we are going to have an increasing number of AIDS patients; they are going to come from all over the State. Because they are acutely ill, they will need care on the local level. So, I suggest that the Medical Society play a leading role in urging physicians to care for the AIDS patients in their local area using the medical schools and the teaching hospitals as a contact source for information when specific problems occur. It is possible for the teaching hospitals and the medical schools to play the role of consultant in seeing that these patients get good care. Since the Medical Society has already said that physicians will care for AIDS patients, one would think there would be no problem. Unfortunately, I think the Medical Society needs to take further action, i.e., publishing a list of physicians who will accept AIDS patients or a list of clinics where AIDS patients can obtain care. The latter is offered as a suggestion if physicians want to band together and staff a clinic at a local health department where this type of care is offered. I would think this would provide a satisfactory solution. Unfortunately, these patients get sick at odd hours and there has to be somebody available on call, as is true of

other medical emergencies.

The AIDS epidemic is tragic, but it offers us a real opportunity as a Medical Society to lead the way for other state Medical Societies in taking care of the AIDS patients who are residents of North Carolina.

Janet J. Fischer, M.D.
Sarah Graham Kenan Professor of Medicine
Associate Professor of Microbiology and Immunology
UNC School of Medicine, Chapel Hill 27514

On Dr. Davis's election

To the Editor:

One facet of the Jim Davis gem has yet to be illuminated: I believe he was only the third person elected president of the AMA

without opposition; call it unanimously or acclamation.

The first was Crawford Gorgas of Cuban and Panamanian malaria and yellow fever fame in 1908. The second was the incomparable Irvin Abel of Louisville in 1937. Dr. Abel was my own idolized mentor in those days.

I do not recall another case of unanimity until our Jim came along.

Hoping you enjoy this part of the tale, and maybe find it useful.

Millard B. Bethel, M.D.
25 Banbury Lane
Chapel Hill 27514

Continuing Medical Education

October 12-14

Diagnostic Ultrasound: Arterial/Venous Doppler

Place: Winston-Salem

Credit: 7 hours per day Category I AMA

Info: Registrar, Ultrasound Center, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4505

October 14-15

22nd Annual Duke/McPherson Otolaryngology Symposium

Place: Durham

Info: Cindi Easterling, Office of CME, DUMC, Box 3108, Durham 27710. 919/684-6878

October 15-18

Ninth Mountain Meeting

Place: Asheville

Credit: 12 hours Category I AMA

Info: Sally Hudson Gulley, Div of CME, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4450

October 19-21

14th Annual Southeastern High Blood Pressure Conference

Place: Asheville

Fee: \$65

Info: Betty Lamb, Adult Health Services Section, Div. of Health Services, Raleigh 27602. 919/733-7081

October 19-21

Doppler Echocardiography: Beginning with Color Flow Imaging

Place: Durham

Info: Cindi Easterling, Office of CME, DUMC, Box 3108, Durham 27710. 919/684-6878

October 21-22

Davison Club Weekend

Place: Durham

Info: Cindi Easterling, Office of CME, DUMC, Box 3108, Durham 27710. 919/684-6878

October 21-22

Neuromuscular Disease Update-Diagnosis, Genetics, Management

Info: Cindi Easterling, Office of CME, DUMC, Box 3108, Durham 27710. 919/684-6878

October 24-28

Diagnostic Ultrasound: Echocardiography

Place: Winston-Salem

Info: Registrar, Ultrasound Center, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4505

October 26-29

Endoscopic Biliary Therapy Live CC TV Symposium

Place: Durham

Info: Cindi Easterling, Office CME, DUMC, Box 3108, Durham 27710. 919/684-6878

October 28

New Perspectives in Anticoagulation

Place: Chapel Hill

Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Bldg., Chapel Hill 27599-7000. 919/962-2118

October 28-30

Dees Symposium on Allergy and Immunology

Place: Durham

Info: Cindi Easterling, Office CME, DUMC, Box 3108, Durham 27710. 919/684-6878

October 31 (and continuing throughout the year):

Geriatric medicine, geriatric mental health, health promotion, and long-term care

Place: Durham

Fee: \$10 per module

Info: Geriatric Education Center, Box 3003 DUMC, Durham 27710. 919/684-5149

October 31-November 1

Diagnostic Ultrasound: Urology

Place: Winston-Salem

Info: Registrar, Ultrasound Center, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4505

November 3-6

Fall Symposium in OB/GYN

Place: Asheville

Info: Cindi Easterling, Office of CME, DUMC, Box 3108, Durham 27710. 919/684-6878

November 4-5

Duke University Hospital and Health Alumni Administration Assoc.

Place: Durham

Info: Cindi Easterling, Office of CME, DUMC, Box 3108, Durham 27710. 919/684-6878

November 4-5

Neurology for the Practicing Physician

Place: Chapel Hill

Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Bldg., Chapel Hill 27599-2118. 919/962-2118

November 5

Current Therapy for Peripheral Vascular Disease

Place: Research Triangle Park

Credit: 7 hours Category I AMA, 0.7 CEU

Info: Cindi Easterling, Office of CME, DUMC, Box 3108, Durham 27710. 919/684-6878

November 5

Clinical Grand Rounds

Place: Durham

Info: Cindi Easterling, Office of CME, DUMC, Box 3108, Durham 27710. 919/684-6878

November 6-9

The Difficult Learner

Place: Rougemont

Info: Cindi Easterling, Office of CME, DUMC, Box 3108, Durham 27710. 919/684-6878

November 7-8 & November 21-22
 1988 Perinatal Conference: Graviditas at Risk
 Place: Asheville and Wrightsville Beach
 Credit: 1.4 CEU
 Fee: NC Registrants - \$55; Others - \$75
 Info: Registrar: Department of OB/GYN, Bowman Gray
 School of Medicine, Winston-Salem, 27103.
 919/748-3662

December 2-3
 3rd Annual Sports Medicine Symposium
 Place: Chapel Hill
 Credit: 9.5 hours Category I; 9.5 prescribed hours AAFP
 Info: Office of CME, UNC School of Medicine, CB# 7000,
 231 MacNider Bldg. Chapel Hill 27599-7000.
 919/962-2118

December 3
 UNC Ophthalmology Residents Day
 Place: Chapel Hill
 Credit 6 hours, Category I, AMA

Fee: None
 Info: Baird S. Grimson, M.D., Department of
 Ophthalmology, CB#7040, 617 Clinical Science Bldg
 UNC, Chapel Hill 27599-7040. 919/966-5296.

December 4-7
 Small Group and Lecture Skills
 Ophthalmology, CB#7040, 617 Clinical Science Bldg
 UNC, Chapel Hill 27599-7040. 919/966-5296.

December 4-7
 Small Group and Lecture Skills
 Place: Rougemont
 Info: Cindi Easterling, Office of CME, DUMC, Box 3108,
 Durham 27710. 919/684-6878

December 6
 1988 Series - Duke Tuesday
 Place: Durham
 Credit: 5 hours, Category I; 0.5 CEU
 Info: Cindi Easterling, Office of CME, DUMC, Box 3108,
 Durham 27710. 919/684-6878

New Members

Beaufort-Hyde-Martin-Washington-Tyrell
 Jacques Ray Pye (FP), P.O. Box 867, Banner Elk 28604

Buncombe
 Brenton Thomas Burkholder (RESIDENT), 491 Biltmore Ave.,
 MAHEC Family Prac. Ctr., Asheville 28801

Burke
 Khalil Saliba Tanas, 111 Wedgewood Court, Morganton 28655

Cleveland
 David Stanton Goldberg (IM), 707, W. King St., Kings Mountain
 28086

Cumberland
 Salim Yacoub Ghostine (NS), 101 Robeson St., Ste. 410 Fayettev-
 ille 28311
 Donald Ryan Lewis, Jr. (GP), 150-7 London Ct., Fayetteville 28311

Durham-Orange
 Kirkwood Floyd Adams, Jr. (IM), UNC, CB #7075, 338 Burnett-
 Womack Bldg., Chapel Hill 27514
 Steven Christopher Chang (STUDENT), 12-F River Birch Rd.,
 Durham 27706
 Neil James Clendeninn (ON), 120 Meadowbrook Dr., Chapel Hill
 27514
 Charles Ian Cooperberg (IM), 2609 N. Duke St., Ste. 604, Durham
 27704
 Margaret J. Grant Foote, 2473 Foxwood Dr., Chapel Hill 27514
 Paul Alophonso Godley (IM), 299 Summerwalk Cir., Chapel Hill
 27514
 Stephen R. Hammes (STUDENT), 3611 University Dr., 6E, Dur-
 ham 27707
 Jerry Bruce Lefkowitz (RESIDENT), 207-10 Melville Loop, Chapel
 Hill 27514
 Michael Clark Mauney (STUDENT), 13-B Tarawa Terrace, Dur-
 ham 27705
 Michael James McNamara (RESIDENT), 4-F Post Oak Rd., Dur-
 ham 27705
 Michael Francis Minogue (STUDENT), 1315 Morreene Rd., Apt.
 9V, Durham 27705
 Richard E. Moon, Box 30941 DUMC, Durham 27710
 Edwin Leonard Page (STUDENT), 3803-003 Chimney Ridge Pl.,
 Durham 27713
 Patricia Mary Quigley (RESIDENT), 910 Constitution Dr., Apt.
 1010, Durham 27705
 Marybeth Spanarkel, (IM), 306 S. Gregson St., Durham 27705

Robert Douglas Stewart (IM), 1901 Hillandale Rd., Durham
 27705
 Christopher Paul Tardif (STUDENT), 46 Rogerson Dr., Chapel Hill
 27514

Edgecombe
 Paul Joseph Donovan (EM), 111 Hospital Dr., Heritage Hospital,
 Tarboro 27886

Forsyth-Stokes-Davie
 Lee Martin Bunemann (RESIDENT), 1590-H Woods Rd., Win-
 ston-Salem 27106
 Kerry Jay Gilliland, 153 Cedar Lake Trail, Winston-Salem 27104
 Dudley Allen Hudspeth (RESIDENT), 834 Carolina Ave., Win-
 ston-Salem 27101
 Roy Bruce Middleton (GS), 2915 Lyndhurst Ave., Winston-Salem
 27103
 Anne Theresa Rogers (AN), 300 S. Hawthorne Rd., Winston-Salem
 27103

Mecklenburg
 Thomas Anthony Carr (GE), 217 Travis Ave., Charlotte 28204

New Hanover-Pender
 Betty Hull Johnson (AN), 1907 Hawthorne Rd., Wilmington 28403
 Howard Fisher Marks, Jr., (GS), 1501 Medical Center Dr., Wilming-
 ton 28401
 Brent Dean Wright (OBG), 2131 S. 17th St., Wilmington 28401

Pitt
 Franklin Hargett (FP), 1705 W. 6th St., Greenville 27835

Rutherford
 James Leroy Kirkpatrick, III (AN), PO Box 1563, Rutherfordton
 28139

Stanly
 Talluri Balaji (U), 708 S. South St., Mount Airy 27030

Swain
 George Sumner Blodgett, III (PTH), PO Box 1369, Plateau St.,
 Bryson City 28713

Wake
 Jean Whitmore Carter (OBG), 100 S. Boylan Ave., Raleigh 27603
 Jerry Michael Pittman, 220 Oakcrest Dr., Wake Forest 27587
 Sharon Rose Stephenson (OBG), 101 S.W. Cary Parkway #170,
 Cary 27511
 Ross Leroy Vaughan, Jr. (PD), Wake Medical Center, 3000 New
 Bern Avenue, Raleigh 27610

Classified Ads

CONSIDER the cost-effective potential of adding a physician assistant to your practice. The North Carolina Academy of Physician Assistants will help you advertise to a large pool of qualified PAs at no cost to you. For information on how you can advertise your PA employment opportunity, contact: Bob Franks, PA-C, NCAPA Employment Chairman, 206 Camelia Dr., Goldsboro 27530. 919/731-3225 (work); 919/734-4657 (home).

DISCOUNT HOLTER SCANNING: starting at \$40. Spacelab Holters available at \$1275. Turn-over time is 24-48 hours. Hook-up kits available at \$4.95. Stress test electrodes available at 29c. Scanning paper available at \$18.95. One free test is offered at no obligation on trial basis. Cardio Care, Inc. For more information call us today at 1-800/248-0153.

INTERNIST to join established multi-specialty group. Cardiology experience preferred. Practice is based in scenic, waterfront community; hospital with three nursing homes. Near Norfolk, VA. Competitive salary/benefits. Send CV to: Box 429, Edenton, NC 27932.

INTERNIST wanted to join three man group in Winston-Salem. Excellent opportunity with well established largely fee-for-service practice. Reply to Forsyth Internal Medicine Associates, P.A., 1405 Plaza Drive, Winston-Salem 27103.

FAMILY PHYSICIANS BC/BE. Group practice, no buy-in, salary guarantee plus incentive year 1, shared call. Resume to Medical Director, Box 4568, Spartanburg, SC 29305.

NORTH CAROLINA - Emergency Medicine opportunities with local Emergency Medical group in central NC in two medium volume E.D.s. Board certified/prepared in E.M., F.P./I.M. preferred. Competitive salary, CME, ACEP dues, malpractice paid. Replies and CVs to James Strickland, M.D., PO Box 464, Burlington 27215. 919/228-0768.

PRACTICE FOR SALE - 510 N.W. Broad Street, Southern Pines, NC. Phone 919/692-6022.

GENERAL SURGEON needs an associate surgeon in a multi-specialty outpatient clinic and outpatient surgery facility. Brinton Surgical Center, P.A., 603 East Center Avenue, Mooresville, NC 28115.

NEUROLOGIST: Outstanding opportunity to develop practice for small, scenic community in the mountains of

Virginia. Supported by 175 + bed hospital w/drawing area of 75K. Excellent living conditions, popular recreational facilities. Contact Jim Davis, Tyler & Co., 9040 Roswell Rd., Atlanta, GA 30350. Call 404/641-6411.

PHYSICIANS OFFICE for sale. Located near Research Triangle on Hwy. 55 in Apex. Building will accommodate two physicians. Reply to Eddie Stiles, Box A, Apex, NC 27502 or call 919/362-7374.

EMERGENCY DEPARTMENT DIRECTORSHIPS, full-time and part-time opportunities available in Illinois, Indiana, Iowa, Kentucky, Michigan, Mississippi, New York, Ohio, Tennessee, Texas, Virginia, West Virginia, and Wisconsin. Guaranteed hourly rate and malpractice insurance. Benefit package available. Contact Emergency Consultants, Inc., 2240 South Airport Road, Room 33, Traverse City, MI 49684; 1-800/253-1795 or in Michigan 1-800/632-3496.

INTERNIST/FAMILY PHYSICIAN wanted for JCAH accredited, university affiliated, psychiatric hospital for medical coverage of in-patients. Attractive salary and benefit package. Send a vita or resume to the attention of Director, Medical Services, John Umstead Hospital, Butner, NC 27509 or call 919/575-7302.

LOOKING FOR RETIRED PHYSICIAN to do basic physical exams at the Plasma Center in Greensboro, five hours/day, M-F (will share time with another physician). Please call 919/273-3420.

NORTH CAROLINA: Attending faculty position available December 1, 1988 at the assistant professor level or above, in tenure track, depending upon candidate's qualifications. Emergency medicine residency training or board preparation preferred. Emergency department has fully autonomous academic departmental status. Emergency medicine residency began July 1983. Hospital designated as Level I regional trauma center. Helicopter service began April 1985. Compensation competitive, plus excellent fringe benefits. Contact: E. Jackson Allison, Jr., MD/MPH, FACEP, Professor & Chairman, Department of Emergency Medicine, East Carolina University School of Medicine, Pitt County Memorial Hospital, Greenville, NC 27858-4354; or call 919/551-4757. Federal law requires proper documentation of identity and employability at the time of employment. It is requested this documentation be included with your application. ECU is an AA/EEO employer, and encourages applications from qualified women and minorities.

INTERNIST, with or without subspecialty—to associate with nephrologist in coastal North Carolina. Riverfront community near beaches. 200 bed hospital with most surgical specialties. Send CV and cover letter to Code 90, NCMJ, Box 3910, DUMC, Durham 27710.

AMBULATORY CARE PHYSICIAN—Immediate opening at an ambulatory care center in Burlington, NC. Position offers three 13-hour days per week, competitive salary, and outstanding benefit package. FP, IM, ER, BC/BE or previous ambulatory care experience required. Send CV to: Attention Medical Director, Apollo Medical Systems, Inc., 211 Six Forks Rd., Suite 207, Raleigh 27609.

NEUROLOGY—SEI Health Services is seeking two adult neurologists and one pediatric neurologist for a large neurological group in the Southeastern United States. Recruiting board-eligible or board-certified physicians. Competitive salary and comprehensive benefit package that includes malpractice insurance and relocation assistance. Clinical experience in EEG, EMG, evoked response, doppler ultrasound, and sleep disorders preferred. Send resume to: SEI Health Services Division, James Hacker, General Manager, 7725 Little Ave., Charlotte 28226, or call: 704/542-7100.



PHYSICIANS Ambulatory Care Clinic

John Short & Associates, Inc., an internationally recognized Healthcare Management and Consulting firm, is actively seeking **PHYSICIANS** with experience and credentials in **FAMILY MEDICINE** and **PRIMARY CARE SPECIALITIES**.

Full or part-time positions are available to staff an existing Primary Care Clinic in the North Carolina Coastal Region. Qualifications include Board Certification or Board Eligibility and State Licensure.

John Short & Associates, Inc. offers competitive compensation including paid malpractice insurance, professional development funding and incentive programs. For additional information please contact: **Susan Bray, Recruiting Director, John Short & Associates, Inc., Box 1305, Columbia, MD 21044, (301) 964-2811.**

Equal Opportunity Employer.

NCMJ Classified Ads...

Send your ad to:

EDITORIAL ASSISTANT
NCMJ
Box 3910 DUKE UNIVERSITY MEDICAL CENTER
DURHAM 27710

Please specify the number of months you'd like your ad to run, and tell us your name, address, and phone number.

Closing date is the 25th of the second prior month.

Rates:

NCMS members, \$15/25 words, plus 25¢ each additional word;
Others, \$25/25 words, plus 25¢ each additional word.

Send no money; you will be billed.
For further information, call 919/684-5728.

In Memoriam

G. Joseph Poole, M.D.

G. Joseph Poole, M.D., died on May 5, 1988 after a sudden illness. At the time of his death, he was a member of the active staff of The Moses H. Cone Memorial Hospital and served as Clinical Associate Professor at UNC-Chapel Hill and Bowman Gray School of Medicine. His educational pursuits were rewarded with many honors. He interned at Colombia Presbyterian Hospital and did a residency in Radiology at Stanford University. He subspecialized in Neuro-radiology at Stanford and during a fellowship in Norway. He served on the faculty at Stanford and Bowman Gray as a Neuroradiologist.

Dr. Poole came to Greensboro 12 years ago and was highly regarded by fellow physicians and by patients. He had an encyclopedic knowledge of neuroradiology in particular and radiology in general. He was skillful in the technical aspects of neuro-radiology as well as the academic and clinical areas.

Although Joe Poole was quiet and reserved, he was a sensitive and caring person who imparted this sentiment to patients, technologists and his co-workers.

Joe was a dedicated family man and his family was the only thing he placed before medicine. He is survived by his loving wife Wanda and three fine children.

Whereas the untimely death of G. Joseph Poole has stolen from us one of our finest physicians, be it resolved that the Greensboro branch of the Guilford County Medical Society does hereby pay tribute to his memory. Be it further resolved that this tribute shall be made known to his family and to the North Carolina Medical Society.

James H. Busick, Executive Director
Guilford County Medical Society
612 Pasteur Drive, Suite 404
Greensboro 27403

James Taylor Brooks, M.D.

Dr. James Taylor Brooks died on February 21, 1988 at the age of 69.

Dr. Brooks was a native of Greensboro. He graduated from the University of North Carolina-Chapel Hill, and in four years of study earned his medical degree at the University of Pennsylvania Medical School in Philadelphia. Following his graduation, he interned at Abington Memorial Hospital in Pennsylvania.

He then entered the U.S. Army in World War II, and served his country as a Captain in the Medical Corp. Following his honorable discharge he returned to North Carolina and completed a residency in internal medicine at the Bowman Gray School of Medicine.

In 1949 he opened an office in Greensboro for the practice of general and internal medicine and continued in active practice until death.

Dr. Brooks was a kind, gentle, compassionate person with an excellent sense of humor. His keen intellect and excellent training made him a valued and outstanding clinician.

He will be sorely missed by his many friends and patients.

John Gray Hunter, M.D.
1016 Professional Village
Greensboro 27401

Index to Advertisers

Advanced Health Technology	485	Medic Computer Systems	525
Alamance Health Services	496	Medical Mutual Insurance Co. of NC	501
Baron Financial	481	Medical Protective Company	490
Blue Cross and Blue Shield of NC, Inc.	484	Miles Pharmaceuticals	492a-b
Burroughs Wellcome	491	MONY	482
Caremark Homecare	512-513	Palisades Pharmaceuticals	504
Charlotte Treatment Center	530	Physicians Financial Services	535
Coast Realty & Construction Co.	532	Republic Health	559
Compensation Consultant	499	Roche Laboratories	531, Covers 3-4
Craven Regional Medical Center	506	Saint Albans Psychiatric Hospital	492
Crumpton Company	Cover 2	U.S. Air Force	516
Dillard	516	U.S. Army Reserve	505, 532a
Duke Alcoholism and Addictions Program	504	U.S. Navy Reserve	489
Eli Lilly & Company	532b	Winchester Surgical Supply	541
Hinrichs Financial Group	500		

The
Official Journal
of the
North Carolina
Medical Society
November 1988
Volume 49
Number 11

CURRENT
JNLS
W1
NO
407

North Carolina Medical
Journal
UCSF LIBRARY
Received on: 11-28-88

No1

na

Medical Journal

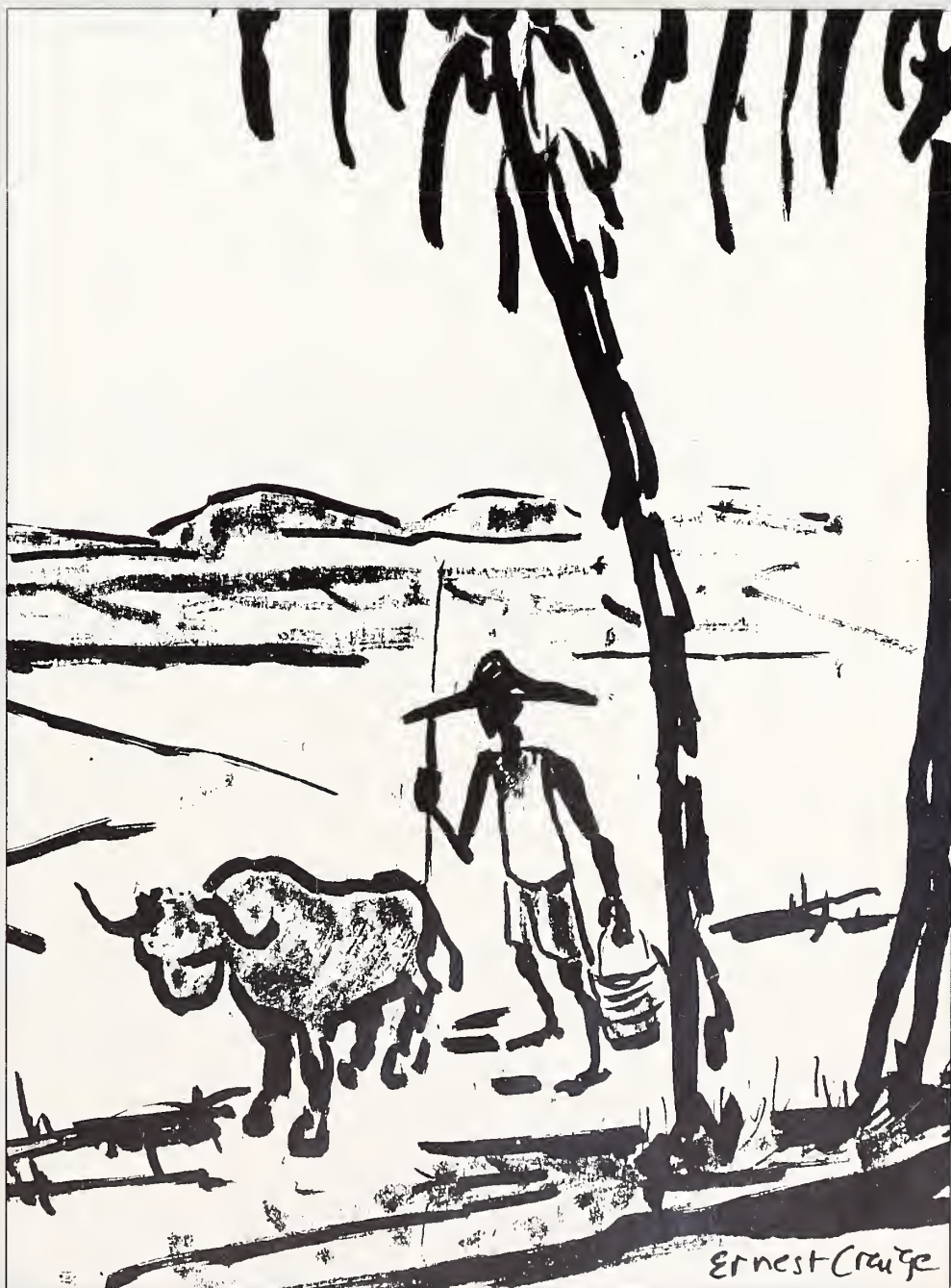
For Doctors and their Patients

**Discovering How Lucky
We Really Are**
Andrew C. McIvor

**Left Arm Pain
Isn't Always Angina**
Paul T. Campbell, M.D., and
David L. Simel, M.D.

**Fair Dinkum Koala Kruisine—
Eucalyptus Oil Poisoning**
Ronald B. Mack, M.D.

The Numbers Racket
William B. Blythe, M.D.



The Direct Line To Security And Peace of Mind



CRUMPTON COMPANY

Many N.C. Physicians participate in the
**Crumpton Plan of Disability Income
Protection —**

a plan that provides income when you cannot!

Because **we care** we have

- Benefits designed to meet today's needs
- Personalized claim service
- New broadened portfolio of insurance products

NOT PROMISES BUT PERFORMANCE

from the Disability Income Specialists who
have served N.C. Professionals for nearly
50 years!

Take a few minutes to call us today for
information on our expanded products and
services.

You will be glad you did!



CRUMPTON COMPANY
PROFESSIONAL INSURANCE ADMINISTRATORS
POST OFFICE BOX 51939, DURHAM, NC 27717-1939
919/493-2441 800/672-1674 (NC) 919/489-7380 (FAX)

STAFF

Eugene A. Stead, Jr., M.D.
Rt. 1, Box 194, Bullock
EDITOR
919/693-4531

Francis A. Neelon, M.D.
Durham
ASSOCIATE EDITOR

F. Maxton Mauney, Jr., M.D.
Asheville
ASSOCIATE EDITOR

Eben Alexander, Jr., M.D.
Winston-Salem
ASSOCIATE EDITOR

William B. Blythe, M.D.
Chapel Hill
ASSOCIATE EDITOR

Walter J. Pories, M.D.
Greenville
ASSOCIATE EDITOR

Edward C. Halperin, M.D.
Durham
ASSOCIATE EDITOR

Laurel Ferejohn
Durham
MANAGING EDITOR
919/684-5728

Jane Whalen
Durham
EDITORIAL ASSISTANT
George E. Moore
Raleigh
BUSINESS MANAGER

EDITORIAL BOARD

Charles W. Styron, M.D.
Raleigh

CHAIRMAN

Edwin W. Monroe, M.D.
Greenville

Robert W. Prichard, M.D.
Winston-Salem

Louis deS. Shaffner, M.D.
Winston-Salem

Jay Arena, M.D.
Durham

Jack Hughes, M.D.
Durham

William B. Blythe, M.D.
Chapel Hill

Margaret N. Harker, M.D.
Morehead City

The appearance of an advertisement in this publication does not constitute any endorsement of the subject or claims of the advertisement.

The Society is not to be considered as endorsing the views and opinions advanced by authors of papers delivered at the Annual Meeting or published in the official publication of the Society.
— *Constitution and Bylaws of the North Carolina Medical Society*, Chapter IV, Section 3, page 4.

NORTH CAROLINA MEDICAL JOURNAL

Box 3910, Duke University Medical Center, Durham, NC 27710 (919/684-5728), is owned and published by The North Carolina Medical Society under the direction of its Editorial Board. Copyright © The North Carolina Medical Society 1988. Address manuscripts and communications regarding editorial matters, advertising, subscription rates, etc., to the Managing Editor at the Durham address. All advertisements are accepted subject to the approval of a screening committee of the State Medical Journal Advertising Bureau, 711 South Blvd., Oak Park, Illinois 60302 and/or by a Committee of the Editorial Board of the North Carolina Medical Journal in respect to strictly local advertising. Instructions to authors appear in each issue (see table of contents). Annual Subscription, \$12.00 (+ tax in NC). Single copies, \$2.00. Publication office: The Ovid Bell Press, Inc., 1201-05 Bluff St., Fulton, MO 65251. *Second-class postage paid at Raleigh, North Carolina 27611 and additional mailing offices.* Postmaster: Send address changes to North Carolina Medical Society, 222 N. Person St., Raleigh, NC 27611.

BARON CREATES TAX LEVERAGE.

Fund Your Retirement Plans At Up To 25% Of Payroll
For Key Employees At A Cost For Staff Of Only 11%—

THAT'S LEVERAGE!

For More Information Call:

Baron Benefits Management, Inc.

A BARON FINANCIAL COMPANY

Executive Compensation and Employee Benefit Specialists

4110 Wake Forest Road, Suite 211
Raleigh, N.C. 27609
(919) 790-9904/(800) 222-8783

300 Wendover Avenue East, Suite 202
Greensboro, N.C. 27401
(919) 379-8207/(800) 822-1086

**"I've gone
through a bypass,
6 months of
physical therapy
and now
I'm supposed
to come up
with a \$150,000
malpractice
tail premium."**



This could be a real situation. Worse, it could happen to you because of a "loop-hole" in your malpractice coverage.

Even though Claims Made malpractice insurance extends protection if you face a lawsuit after retirement or death, most policies provide no protection if you return to work during a disability, even if you return to your occupational specialty.

So you may be forced to pay a whopping premium – the tail premium – in order to maintain your malpractice tail coverage.

If your malpractice insurance company doesn't waive this tail premium, there's only one policy in the marketplace designed to cover it: MONY's new Distinction Disability Insurance Series.

Malpractice protection is only part of the story.

Malpractice Tail Premium Coverage is only one of the reasons MONY's Distinction is a different approach to disability insurance. It meets your needs because:

- ☐ Your coverage cannot be canceled. No restrictions can ever be added.
- ☐ We're a mutual company and any dividends we pay can actually reduce the cost of your policy.

DISTINCTION™

The Intelligent Choice In Disability Income

Please send me more information on
MONY's Malpractice Tail Rider

NAME _____

ADDRESS _____

CITY, STATE _____

ZIP _____

PHONE (W) _____

Sue Anne Schoonderwoerd
(919/872-8666)
P.O. Box 95161
Raleigh, NC 27625

MONY
FINANCIAL SERVICES

The Mutual Life Insurance Company of New York, NY, NY.

North Carolina Medical Journal

FOR DOCTORS AND THEIR PATIENTS

Contents / November 1988, Volume 49, Number 11

Cover drawing by Ernest Craige, M.D.

SCIENTIFIC ARTICLES

- 564 Left Arm Pain Isn't Always Angina *Paul T. Campbell and David L. Simel*
569 Symptoms and Signs of Syndromes Associated with Mill Wheel Murmurs *W. Stuart Tucker*
574 The TMJ Syndrome: Is It a Reasonable Diagnostic Term? *William S. Kirk, Jr.*
583 Objective Laboratory Parameters in the Diagnosis of Sickle Cell Pain Crisis *William P. Buchanan, Peter C. Ungaro, and Jane C. Ranney*

FOR PATIENTS

- 587 Discovering How Lucky We Really Are *Andrew C. McIvor*

EDITORIALS

- 591 Emperor's Clothes Are Costly *James A. Bryan II*
595 Some Thoughts on Drug Abuse *Marvin P. Rozear*
597 Who Is to Blame? *Lewis F. Brinton*

TOXIC ENCOUNTERS

- 599 Fair Dinkum Koala Kruisine—Eucalyptus Oil Poisoning *Ronald B. Mack*

BOARD OF MEDICAL EXAMINERS

- 602 Drug Enforcement Administration: Renewal of Physician Registration *Eben Alexander, Jr.*

CAROLINA PHYSICIANS BOOKSHELF

- 603 Book Reviews *Edited by Edward C. Halperin*

MEDICAL HISTORY

- 606 Roles for a Small Museum: The Case of the Country Doctor Museum *Paul I. Crellin*

LEARNING EXPERIENCES FROM UNC

- 609 The Numbers Racket *William B. Blythe*

LETTERS TO THE EDITOR

BULLETIN BOARD

- | | | | |
|-----|------------------------------|-----|---------------------------|
| 613 | Continuing Medical Education | 615 | Classified Advertisements |
| 614 | New Members | 616 | Index to Advertisers |

Left Arm Pain Isn't Always Angina

Paul T. Campbell, M.D., and David L. Simel, M.D.

Arm pain is a common complaint representing a wide variety of pathological processes. The initial problem in evaluating patients with left arm pain is differentiating whether such discomfort is from somatic structures (e.g., the skin or skeletal muscle), or from visceral structures (e.g., the esophagus or the heart). Impulses from somatic and visceral structures converge on a common pool of neurons in the posterior horn of the spinal cord, and their origin may be confused by the cortex, accounting for the "referred" pain phenomenon.¹ There is a widely accepted view that pain in the left arm, especially when accompanied by chest pain, has an exclusive and ominous significance as being almost definitive evidence of ischemic heart disease. Braunwald has described this as "the left-arm myth."²

Chest and left arm pain are common symptoms which evoke anxiety among clinicians and patients alike. Although sometimes it may be in the patient's best interest to err on the side of overdiagnosing ischemic heart disease, erroneous diagnosis can lead to unnecessary emotional, social and financial consequences.

Pain in the chest with referral to the left arm is not pathognomonic of cardiac pain. Such a pattern of cardiac pain is present in only 30% to 50% of cases.^{1,3} The differential diagnosis includes a variety of non-cardiac conditions including diseases of the lungs, esophagus, gall bladder, vasculature, cartilage, and tendons and muscles of the chest wall, osteoarthritis of the upper spine, and bursitis of joints. Two cases involving left upper extremity discomfort are presented and their etiologies discussed.

Case One

A 48-year-old man with a three-year history of left lower extremity claudication presented with intermittent left chest, left upper extremity and digital discomfort. His past medical history included idiopathic avascular necrosis of the femoral and humeral heads; both hips required a prosthesis. One year after his initial claudicatory and arm symptoms he experienced transient blurred vision and ataxia with diminished left

upper extremity pulses. A chest x-ray, electromyogram and nerve conduction studies were normal. Cervical-spine films revealed degenerative changes with patent neural foramina. The electrocardiogram, erythrocyte sedimentation rate, rheumatologic screen, hemoglobin electrophoresis, and tests to evaluate a hypercoagulable state were all normal. He was treated with aspirin and dipyridamole. However, intermittent episodes of left-sided chest, arm and digital pain continued. The patient returned reporting the acute development of pain in the left upper extremity and left digits while at rest, with symptoms subsiding after 15 minutes.

On examination the patient appeared well. The blood pressure was 130/90 mmHg in the right arm but Korotkoff sounds could not be auscultated in the left arm. The left arm blood pressure was 84 mmHg by palpation. Cardiac exam was significant for an S4 gallop. The left subclavian, axillary, brachial and radial pulses were weak without audible bruits. The left hand blanched after brief exercise but did not reproduce discomfort. Adson's maneuver, performed by palpating the patient's radial pulse while his forearms were pronated on the knees, chin raised high and pointed toward the left side, and breath held during inspiration, was negative. A 3 mm subungual hemorrhage was visible in the left fourth digit. His neurologic exam was significant for decreased left interosseous strength and diminished sensation over the dorsum of the left forearm and lateral digits.

A digital subtraction angiogram of the aortic arch revealed high grade stenosis of the left subclavian artery just proximal to the takeoff of the left vertebral artery. Retrograde filling in the left vertebral artery was seen representing a subclavian steal syndrome (figure 1, next page). The carotid arteries had no significant stenoses. The patient underwent a left saphenous vein carotid-subclavian bypass with restoration of left upper extremity pulses and blood pressure, and resolution of symptoms. Over the six months since discharge, the patient has had no exercise-induced arm discomfort.

Case Two

A 35-year-old postman had an eight-year history of intermittent left upper extremity paresthesia, tightness and discoloration associated with downward traction of his shoulder by the shoulder strap of his mailbag or arm exercise. Relief was obtained with elevating the arm. Fifteen years earlier he was

From the Department of Internal Medicine, Duke University Medical Center, Durham 27710.

involved in a tractor accident in Vietnam, reportedly suffering left rib, left clavicular and facial fractures.

Examination revealed symmetric equal blood pressure in both arms, 150/90 mmHg, with a diminished left radial pulse. The neurologic exam was normal and range of motion full. Adson's maneuver was negative.

A chest x-ray revealed an old healed left clavicular fracture and an unusual separation of the left second and third ribs laterally, felt due to a congenital abnormality of the second rib or to previous trauma. A digital subtraction angiogram displayed moderate narrowing of the left subclavian artery noted at the dysplastic second rib while the left arm was adducted (figure 2).

The patient underwent left first and second rib resection via the posterior approach with division of the anterior and medius scalene muscles, and resection of fibrous bands over the left subclavian vein. Symptoms resolved postoperatively and the patient has remained asymptomatic over ten months since discharge.

Discussion

These cases are examples of the aortic arch syndrome (brachiocephalic ischemia, case one) and the thoracic outlet syndrome (case two), both presenting with complaints involving the left arm.

Aortic Arch Syndrome

The aortic arch syndromes are congenital and acquired conditions that produce sequential occlusion of the arch vessels.⁴ Atherosclerosis, the process in which cholesterol and other lipids are deposited in large and medium-sized arterial walls, accounts for more than 90% of instances of occlusion of the subclavian, carotid or innominate arteries,⁵ the remainder due to Takayasu's arteritis, syphilitic aortitis, neoplastic

obstruction and trauma.

Most patients with atherosclerotic occlusive disease of the aorta and its major branches become symptomatic during the fifth or sixth decade of life and display a high incidence of associated hypertension, peripheral vascular disease, and atherosclerotic heart disease.⁶ These lesions tend to be located at arterial bifurcations and are therefore characteristically found at the origin of the brachiocephalic vessels and at the bifurcation of the common carotid arteries. The left subclavian artery is most commonly affected, followed by the innominate and left common carotid arteries (figure 3). Multiple branches are involved in 40% of patients.⁷

Symptoms include those of cerebrovascular insufficiency with or without associated upper extremity ischemia and are due to diminished arterial flow as a result of stenosis of the vessel lumen. Total occlusion secondary to hemorrhage into an atherosclerotic plaque or thrombosis of a narrowed segment may also cause symptoms, depending on the degree and location of the obstruction, the extent of collateral circulation, or the development of "steal syndromes" and retrograde diversion of flow from the brain.

Upper extremity ischemia may be clinically manifested as weakness, claudication, coldness or duskeness of the hand, or Raynaud's phenomenon. Cerebral vascular insufficiency may involve anterior (carotid) or posterior (vertebrobasilar) circulation ischemia with amaurosis fugax, numbness, paresis or paralysis of the contralateral face, arm or leg, tinnitus, headache, dysarthria, dysphagia, ataxia or impaired consciousness. In the subclavian steal syndrome, proximal subclavian artery stenosis or occlusion does not allow increased blood flow during exercise-induced vasodilation. Blood becomes diverted via the circle of Willis through the ipsilateral vertebral artery to the exercising arm resulting in symptoms of cerebral ischemia.⁸

Physical examination with careful attention to all peripheral pulses, measurement of blood pressure in both arms, and auscultation for bruits in the supraclavicular and neck



Figure 1. Digital subtraction angiogram showing high grade stenosis of the left subclavian artery (large arrow) and retrograde filling in the left vertebral artery (small arrow) representing a subclavian steal syndrome.



Figure 2. Digital subtraction angiogram displaying narrowing of the left subclavian artery at dysplastic second rib while the left arm was adducted.

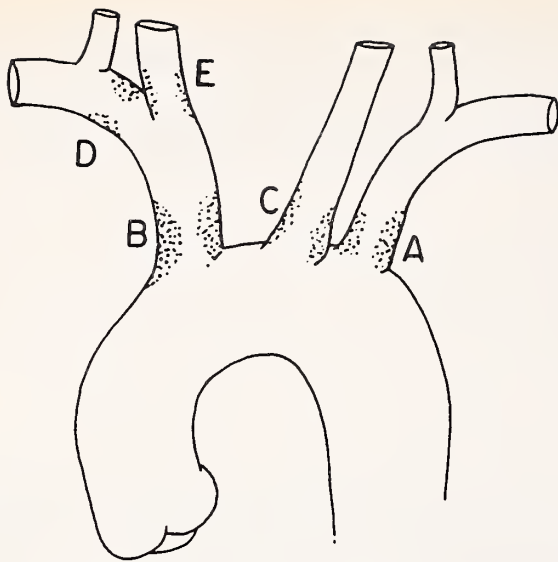


Figure 3. Frequency (Percentage of total occlusive lesions) of arterial lesions and associated symptoms.

regions will usually detect brachiocephalic occlusive disease. Diagnostic evaluation includes ophthalmodynamometry or pneumoplethysmography to assess pressure within the arterial system distal to a carotid obstruction. Doppler ultrasound techniques may be used to confirm decreased flow in an obstructed artery or reversal of flow in steal syndromes. The definitive study is the angiogram performed via the transfemoral catheter approach (aortic arch study) or by digital subtraction imaging.

Management of symptomatic individuals involves surgical revascularization, or endarterectomy. Most patients experience long-term relief of symptoms with patency preserved in 80% to 90% of cases.⁵

Thoracic Outlet Syndrome

Elements responsible for the vascular and neurologic supply to the upper extremity exit at the thorax. The thoracic outlet is the triangular channel bounded anteriorly by the scalenus anterior muscle, superiorly by the clavicle and subclavius muscle, inferiorly by the first rib and posteriorly by the scalenus medius muscle. The brachial plexus and subclavian artery run through this triangle, and the subclavian vein crosses the first rib anterior to the scalenus anterior muscle.⁹ In the already crowded cervico-axillary canal a variety of congenital or acquired anomalies may constrict their passage and produce a combination of vascular or neurologic symptoms referred to as the thoracic outlet syndrome.

Etiologies of this syndrome include cervical ribs, fracture of the clavicle or first rib, hypertrophy or atrophy of muscle groups, poor posture, aging, trauma (especially whip-lash injuries) and congenital fibromuscular bands.¹⁰ The incidence is higher in female than in male patients, usually occurring in the third or fourth decades.¹¹ Signs and symptoms depend on the structure (nerve or vessels) compressed. Neurologic symptoms are most common, with pain and

paresthesia being present in 95% of cases, and motor weaknesses in approximately 10%. These are most often in the C8 and T1 distribution from compression of the lower trunk or medial cord of the brachial plexus. Dorsal scapular nerve entrapment results in diffuse pain radiating down the arm and along the medial border of the scapula.¹²

Arterial and venous symptoms occur in approximately 3% to 5% of cases.¹³ Arterial compression can cause pain accompanied by tingling and numbness, intermittent claudication of the arm, weakened grip, blanching of the arm on exertion and digital gangrene from microemboli to the fingers. Venous compression results in swelling, discoloration (reddish-blue hue), an aching feeling of tightness and dilation of the superficial veins of the extremity.¹⁴

Diagnosis requires a detailed history, physical examination and radiographic studies. Symptoms similar to the thoracic outlet syndrome may be caused by cervical neuritis, cervical osteoarthritis or disk disease, carpal tunnel syndrome and brachial plexus injury.

Symptoms are often related to arm position and use, and may be aggravated by activities that stress the shoulder girdle. Loss or diminution of the radial pulse can be elicited with hyperextension, hyperabduction or Adson's maneuver. These tests are helpful only when symptoms simulating the patient's complaints correlate with changes in the radial pulse, as radial pulse obliteration alone can be seen with these maneuvers in normal people.¹⁵ Palpation of peripheral pulses, and auscultation for subclavian and axillary bruits and for brachial systolic blood pressure, should be performed bilaterally. A thorough neurologic exam with positional maneuvering should be undertaken.

A cervical rib, abnormalities of the first rib, bony exostoses, aneurysmal calcifications or malunion of an old clavicular fracture may be seen on x-ray films of the chest and cervical spine.¹⁶ Nerve conduction velocity and electromyograms help locate the presence and level of compression. Arteriography is indicated when there is evidence of positional vascular compression or occlusion at the thoracic outlet. Phlebography can be helpful when compression or occlusion of the subclavian vein is suspected.¹⁰

The initial management of most patients is conservative, consisting of exercises to enlarge the thoracic outlet by strengthening the shoulder muscles and improving posture. Between 50% and 90% of patients can be successfully managed in this fashion.¹⁷ Early surgery is indicated for those patients with actual or threatened ischemia secondary to subclavian artery compression or for neurologic deficits. The procedure is tailored to the patient and may involve resection of ribs or fibromuscular bands, with or without arterial reconstruction. Success rates between 85% and 95% have been reported, though symptoms recur in 1% to 15% of patients.¹⁰

Left arm discomfort can be caused by a wide variety of conditions. Proper diagnosis can usually be made with a careful history, physical examination and routine radiographic studies. Failure to recognize a serious disorder such as angina pectoris or mediastinal tumor can result in the

dangerous delay of appropriate treatment, and incorrect diagnosis of a potentially harmful condition such as ischemic heart disease may lead to unnecessary procedures and have significant psychologic and economic consequences. An awareness of characteristic features and findings of the many causes of left arm pain will help dispel "the left-arm myth" and provide for appropriate evaluation, diagnosis and therapy. □

References

- 1 Christie LG, Conti R. Systemic approach to evaluation of angina-like chest pain. *Am Heart J*. 1981;102:897-911.
- 2 Braunwald E. Chest discomfort and palpitation. In: Braunwald E. (ed.) *Harrison's principles of internal medicine*. 11th ed. New York: McGraw Hill, 1987, pp. 17-23.
- 3 Sampson JJ, Cheitlin MD. Pathophysiology and differential diagnosis of cardiac pain. *Prog in Cardiovasc Dis* 1971;507-31.
- 4 Smith RB, Perdue GD. Aortic arch syndromes. In: Lindsay and Hurst (eds.) *The aorta*. New York: Grune and Stratton, 1979, pp. 225-36.
- 5 Wylie EJ, Ehrenfeld WK. Extracranial occlusive cerebrovascular disease. Philadelphia: WB Saunders, 1970, pp. 87-95, 184-213.
- 6 Crawford ES, DeBakey ME, Morris GC, et al. Surgical treatment of occlusion of the innominate, common carotid and subclavian arteries: a 10-year experience. *Surgery* 1969;65:17-31.
- 7 Strandess DE. Collateral circulation in clinical surgery. Philadelphia: WB Saunders, 1970, pp. 275-86, 570-82.
- 8 Reivich M, Holling HE, Roberts B, et al. Reversal of blood flow through the vertebral artery and its affect on cerebral circulation. *N Engl J Med* 1961;265:878-85.
- 9 Hirsh LF, Thanki A. The thoracic outlet syndrome. *Postgrad Med* 1985;197-207.
- 10 Crawford FA. Thoracic outlet syndrome. *Surg Clin N Amer* 1980;60:947-55.
- 11 Graham GG, Lincoln BM. Anterior resection of the first rib for thoracic outletsyndrome. *Am J Surg* 1973;126:803-6.
- 12 Vo NM. Thoracic outlet syndrome: ten years later. *Conn Med* 1984;143-6.
- 13 Urschel HC, Maruf RA. Management of the thoracic outlet syndrome. *N Engl J Med* 1972;1140-3.
- 14 Lord JW, Rosati WM. Thoracic outlet syndromes. *Clin Symposia* 1971;23:3-32.
- 15 Ekolof B. Vascular compression syndromes of the upper extremity. *Acta Chir Acad* 1976;465:74-7.
- 16 Tyson RA, Kaplan GF. Modern concepts of diagnosis and treatment of the thoracic outlet syndrome. *Orth Clin N Amer* 1975;6:507-19.
- 17 Dale WA, Lewis MR. Management of the thoracic outlet syndrome. *Ann Surg* 1975;181:575-85.

New Concept in Disability Income Protection

*Pick Your Monthly Benefit
... Then Pick
Your Premium*

Receive all the best contractual definitions the industry offers—then we'll ask you to choose the premium you want to spend for this vital coverage.

Most contracts, without exception, use the layering effect; and, because this adds cost, your contract may be lacking some valuable elements.

For a **FREE Disability Insurance Audit** simply return the attached coupon. There is no obligation.

COMPENSATION CONSULTANT

Specialists in Compensation Replacement

YES, I'd like more information about:

- ☐ Free Disability Insurance Audit
- ☐ Variable Premium Disability Income Plans
- ☐ Retirement Benefit Disability Income Plans
- ☐ Vanishing Premium Disability Income Plans
- ☐ Return of Premium Disability Income Plans

NCMJ3

Name _____

Address _____

City _____ State _____ Zip _____

Telephone _____

Date of Birth _____

Mail coupon to:

Compensation Consultant • P.O. Box 9384 • Hickory, NC 28603

For professionals, a major disability or illness can be financial disaster.

A disability income protection plan from Connecticut Mutual replaces earnings lost because of disability.

Our plan includes:

- high benefit limits that replace more of your income;
- special reduced rates for non-smokers;
- proportionate benefits when you can only work part-time but still

need a full-time income;

—the ability to increase your basic policy benefit as your income increases, regardless of your health;

—reimbursement for vocational and educational expenses during rehabilitation;

—an "Own Occupation" rider that pays full benefits if you are unable to perform the main duties of your own occupation, even if you earn income from a different job or business;

—we can also pay dividends that

reduce the cost of your coverage.

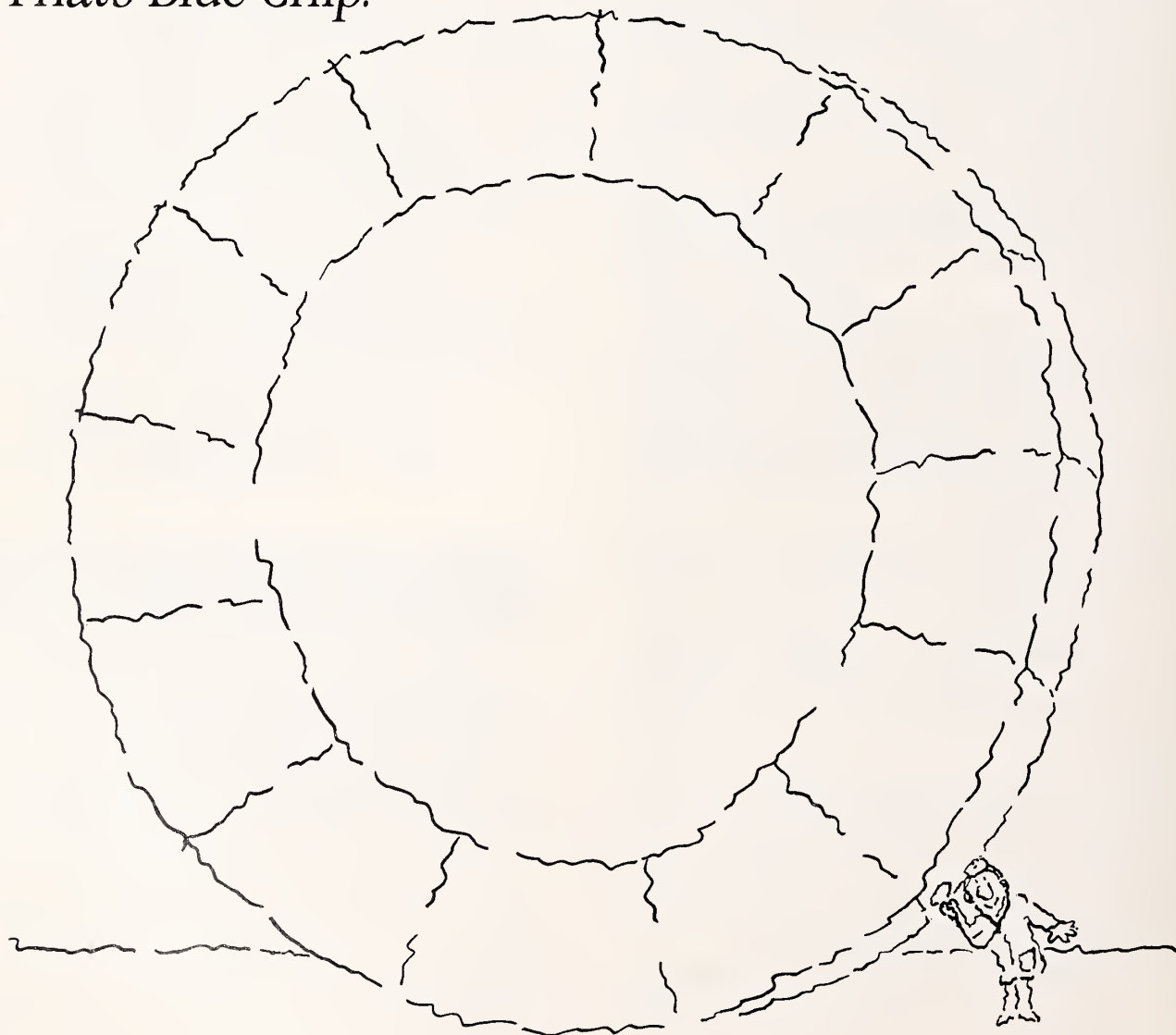
Call today to find out how we can custom design a Blue Chip protection plan to keep your income healthy.

The Hinrichs Financial Group

1600 Charlotte Plaza
Charlotte, NC 28244
(704) 371-8600

An affiliate of the  Alliance

*Disability insurance that keeps your income healthy.
That's Blue Chip.*



Connecticut Mutual Life Insurance Company (Hartford CT)

Symptoms and Signs of Syndromes Associated with Mill Wheel Murmurs

W. Stuart Tucker, Jr., M.D.

The term "mill wheel murmur" refers to the cardiac auscultatory finding of a noise like that of an old-fashioned overshot water wheel. It is a rhythmic splashing or churning sound generated by the agitation of gas trapped with fluid in a closed space. Two syndromes in medicine are associated with a mill wheel murmur. One is hydropneumopericardium, where gas and fluid accumulate inside the pericardial sac.^{1,2} The other is venous air embolism to the right heart, where air and blood mix inside the right heart chambers.^{3,4} In both syndromes, the beating of the heart agitates the gas-fluid collection, causing the audible murmur. A review of the diagnosis of these two uncommon syndromes reveals the divergent pathophysiologic mechanisms of the classic mill wheel murmur common to both.

Hydropneumopericardium

Pneumopericardium and its variants, including hydropneumopericardium, hemopneumopericardium, pyopneumopericardium, and chylopneumopericardium, can be caused by a variety of disorders or insults (table 1, next page).¹ Although the chest x-ray appearance of pneumomediastinum, which commonly occurs with positive pressure ventilation, may resemble that of pneumopericardium, positive pressure ventilation rarely causes pneumopericardium.^{5,6} Hydropneumopericardium can result from simultaneous pericardial accumulation of gas and body fluid, such as blood, pus, chyle, and/or gastrointestinal secretions. Examples include trauma, rupture of lung or liver abscess, and esophageal or gastric perforation by ulcer, cancer, or a foreign body like a swallowed bone. Infection creating trapped fluid and/or gas may follow any pericardial perforation from a non-sterile surface or cavity. Among the most bizarre examples is the case of a juggler who perforated the esophagus and pericardium in the course of sword swallowing.¹

When body fluids accumulate in the pericardium as a primary phenomenon, hydropneumopericardium can occur with secondary entry of gas into the pericardium. Pericardiocentesis can lead to accidental or intentional entry of air into the pericardium, the thickness of which can be estimated by post-puncture chest x-rays. Gas may be produced by bacterial infection causing primary pyopericardium or by metastatic colonization of a benign effusion in the course of sepsis. Pyopericardium can rupture through the chest wall or into the lungs causing air to enter the pericardial sac.²

Pneumopericardium and its variants are associated with unusual findings on physical examination (table 2, next page). By inspection, the apical impulse may disappear during recumbency, being masked by air within the pericardium. The precordium may be seen to bulge because of pressure by intra-pericardial gas.² Edema of the precordial skin has been reported in pyopneumopericardium.¹ Pericardial tamponade may occur with tension pneumopericardium.⁷

On palpation, the apical impulse may similarly disappear during recumbency. Although pneumopericardium only rarely accompanies pneumothorax or pneumomediastinum,^{5,6} subcutaneous emphysema associated with those disorders might be detected by palpable cutaneous crepitus. Tenderness over the lower sternum has occurred in pyopneumopericardium.¹

By percussion, an area of cardiac dullness cannot be demarcated.¹ The precordium may be tympanitic from pneumopericardium when the patient is supine. The tympany may shift with changes in patient position as pericardial air floats above the solid mass of the myocardium and above pericardial fluid. A flattened precordial percussion note associated with pneumohydropericardium has been called "cracked pot resonance"² or *le bruit de pot fêlé* (literally, "the noise of pot cracked").⁸ Precordial tympany or diminished precordial percussion dullness is not a specific finding of pneumopericardium; pneumothorax, localized or generalized emphysema, and elevation of the left hemidiaphragm with overlapping gastric or pneumoperitoneal tympany should be considered when precordial tympany is found.⁹

By auscultation, the heart sounds may be muffled by air

From The Nalle Clinic, 1350 S. Kings Drive, Charlotte 28207. Dr. Tucker is a Teaching and Research Scholar of the American College of Physicians. Reprints are not available.

over the heart when the patient is supine. A pericardial friction rub may be present. A loud succussion splashing with metallic tinkling may be heard by the unaided ear even at a distance of a few feet from the patient.^{1,2,7,8} Air in the pericardium allows the splashing of pericardial fluid by cardiac motions. The splashing sound is the "mill wheel murmur," also called a "water wheel murmur" or "churn murmur."¹⁰ Synonyms of historic interest include *le bruit de moulin* (literally, "the noise of mill"),¹¹ *le bruit de la roue hydraulique* (literally, the noise of the wheel hydraulic),¹ *le clapotement* (derived from the French intransitive verb "clapoter," meaning "of the sea, to be choppy")¹⁰ and *le bourdonnement amphorique* (literally, "the amphora-like humming or buzzing").⁸ The mill wheel murmur may be loudest in inspiration while the patient is supine. Although loudest in the third, fourth, and fifth left and in the third and fourth right intercostal spaces, the mill wheel murmur may be audible over the whole precordium and may change with changes in body position.¹

Several points of differential diagnosis bear emphasizing. Succussion produced by the action of the heart in hydropneumothorax might mimic the diagnosis of hydropneumopericardium, but precordial loudness of the abnormal sounds would strongly favor hydropneumopericardium. Positional changes in the intensity and localization of the heart sounds should also distinguish hydropneumopericardium from hydropneumothorax.¹ With the stomach distended by both gas and fluid, the resulting sounds of tympany

and metallic rumbling would not be synchronous with the beating of the heart as in the case of hydropneumopericardium. Pneumomediastinum and hydropneumomediastinum might simulate pneumopericardium but cervical subcutaneous emphysema would be much more likely to accompany those disorders.^{2,5,12} In pneumomediastinum, "Hamman's crunch" (the substernal crepitation of clicking of mediastinal air synchronous with the heart beat) might be heard, sometimes even without a stethoscope.^{5,12,13} Other disorders associated with Hamman's crunch include dilated lower esophagus, pneumoperitoneum with a high left diaphragm, gastric dilatation, and left pneumothorax.⁹

Venous Air Embolism

Venous air embolism occurs in several settings (table 3).¹⁵ Air may be introduced accidentally or intentionally into the venous system by surgical or traumatic venotomy or by intravenous catheters, particularly central venous catheters exposed to negative intrathoracic pressures.^{3,16} Air embolism may occur with vaginal insufflation during pregnancy either from vaginitis therapy or from orogenital sex.¹⁷ Air embolism may also accompany decompression sickness in scuba divers when dissolved tissue nitrogen forms venous bubbles.¹⁸

Unlike the generally more protracted course of non-traumatic pneumopericardium, the course of venous air embolism is often short and quickly mortal (table 4). If the air embolism is small, the only sign may be a "sharpening or

Table 1. Causes of pneumopericardium and hydropneumopericardium

I Iatrogenic	IV Penetrating ulcer of esophagus or stomach
A. Diagnostic pleural or pericardial paracentesis	A. Benign ulcer
B. Therapeutic pneumothorax	B. Cancer
C. Therapeutic pneumopericardium	V Infections
D. Pericardiotomy	A. Primary lung infection penetrating into the pericardium
E. Positive pressure ventilation (rare)	1. Tuberculosis
II Trauma	2. Empyema
A. Bullets and knives	3. Lung gangrene or abscess
B. Fractured ribs	B. Primary purulent pericarditis
C. Blunt trauma	1. Perforation into lung or through chest wall
III Foreign body in esophagus	2. Gas-producing infection
A. Dentures	
B. Bones	
C. Sword	

Table 2. Physical findings in pneumopericardium and hydropneumopericardium

I Inspection	IV. Auscultation
A. Absent apical impulse during recumbency	A. Diminished or absent heart sounds, especially supine
B. Precordial bulge	B. Pericardial friction rub
C. Precordial edema	C. Loud metallic succussion splashing (heard at a distance)
D. Pericardial tamponade	D. Mill wheel (or water wheel or churn) murmur
II Palpation	E. Hamman's crunch
A. Absent apical impulse during recumbency	F. Subcutaneous emphysema
B. Subcutaneous emphysema with crepitus	
III. Percussion	
A. Supine precordial tympany	
B. Shifting tympany	
C. Cracked pot resonance	

Table 3. Causes of venous air embolism

I Medical, surgical, and obstetric causes	II Diagnostic air injections
A. Traumatic or surgical venotomy	A. Perirenal (retroperitoneal) air
1. Operations involving neck veins	B. Pneumoperitoneum
2. Operations involving dural sinuses	1. Direct
B. Uterine curettage	2. Uterotubal insufflation for testing for Fallopian tube patency ¹⁴
C. During parturition of women with placenta previa	C. Urinary bladder
D. Vaginal insufflation during pregnancy	D. Intra-articular
1. Orogenital sexual activity	III Therapeutic air injections
2. Powder insufflation for vaginitis treatment	A. Maxillary antrum lavage
E. Intentional or accidental air introduction into intravenous lines, especially, central venous lines	B. Pneumoperitoneum

clapping character of the second heart sound”.¹⁹ If the air embolism is moderate sized, the onset of symptoms is abrupt and is marked by deep inspirations, gasping, cough, cyanosis, hypotension, unconsciousness, and respiratory arrest.³ The patient may initially complain of faintness, a fear of death, substernal chest pain, or dyspnea. Wheezing may occur as a result of acute bronchospasm. A mill wheel murmur is produced by the agitation of blood and air in the right ventricle. The mill wheel murmur may be audible only transiently and is not often heard.¹⁶ If the air embolism is large and cardiovascular collapse occurs, then a precordial “sound resembling squeezing and releasing a wet sponge” may be heard.^{16,19} If paradoxical embolism of air occurs, symptoms and signs of acute arterial occlusion may predominate, as in stroke or myocardial infarction. In this event, bubbles in the retinal arteries or mottled, marble-like skin might be seen.¹⁷ With decompression sickness, the presentation of air embolism may be confused by possibilities of pneumothorax, pneumomediastinum, and subcutaneous emphysema. For example, tension pneumomediastinum can produce severe retrosternal chest pain radiating to the shoulders and arms and can cause decreased cardiac output and shock.²⁰

Emergency treatment for air embolism is placing the patient in the left lateral decubitus position with the head down (Durant’s maneuver).^{15,19} This maneuver traps air in the right ventricle, decreases intracardiac blood agitation, and prevents air embolism to the lungs or to arterial beds through any right-to-left intracardiac shunt. The dependency of the heart also improves venous return and cardiac output. Aspiration of the air from the right heart can be accomplished with a central venous catheter.¹⁹ Oxygen administration relieves hypoxemia and reduces the partial pressure of nitrogen in alveoli and in blood, allowing the embolized air to be exhaled.^{16,20,21}

Summary

It is worth remembering that two different locations of fluid and air have a common physical finding in mill wheel murmurs; agitation of gas and fluid trapped in a closed space is the cause of the murmur, in one case, inside the pericardium with hydropneumopericardium, and in the other, inside the heart with air embolism. These syndromes provide fertile ground for discussions of their differential physical diagnosis. □

Acknowledgement

Mrs. Cindy Warnstaff of the Nalle Clinic assisted in the preparation of the manuscript.

References

- 1 James WB. Pneumopericardium. *Am Med* 1904;8:23-7.
- 2 Shackelford RT. Hydropneumopericardium: report of a case with a summary of the literature. *JAMA* 1931;96:187-91.
- 3 Clain A, ed. Hamilton Bailey’s demonstrations of physical signs in clinical surgery. 14th ed. Baltimore: Williams and Wilkins, 1967, p. 209.
- 4 Hanley PC, Klick RL, Tancredi RG. Delayed air embolism after removal of venous catheters (letter). *Ann Int Med* 1984;101:401-2.
- 5 Maunder RJ, Pierson DJ, Hudson LD. Subcutaneous and

Table 4. Physical findings in venous air embolism

- I Air embolism to the right heart
 - A. Clapping second heart sound
 - B. Wheezing
 - C. Mill wheel murmur
 - D. Palpable jugular vein bubbles
 - E. Sponge-squeezing sound
 - F. Cardiovascular collapse
 1. Tachycardia
 2. Cyanosis
 3. Increased venous pressure
- II Paradoxical arterial air embolism
 - A. Stroke
 - B. Myocardial infarction
 - C. Retinal artery bubbles
 - D. Mottled skin
 - E. Air bleeding

- mediastinal emphysema: pathophysiology, diagnosis, and management. *Arch Intern Med* 1984;144:1447-53.
- 6 Smith JT, Jr. Pneumopericardium vs. pneumomediastinum (letter). *Hosp Pract* 1987;22:14.
 - 7 Costa IVI, Soto B, Diethelm L, Zarco P. Air pericardial tamponade. *Am J Card* 1987;60:1421-2.
 - 8 Stokes W. The diseases of the heart and the aorta. Dublin: Hodges and Smith, 1854, pp. 22-5.
 - 9 Chapman JS. Spontaneous irruption of air from the lung: I. pneumomediastinum. *Am J Med* 1955;18:547-56.
 - 10 Meigs JF. Case of pneumo-hydropericarditis; with remarks. *Am J Med Sci* 1875;69:81-95.
 - 11 Brichteau, J. Observation d'hydro-pneumo-pericarde, accompagnée d'un bruit de fluctuation perceptible à l'oreille. *Archives Generales de Medecine* 1844;4:334-9.
 - 12 Hamman L. Spontaneous mediastinal emphysema. *Bulletin of the Johns Hopkins Hospital* 1939;64:1-21.
 - 13 Rose WD, Veach JS, Tehranzadeh J. Spontaneous pneumomediastinum as a cause of neck pain, dysphagia, and chest pain. *Arch Int Med* 1984;144:392-3.
 - 14 Speert H. Obstetric and gynecologic milestones. New York: MacMillan, 1958, pp. 277-84.
 - 15 Durant TM, Long J, Oppenheimer J. Pulmonary (venous) air embolism. *Am Heart J* 1947;33:269-81.
 - 16 O'Quin RJ, Lakshminarayan S. Venous air embolism. *Arch Intern Med* 1982;142:2173-6.
 - 17 Fyke FE, Kazmier FJ, Harms RW. Venous air embolism: life-threatening complication of orogenital sex during pregnancy. *Am J Med* 1985;78:333-6.
 - 18 Shilling CW, Carlston CB, Mathias RA, eds. The physician's guide to diving medicine. New York: Plenum Press, 1984, p. 291.
 - 19 Brechner VL, Bethune RWM. Recent advances in monitoring pulmonary air embolism. *Anesth Analg* 1971;50:255-61.
 - 20 Bassin R, Angard C. Scuba emergencies. *Hosp Phys* 1979;15:48-50.
 - 21 Fine J. Treatment of air embolism (letter). *JAMA* 1979; 241:1686.

NAVAL RESERVE PHYSICIAN

- Monthly Stipend for Physicians in training leading to qualifying as General/Orthopedic/Neurosurgeon or anesthesiologist.
- Loan repayment of up to \$20,000 for Board eligible General/Orthopedic surgeons and anesthesiologists.
- CME opportunities.
- Flexible drilling options.

*Promotion Opportunities

*Prestige

*For graduates of AMA approved
Medical Schools*

**CALL YOUR
NAVAL RESERVE FORCE
REPRESENTATIVE TODAY.**

1-800-443-6419



Sudafed[®]

(Pseudoephedrine HCl)
Nasal Decongestant

Stops Symptoms Fast, But Won't Stop Her.



Today's active woman can't let cold symptoms slow her down. Recommend SUDAFED when she comes to you seeking relief from sinus congestion — the most uncomfortable cold symptom.

- Fast, effective relief from nasal and sinus congestion
- No antihistamines that can cause drowsiness
- The nasal decongestant most recommended by physicians*
- SUDAFED 12 Hour available for convenient, twice-a-day dosage

Recommend SUDAFED, the dependable decongestant that will stop her symptoms but won't stop her.



SUDAFED Tablets
SUDAFED 12 Hour Safety-Sealed Capsules

*Data on file, B.W. Co., 1987.



The TMJ Syndrome

Is It a Reasonable Diagnostic Term?

William S. Kirk, Jr., D.D.S., Oral and Maxillofacial Surgeon

Physicians are often confronted with various facial, head, and neck pain complaints from their patients. The multiplicity of potential etiologies for development of pain in this area make this a difficult area of clinical practice. Central nervous system, vascular, connective tissue, skeletal, sinus, otologic, dental, and joint structures can all contribute. For the primary physician who may be the first to be confronted with the patient with facial, head, or neck pain, the ultimate diagnosis can come after much frustration in search of the etiology.

Dentistry and medicine share confusion over the condition commonly referred to as the "TMJ syndrome." Much of this confusion has come over poor communication among professionals and ignoring the basic orthopedic nature of the temporomandibular joint in health and disease. The complex anatomy, physiologic and kinesiology properties of the joint and the important relationship between dental occlusion and basic joint orthopedics makes this a difficult clinical problem (figure 1). Historically, this area of responsibility has been a part of the dental profession. Unfortunately, dentistry and medicine have failed at times to correlate conditions seen in other joints of the body to that of the temporomandibular joint. It is as though medicine and dentistry, in their separate ways, viewed this joint as unusual, perplexing, and unique from all others.

Over the past decade, great strides have been made to understand the pathophysiologic process of temporomandibular joint dysfunction. The term temporomandibular joint or "TMJ syndrome" was first presented by Costen, an otolaryngologist, over 50 years ago.¹ Unfortunately, it is still used as a clinical diagnosis that is entirely inappropriate and should be abandoned for more specific and descriptive diagnoses, reflecting basic orthopedic internal derangement, arthritic, synovitis, vascular, and/or myositis pain states. It is the purpose of this paper to present specific information based on surgical observations in the management of orthopedic disturbances of the TM joint. It is also the hope that this information will help with expanding the primary physician's understanding of the pathophysiologic process of specific

temporomandibular joint disease and dysfunctional states. It is also hoped that more specific diagnoses can be appreciated beyond the convenient categorization of a syndrome. Observations and evidence presented are based on nine years of surgical observation by the author and others²⁻⁴ and patient response to various treatments, both surgical and nonsurgical.

Applicable Orthopedic Principles to Temporomandibular Joint Function

Joint Range of Motion

It is an understatement to suggest that the TM joint possesses one of the most interesting and complex arthrokinematic systems of the body. Rotational movements similar to those

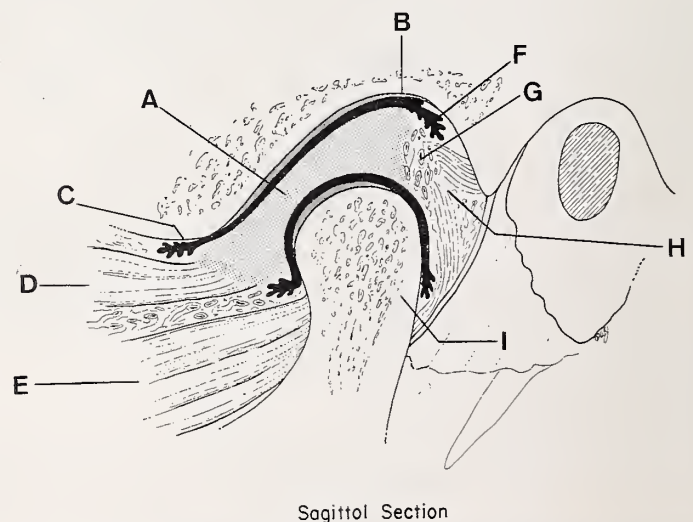
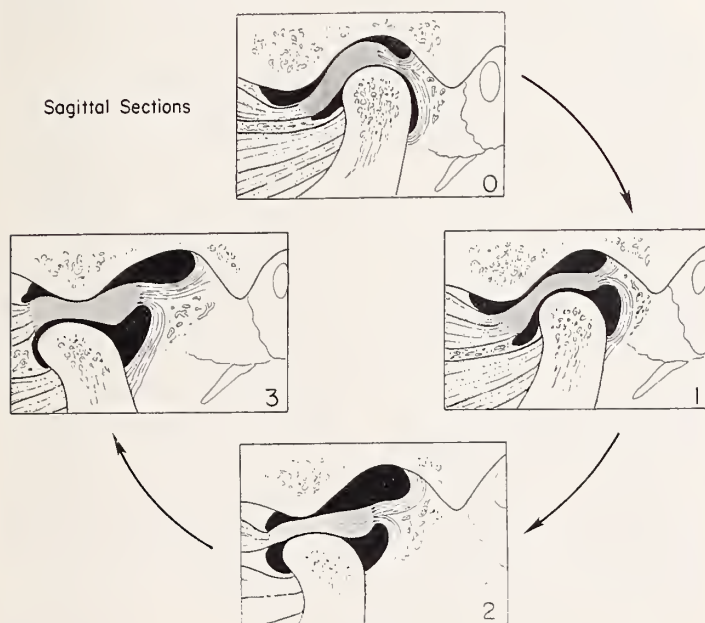


Figure 1. Normal schematic drawing of normal anatomic relationship of the temporomandibular joint in the closed jaw position. Schematic assumes adequate joint space and support by the occlusion.

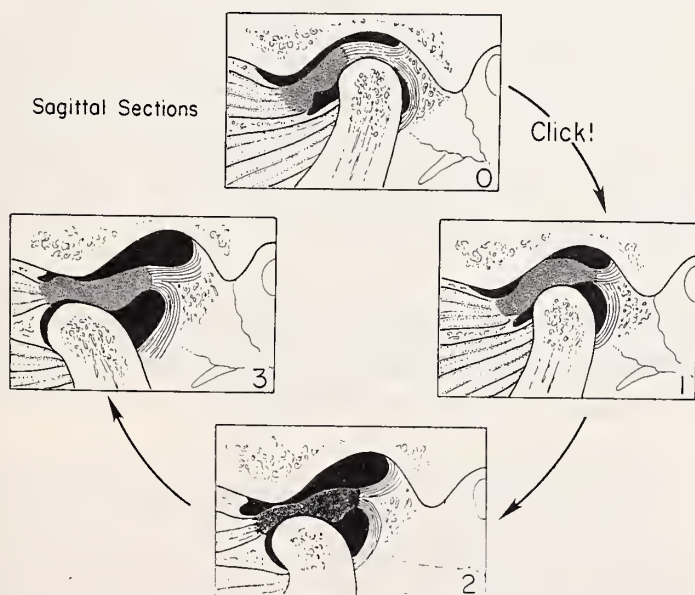
- | | |
|---|--|
| A. Fibrocartilage articular disc | F. Synovial villi |
| B. Glenoid fossa | G. Vascular sinusoid in posterior attachment tissues |
| C. Articular tubercle of temporal bone | H. Posterior bilaminar ligament |
| D. Superior belly of lateral pterygoid muscle | I. Mandibular condyle |
| E. Inferior belly of lateral pterygoid muscle | |

From 600 South College St., Charlotte 28202.

found in other joints are present in most functional movements such as with chewing and speech. The unique movement is the translatory movement of the condyle from the glenoid fossa, down the slope of the articular eminence of the temporal bone to a position opposite the articular tubercle (in normal range of motion). This translatory glide ensures maximum depressive and vertical opening of the mandible (figure 2). It is this same translatory movement that is the most taxing over time to the integrity of joint ligaments and



A. Normal sagittal orthopedic relationships among mandibular condyle, articular disk, glenoid fossa, and articular eminence of the TMJ. Closed mouth position is "0"; fully translated position is "3." Note combination of rotational and translational movement of the condyle with posterior support of the disk maintained by posterior ligament tissues.



B. Early internal derangement with disk displacement. Disk is displaced forward due to muscular forces and mechanical displacement in "0." Closed mouth position places condylar forces on herniated posterior ligament tissues. The articular disk resumes a more normal position after joint "clicking," and continues in an appropriate position through the remainder of condylar translation.

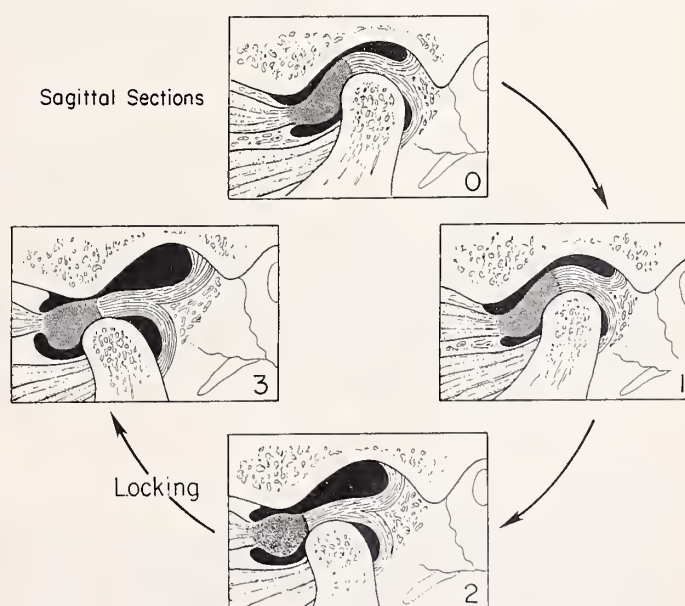
their attachment to the articular disc. Chronic excessive translation or abnormal joint mechanics during translation can lead to ligamentous fatigue and loss of the ability to appropriately stabilize the intra-articular fibrocartilage disc during function.⁵ Acute hyperextension injuries or mandibular trauma can tear disc and ligament tissues and/or capsular or synovial tissues as in any other acute joint injury.⁶ Progressive degenerative arthritic conditions can result.

The fibrocartilage and elastin predominated nature of these tissues have inherent viscoelastic properties. It has been suggested that the biochemical nature of these tissues is unique, that they can elongate with time.⁷ Individual collagen fiber lengthening, fatigue, and loss of inherent elasticity can invite wholesale disc, capsule, and ligamentous flaccidity that can present as joint instability and progress to failure of internal structures. Uncorrected internal joint dysfunction has been shown to be progressive over time and can result in severe problems with routine joint function and development of pain.⁸

Joint Space Maintenance

"No two objects can occupy the same place at the same time." This simple physical property of matter applies to all joints and the protection of intra-articular structures. Impingement of bony tissues on the softer cartilagenous structures invites degeneration. All joints of the body must be adequately supported by the integrity of muscle and ligamentous tissue. The temporomandibular joint is no different.

Analysis of the maintained joint space by an appropriately positioned and supporting occlusion is paramount to long term joint health. Joint space loss can be seen when posterior teeth are lost or in certain malocclusion states. Ignoring the degree of joint space loss in the face of a poorly



C. A schematic of locking of the TMJ. Disk dislocation and morphologic changes prohibit condylar rotation and translation. This can result from an uncorrected disk instability and abnormal forces generated during function. Note function on herniated ligament tissue.

functioning joint invites complications, particularly when extensive restoration of dental occlusion is necessary. Joint space can be increased with certain restorative or surgical techniques and should be considered as part of treatment planning objectives in certain cases.

Synovitis

Inflammatory conditions within the TMJ occur as they do in other joints. Inflammatory capsulitis and edema in joint tissues can result from a host of etiologies: rheumatoid, autoimmune or connective tissue disease, trauma, malocclusion, localized infection, and possible otitis media. The effect of otitis media raises interesting possibilities concerning hematogenous spread of organisms from surrounding tissues and structures into the joint. The author has experience with three cases of bony ankylosis and osteomyelitis of the TM joint with *H. influenza* being the predominant cultured organism. Formation of ankylosis was rapid. Though ankylosis is an extreme complication, it seems logical to question the possible relationship between various stages of joint infection of inflammation secondary to otologic infection. In all of these cases no other etiology could be found other than a history of acute or chronic suppurative otitis media ranging from three to six months prior to the onset of joint symptoms.

Being a synovial joint, the TMJ does have synovial fluid. The volume of this fluid is quite small, approximating 2cc to 3cc at the most. The pH of synovial fluid in other joints is basic, approximating pH 7.8 to 8.4, depending on which studies are cited. This has not been well documented in the TMJ. As in other joints, it is probable that any alteration in the pH of this small amount of fluid may invite the formation of acute or chronic inflammatory states that can lead to degenerative changes. Harris and Krane have shown in other joints that collagenases are released from cells within the synovial linings of joints that are destructive to intra-articular structures.⁹⁻¹¹ These collagenases may be released in certain connective tissue disease states, autoimmune disorders,¹² trauma, and after hemarthrosis. Any of these states might change cellular respiration to catabolic end points. It is quite possible that the same possible mechanism presents itself in this joint as in any other. Likewise, if inflammatory states are modified by hormonal influence, it could explain the predominance of this condition in females and those patients susceptible to osteoarthritis, osteoporosis, or connective tissue disease states.

Trauma

Trauma to the mandible is the most frequent precipitator of disc displacements. A history of mandible fracture, acute or chronic joint subluxation can result in a sheer force directed to the disc and ligamentous attachment of the joint. This force can tear the capsular and ligamentous attachment to the disc. In the case of multiple trauma, the injury can be subtle and not

detected until several months later when unremitting preauricular pain, joint popping and mandibular incoordination result in interference with appropriate and comfortable function. Untreated condyle fractures, misdiagnosis of compression fractures of the condyle during childhood falls or accidents, and malunion of condyle fractures can all lead to long term joint dysfunction and degenerative joint disease in young patients. Problems can be accelerated if malocclusion is present.

Iatrogenic trauma should not be dismissed. Difficult anesthetic intubations, radiation, extended dental procedures, oral and oro-pharyngeal surgical procedures can cause acute ligamentous hyperextension and eventual disc displacement. Uncoordinated condyle and disc function can subsequently result in progressive disc pathologies and morphologic changes due to increased load during translatory function.

Open joint locking or TMJ dislocation can occur acutely as a result of major trauma or after something as benign as yawning or during eating. In general, there are anatomic reasons for a tendency to lock in the fully translated position. Occasionally, ligament or capsular laxity will provide such poor joint support that the condyle will hypertranslate beyond the articular eminence of the temporal bone. A combination of acute spasm of the lateral pterygoid muscle and mechanical locking of the condyle and disc creates the open lock which creates the dislocation. Physical therapy and occasionally surgery is required to definitively correct this severe instability. Lateral dislocation of the condyle through the capsule of the joint is also possible in acute trauma. Both injuries, whether acute or chronic, can precipitate progressive orthopedic dysfunction of the TMJ as a result of displacement of the fibrocartilage disc.

Ankylosis is a rare but debilitating condition. True bony ankylosis can occur from malunion or improper management of condylar fractures, arthritis, and osteomyelitis. Generally, the range of motion of the mandible is less than 10mm of mandibular opening. Fibrous ankylosis can occur as a result of the same etiologies but can also result from osteoarthritis and progressive internal derangement. Patients usually seek surgery when pain and restricted range of motion (50% of normal or less) result in difficulty with mastication and other functions.

Clinical Diagnosis of Orthopedic Internal Derangement of the Temporomandibular Joint

The most consistent clinical sign of internal derangement of the TM joint is popping or clicking that can be heard or palpated as the patient moves the mandible through a range of motion. Clicking of this joint has often been referred to as a benign or even "normal" condition. Epidemiologic studies suggest that even 30% of a population may exhibit this phenomenon without significant sequelae to the patient.¹³ However, it should not be considered a normal finding as it can indicate severe disruption of the mechanics of the joint

that can progress to degenerative disease in certain patients.¹⁴

Well localized preauricular pain or "earache" pain is the most frequent subjective complaint. Unremarkable otologic exam is a key differential exam in distinguishing the pain of TMJ capsular or synovial sources from that of ear sources.

Headache complaints have probably received too much attention as to be considered as part of a syndrome "per se." Referred pain from intracapsular sources or noxious stimuli from afferent fibers of the trigeminal nerve (which innervates all dental and osseous structures in the region, the muscles of mastication, and the joint itself) have been shown by Moskowitz to hormonally influence development of vascular headaches in certain cases.¹⁵ However, headache pain without preauricular pain or joint dysfunction should be viewed with a high level of suspicion of multiple etiologies. The subjective headache pain from the TM joint or masticatory muscles is usually poorly localized retro-orbital pain and/or temporal headache pain. Both are generally accepted to be tension headaches generated from myospasm of the lateral pterygoid and temporalis muscles respectively.

Mandibular incoordination on vertical opening is another key sign. Unless there is skeletal asymmetry of the mandible, both joints should act in concert with one another as vertical opening progresses from hinge to translation, to complete translation. Side to side movement is necessary to open the jaw when morphologic changes of the disc or disc dislocation exist preventing normal smooth and gliding movement.

Malocclusion states are often blamed as an etiology factor in precipitating myofascial pain and disc dysfunction. Electromyographic data supports this concept. The deep bite malocclusion or malocclusion precipitated by multiple missing teeth are the most consistent precipitators of orthopedic dysfunction with the TM joint.

A history of either closed or open locking of the mandible are usually indicators of either gross disc deformity or excessive laxity of supporting ligament and capsular structures respectively. The closed lock condition is not to be confused with true muscular trismus, which usually is seen in myositis states, such as when metabolic acidic by-products accumulate in and around muscle tissues in an infectious state. Either closed or open locking can be quite painful to patients and debilitating. Difficulty with routine functional activities such as chewing take on an entirely new perspective when the orthopedic dysfunction of the TMJ is coupled with myospasm and synovitis states.

Internal Derangement and Osteoarthritis

It is likely that certain etiologic factors are responsible for causing a slippage or torqueing of the disc/capsule complex from its stable relationship within the joint. Joint clicking is pathognomonic for this phenomenon.¹⁶ Once functional stability within the joint is lost, abnormal loading factors are applied to the disc. Over periods of time, intrinsic force will cause changes in contour of the disc, particularly the inferior

surface, and further loss of stability and functional integrity among disc, condyle, and ligamentous structures. Abnormal loading of the joint is aggravated by heavy force applied to the disc during the translatory phase. It is the excessive translatory phase loading that stretches the posterior bilaminar elastic connective tissue and excessively loads the fibrocartilage disc. Once this restricting traction to the disc is lost, there are no other intra-articular structures that will effectively prevent frank displacement and excessive condyle/disc translation during function.⁵ Once the phenomenon occurs, breakdown of elastic collagen fibers may begin, with resultant development of intra-articular disc deformity.⁷

The development of degenerative or osteoarthritis appears to be progressive. It is quite probably an underdiagnosed condition and is a more acceptable diagnosis than the use of "TMJ syndrome." Degenerative states are more prevalent in women than men, particularly those with malocclusion states which inadequately support or maintain an adequate joint space or support. The condition appears clinically to show a close correlation to the same population of patients susceptible to osteoporosis and connective tissue disorders.

Radiographic Diagnosis

As in other joints, one of the first clinical signs of degenerative disease is loss of joint space or atypical condyle/fossa relationships. These are readily observed with tomographic techniques.

During the past decade, arthrography with simultaneous fluoroscopic examination was the standard diagnostic test for examination of internal derangement.^{17,18} Where available, magnetic resonance imaging has replaced arthrography as the ultimate diagnostic examination.^{19,20} Degree of disc displacement and deformity can be discerned in a manner which is non invasive with this technique.

Treatment

Because the TM joint is subject to influences that are both orthopedic and dental in nature, treatment must encompass knowledge of both. Malocclusions, skeletal malformations, orthopedic dysfunctions, pain from muscular and vascular sources, and a significant psychosomatic component in the patient with chronic pain states must all receive attention.

Treatment of the orthopedic component will respond to physical therapy and surgical modalities. Mild disc displacements can be managed with physical therapy and joint decompression with occlusal splints. Orthodontia and dental restoration aimed at creating more appropriate occlusion-protected joint support sometimes is required. Surgical arthroplasty procedures designed to reposition and/or recontour displaced discs are required when physical therapy and other conservative occlusion-related modalities are not suc-

cessful.^{2,21} Physical therapy modalities such as ultrasound, TENS, and phonophoresis are excellent pain control modalities and have a rightful place in management.²²⁻²⁴ As in other joints, non steroidal anti-inflammatory agents should be used in cases of suspected capsular or synovial inflammation. Finally, prevention of abnormal joint mechanics such as hypertranslation and protection of joint soft tissues by an appropriate occlusion relationship are paramount. Failure to acknowledge the importance and interrelationship of all factors in mandibular and masticatory function invites poor response to any corrective treatment.

Summary

The clinical diagnosis of "TMJ" or "TMJ syndrome" is inappropriate in that it attempts to categorize conditions that are too multifactorial and broad to adequately describe a true clinical entity. Abandoning the term "TMJ syndrome" and incorporating more specific and diagnostic terminology is encouraged. The most frequent clinical diagnoses would be the following: disc displacement, dislocation, or rupture of the TM joint disc (internal derangement); TM joint capsulitis or synovitis (trauma or malocclusion induced); arthritis of the TM joint (polyarthritis or vasculitis, psoriatic, rheumatoid, degenerative, bacterial, or viral); chronic myofascial tension or vascular headache; any of the above with superimposed dental and/or maxillofacial malocclusion.

Elimination of the term "TMJ syndrome" and attempts at a more specific description of clinical presentations will aid in specific treatment recommendation. No longer is it appropriate to assume that all of these patients merit the same evaluation or treatment process. The sharing of treatment modalities and diagnostic modalities between medical and dental professions is long overdue in this area of patient management. Acknowledgement of this existing problem is the first step in appropriate management. □

References

- Costen JBL. Syndrome of ear and sinus symptoms dependent upon disturbed function of the temporomandibular joint. *Ann Otol Rhinol Laryngol* 1934;43:1.
- Wilkes CH. Twelve years experience with arthroplasty of the temporomandibular joint. 4th Annual Meeting, Temporomandibular Joint-Pain and Dysfunction. Philadelphia, PA, Nov. 16, 1985.
- McCarty WL, Farrar WB. Surgery for internal derangements of the temporomandibular joint. *J Prosth Dent* 1979;42:191.
- Farrar WB, McCarty WL. The TMJ dilemma. *J Alabama Dent Assoc* 1979;63:19-26.
- Bell WE. Understanding temporomandibular biomechanics. *J Craniomand Pract* 1983;1:28-9.
- Shira RB, Alling CC. Traumatic injuries involving the temporomandibular joint articulation. In Schwartz L, Chayes CM, eds., *Facial pain and muscular dysfunction*. Philadelphia: WB Saunders, 1986.
- Rocabado M. Arthrokinematics of the temporomandibular joint. In Gelb H, ed., *Dental clinics of North America*. Philadelphia: WB Saunders, 1983.
- Kirk WS Jr, Calabrese D. Clinical evaluation of physical therapy in the management of internal derangement of the temporomandibular joint and prevention of progressive joint dysfunction. *J Oral and Maxillofacial Surg*. To be published.
- Harris ED, Krane SM. Collagenases I. *New Eng J Med* 1974;291:557-62.
- Harris ED, Krane SM. Collagenases II. *New Eng J Med* 1974;291:605-9.
- Harris Ed, Krane SM. Collagenases III. *New Eng J Med* 1974;291:651-60.
- Chung HS, Ryan LM, et al. Identification of collagen subtypes in synovial fluid sediments from arthritic patients. *Am J Med* 1980;68:73-9.
- Carlsson GE, Oberg T. Remodeling of the temporomandibular joint. In Zarb GA, Carlsson GE eds., *Temporomandibular joint function and dysfunction*. Copenhagen: Munksgaard, 1979, p. 170.
- Kopps S. Clinical findings in temporomandibular joint osteoarthritis. *Scand J Dent Res* 1977;85:434.
- Moskowitz MA. The neurobiology of vascular head pain. *Ann Neurol* 1984;16:157-68.
- Isberg-Holm AM, Westesson PL. Movement of disc and condyle in temporomandibular joints with clicking. An arthrographic and cineradiographic study on autopsy specimens. *Aeta Odontol Scan* 1982;40:153.
- Wilkes CH. Arthrography of the temporomandibular joint in patients with TMJ pain-dysfunction syndrome. *Minn Med* 1978;61:645.
- Kirk WS Jr, Hatten HP. Disc derangements of the temporomandibular joint: definitive diagnosis with arthrography. *NC Dental Gazette* 1983, pp. 6-9.
- Katzberg RW, et al. Magnetic resonance imaging of the temporomandibular joint meniscus. *Oral Surg, Oral Med, Oral Path* 1985;59:332-5.
- Katzberg RW, Bessett RW, et al. Magnetic resonance surface coil images of the normal and abnormal temporomandibular joint. 4th Annual Meeting, Temporomandibular Joint Pain and Dysfunction. Philadelphia, PA, Nov. 16, 1985.
- Bessett RW, et al. Diagnosis and reconstruction of the human temporomandibular joint after trauma or internal derangement. *Plast and Reconstr Surg* 1985;pp.192-203.
- Wing M. Phonophoresis with hydrocortisone in the treatment of temporomandibular joint dysfunction. *Physical Therapy* 1982;62.
- Friedman MH, Weisberg J. Application of orthopedic principles in evaluation of the temporomandibular joint. *Physical Therapy* 1982;62:597-603.
- Rocabado M, Johnson BE, Blakney MG. Physical therapy and dentistry: an overview. *J Craniomand Pract* 1983;1:46-9.

In North Carolina, when you decide to prescribe Librium,

To protect your prescription...



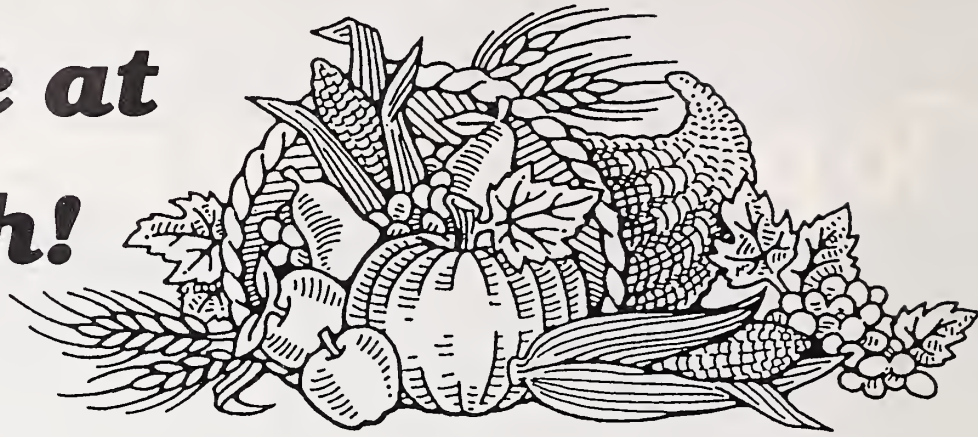
**You sign
on the right.**

Librium[®] 5-mg, 10-mg, 25-mg capsules
brand of
chlordiazepoxide HCl/Roche [®]

ROCHE

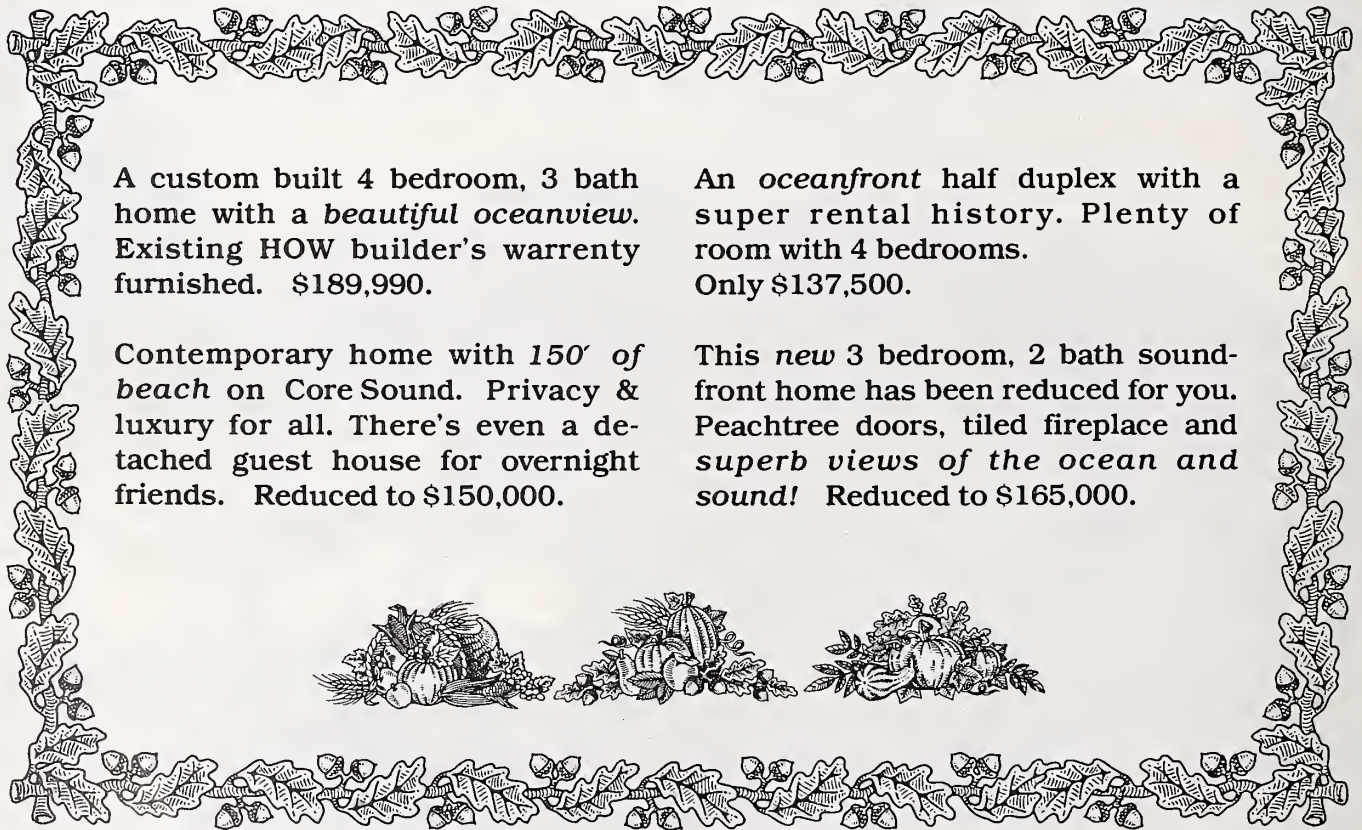
Copyright © 1987 by Roche Products Inc., Manati, Puerto Rico 00701. All rights reserved.

Here's a Cornucopia of Value at the Beach!



Coast Realty offers it's best properties just in time for the Thanksgiving Holidays! We can help you celebrate the season with all the fishing, boating, and relaxation you desire.

Picture yourself enjoying these homes at the beach!



A custom built 4 bedroom, 3 bath home with a *beautiful oceanview*. Existing HOW builder's warrenty furnished. \$189,990.

An *oceanfront* half duplex with a super rental history. Plenty of room with 4 bedrooms. Only \$137,500.

Contemporary home with *150' of beach* on Core Sound. Privacy & luxury for all. There's even a detached guest house for overnight friends. Reduced to \$150,000.

This *new* 3 bedroom, 2 bath sound-front home has been reduced for you. Peachtree doors, tiled fireplace and *superb views of the ocean and sound!* Reduced to \$165,000.



No one cares more about pleasing a client when it comes to Real Estate & Construction at Emerald Isle! Come talk to professionals that make a difference.

FOR FURTHER INFORMATION PLEASE CONTACT US AT:

Coast Realty and Construction Company
7703 Emerald Drive
Emerald Isle, North Carolina 28594
(919) 354-3700

Now America's oldest professional liability insurer has come to North Carolina.

The newest professional liability insurer in North Carolina is the oldest in the nation. The Medical Protective Company pioneered the concept of professional protection before the turn of the century and has been serving doctors exclusively ever since. Through good times and bad.

With the current liability crisis escalating, you need to take a close look at your coverage and the company that stands behind it. Then take a close look at us. You'll see we carry the highest

rating from A.M. Best, the firm that tracks the financial stability of insurance companies nationwide. Beyond that, you'll find complete protection at premium rates that are likely lower than you're currently paying. Plus the personal attention and claims prevention assistance you deserve.

Contact Stu Mitchelson today at 704/541-8020. He's the oldest company's representative in its newest state. And he's here to serve you.

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

Stuart Mitchelson, P.O. Box 13489
Charlotte, North Carolina 28211, (704) 541-8020

THE ARMY RESERVE OFFERS NEW FINANCIAL INCENTIVES FOR RESIDENTS.



If you are a resident in Anesthesiology or Surgery*, the Army Reserve has a new and exciting opportunity for you. The new Specialized Training Assistance Program will provide you with financial incentives while you're training in one of these specialties.

Here's how the program can work for you. If you qualify, you may be selected to participate in the Specialized Training Program. You'll serve in a local Army Reserve medical unit with flexible scheduling so it won't interfere with your residency

training, and in addition to your regular monthly Reserve pay, you'll receive a stipend of \$678 a month.

You'll also have the opportunity to practice your specialty for two weeks a year at one of the Army's prestigious Medical Centers.

Find out more about the Army Reserve's new Specialized Training Assistance Program.

Call or write your US Army Medical Department Reserve Personnel Counselor:

**Army Reserve Health Care Team
2634 Chapel Hill Blvd.
Suite 205
Durham, NC 27707-2875
(919) 493-1364 Collect**

* General, Orthopaedic, Neuro, Colon/Rectal, Cardio/Thoracic, Pediatric, Peripheral/Vascular, or Plastic Surgery.

ARMY RESERVE MEDICINE. BE ALL YOU CAN BE.

Objective Laboratory Parameters in the Diagnosis of Sick Cell Pain Crisis

William P. Buchanan, M.D., Peter C. Ungaro, M.D., and Jane E. Ranney, Ph.D.

Patients in sickle cell pain crisis can be quite a challenge for the internist, especially with the paucity of objective clinical findings. Physicians sometimes think that patients with sickle cell anemia and pain compatible with crisis are drug-seeking or responding to other psychosocial factors. Making this differentiation can be important in controlling the amount of analgesic narcotics given and in directing the patient to sources of psychosocial support.

The literature substantiates the usefulness of certain laboratory tests in confirming that the patient is experiencing a crisis. Erythrocyte sedimentation rate (ESR) and fibrinogen levels have been shown to rise in patients with sickle cell crisis without evidence of additional disease processes.¹⁻⁵ In complicated crisis (i.e., occult infection), these measures increase dramatically because of the associated inflammatory process.¹ Decreased red cell distribution width (RDW)⁶ and increased platelet count^{2,7} have also been demonstrated in patients with sickle cell pain crisis. It has also been suggested that lactic dehydrogenase (LDH) increases during sickle cell pain crisis. A recently described laboratory test, the measurement of fibrin D-dimer, may prove to be particularly helpful, since elevated levels correlate well with vaso-occlusive crisis.⁸ However, this measurement is at present available only on an investigational basis.

Methods

Ten patients with known sickle cell disease had a total of 26 admissions for painful crisis during the study period. Five admissions for crisis complicated by bacterial infections were eliminated. Three admissions which followed discharges by less than seven days were eliminated. Results are based on 18 admissions of eight patients with one to five

admissions per patient. ESR, fibrinogen level, platelet count, LDH level, and RDW were checked on days one, three, and six.

Results

Table 1 (next page) contains means of the parameters. The number of observations are in parentheses. Not all data were available for all patients.

The ESR rose in 12 of 14 admissions. Although some rise was evident on day three, a significant difference (direct difference t , one-tailed $p < .005$) was only evident by day six. The fibrinogen level rose in 11 of 13 admissions. This increase was significant on days three and six ($p < .025$, $p < .01$, respectively). One of the patients who did not show a rise in fibrinogen level was hospitalized for only three days, so there could have been a rise on day six. The other is a patient well known for excessive narcotic use and psychosocial problems. Two of her admissions also did not show a rise in ESR. There were no significant changes in platelet count, RDW, or LDH.

Comment

Changes in the fibrinogen level and the ESR proved helpful in confirming the clinical impression of sickle cell crisis. The other tests investigated were not useful. Although obtaining serial ESR or fibrinogen determinations adds to the cost of patient care, this laboratory information can be helpful to the physician. Patients with sickle cell crisis often require substantial doses of potentially addicting analgesic drugs. Confirmatory objective parameters can substantiate the appropriateness of administration of these drugs.

Patients with sickle cell anemia are faced with a lifelong difficult illness and early mortality. These patients require substantial psychosocial support. In some instances their demands for analgesic drugs are a response to their emotional needs rather than actual crisis. In our study the patient who was known to have this problem was the only patient who did

From New Hanover Memorial Hospital and the Wilmington AHEC, and the Department of Medicine, School of Medicine, University of North Carolina at Chapel Hill.

not manifest elevation of the ESR and fibrinogen level when she presented with complaints that closely mimicked those of crisis. This kind of information has the potential for directing the therapeutic planning in a way that will better meet the patient's needs.

It should be emphasized that patients with sickle cell anemia can have abnormalities other than crisis that can elevate ESR and fibrinogen levels. For example, gout and osteomyelitis occur with increased frequency in these patients and can cause elevations. Thus elevations of these parameters do not differentiate between these conditions and vaso-occlusive crisis. However, demonstration of an elevation does provide confirmatory evidence for vaso-occlusive crisis when other inflammatory entities can be excluded.

This study should not be taken to imply that failure to demonstrate a rise in ESR and fibrinogen means that the patient has not had a painful crisis. However, if these parameters do not rise, it is reasonable to re-evaluate the approach to that patient to be certain that the therapeutic plan is appropriate.

Objective parameters can also affect physician attitudes. At the beginning of this study the internal medicine house officers thought that many episodes of crisis really represented drug-seeking behavior or unmet emotional needs. When all but one patient who complained of crisis symptoms had objective confirmation, house officers realized that most admissions were for bona fide crises. This helped them to develop therapeutic approaches appropriate to their patients' needs. A similar impact on other physicians might be anticipated.

Although routine ESR and fibrinogen determinations cannot be advocated for clinical manifestations of sickle cell, this approach can be beneficial, especially when there is

concern that the symptoms are not actually due to crisis. Failure to demonstrate rising levels does not rule out crisis, but confirmatory laboratory data can be helpful. □

References

- 1 Lawrence C, Fabry ME. Erythrocyte sedimentation rate during steady state and painful crisis in sickle cell anemia. *Am J Med* 1986;81:801-8.
- 2 Gordon PA, Breeze GR, Mann JR, et al. Coagulation fibrinolysis in sickle-cell disease. *J Clin Pathol* 1984;27:485-9.
- 3 Richardson SG, Breeze GR, Stuart J. Hyperfibrinogenaemia and hyperviscosity in sickle-cell crisis. *J Clin Pathol* 1976;29:890-3.
- 4 Wautier JL, Pintigny D, Wautier MP et al. Fibrinogen, a modulator of erythrocyte adhesion to vascular endothelium. *J Lab Clin Med* 1983;101:911-20.
- 5 Hebbel RP, Moldow CF, Steinberg MH. Modulation of erythrocyte-endothelial interactions and the vaso-occlusive severity of sickling disorders. *Blood* 1981;58:947-52.
- 6 Fabry ME, Benjamin L, Lawrence C, Nagel RL. An objective sign in painful crisis in sickle cell anemia: the concomitant reduction of high density red cells. *Blood* 1984;64:559-63.
- 7 Haut MJ, Cowan DH, Harris JW. Platelet function and survival in sickle cell disease. *J Lab Clin Med* 1973;82:44-53.
- 8 Devine DV, Kinney TR, Thomas PF, et al. Fragment D-dimer levels: an objective marker of vaso-occlusive crisis and other complications of sickle cell disease. *Blood* 1986;68:317-9.

Table 1. Means of laboratory measures during admissions for sickle cell crisis. (Number of admissions studied in parentheses.)

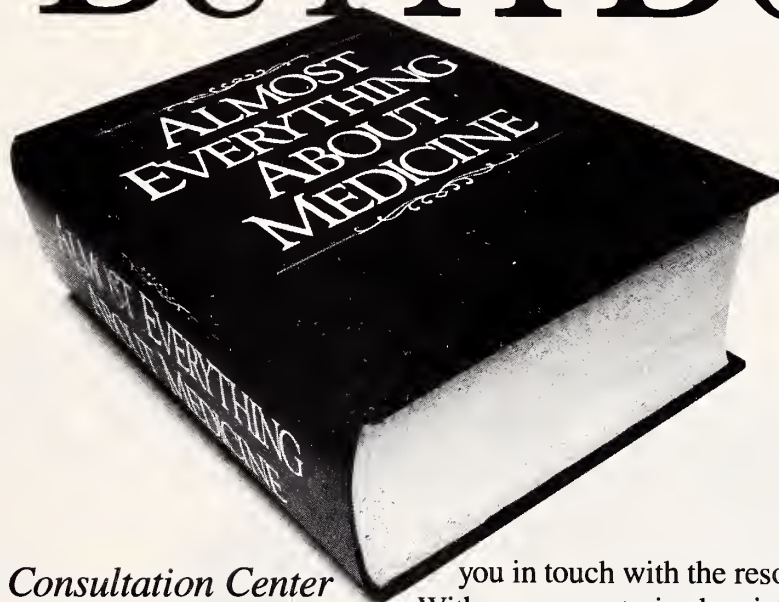
DAY	ESR	FIBRINOGEN	PLATELETS	RDW	LDH
1	17 (16)	287 (14)	509 (18)	22.4 (18)	879 (14)
3	26 (14)	371 (14)*	406 (15)	21.5 (15)	912 (13)
6	47 (7)***	460 (7)**	477 (10)	21.8 (10)	872 (7)

*p < .025

**p < .01

***p < .005

HOW TO EXPAND YOUR REFERENCE RESOURCES AND NOT BUY A BOOK.



The Carolina Consultation Center at the University of North Carolina medical center provides reliable help, fast and free.

The Carolina Consultation Center provides rapid access to top specialists and advanced clinical information in virtually all fields. We put 530 specialists—the entire staff of the UNC medical center—at your fingertips.

Over the past 20 months more than 5,000 physicians—one of every two practicing in North Carolina—have used the center for information, requests for support and contacts to expedite transfers of patients.

The center is staffed by trained information specialists who have only one job—to put

you in touch with the resources you need. With our computerized registry, we can make your connection quickly and see that your questions are answered in minutes.

For a free copy of the Carolina Consultation Center's Directory of Consultants, call 1-800-UNC-NCMH. This up-to-date listing of the medical staff, complete with biographies and areas of expertise, is an invaluable tool to help you determine the consultant you need, before you place your call.

The call, the directory, and the service are all free.



1-800-862-6264

AUTHORS: INSTRUCTIONS FOR SUBMITTING PAPERS

Copyright of an article published in the *North Carolina Medical Journal* is retained by the author, but the copyright to each entire issue is the property of The North Carolina Medical Society, and permission to reprint all or any part of a published article must be negotiated with the author and the editor jointly. The reprinted material must carry a credit line signifying that it appeared in the *North Carolina Medical Journal*.

Medical articles, editorials, patient oriented articles, letters to the editor and all other text submitted for publication must be double-spaced throughout, including references and legends. The material should be typed on one side of the paper with 1¼ inch margins all around. Do not use an all-caps or a script typeface. Submit one original and one copy. Please be sure to include your phone number.

The author is responsible for the accuracy of all statements and references. Acronyms and other abbreviations should be kept to a minimum; *any acronym used should be fully translated in the text*. Refer to pharmaceutical products by their generic names; brand names may follow in parentheses. Units of measure should appear in the metric system. References, typed

double-spaced, should be listed in the order of their citation in the text, not alphabetically. They should follow the style used in the *Journal*.

Illustrations should be black and white glossy prints or color or black and white slides, with legends typed in double-space on a separate sheet of paper. Since the *Journal* has a limited budget for color, it may be a factor in publishing color illustrations.

Attach to the two copies of the manuscript a cover letter giving the address and telephone number of the person who will correspond about it, and address the completed communication to the Editor, Box 3910, Duke University Medical Center, Durham, NC 27710.

All manuscripts are subject to editorial changes. If extensive revision is necessary, the author may be sent a draft of the edited article for approval before publication. The author will be sent galley proofs if the paper is published.

Authors interested in more effective writing may find *The Elements of Style* by Strunk and White and *How to Write and Publish a Scientific Paper* by Day helpful.

Extracted, with permission, from *Virginia Medical* with thanks.



Unique Boutique

Pamper Your Femininity

After Breast Surgery Consultants

We would like to acquaint you with the shop that specializes in servicing all of the needs of the mastectomee. We carry a variety of breast forms and bras that enable us to provide a custom fit specifically for each individual. We also have accessory items helpful during stages of reconstruction or after lumpectomy surgery. In a cozy intimate shop with a relaxed environment, our customers will receive service and understanding from women who have shared their experience.

FOR BETTER SERVICE AND FIT VISIT

UNIQUE BOUTIQUE

1819 E. SEVENTH STREET
CHARLOTTE, NC 28204
(704) 377-4356

(Appointments welcome)

HOURS:

MON-THURS 10 AM-4 PM
FRIDAY 10 AM-2 PM
2nd & 4th SAT 10 AM-2 PM

NORTH CAROLINA MEDICAL JOURNAL

For Patients

VOLUME 49 / NUMBER 11 / NOVEMBER 1988

Discovering How Lucky We Really Are

ANDREW C. McIVOR

The worst of the North Carolina winter never touched me this year. After four years of medical school at Bowman Gray, I finally got smart. A jet took me to Roxas City, Philippines, where I was greeted by coconut trees, nipa huts and farmers plowing their rice fields with water buffalo. The warm sea breeze congratulated me on my choice to spend two months at a small hospital here. But nothing at Bowman Gray had taught me how to treat "water spirits" or what to say when a patient offers his child in payment.

Toyo Boyan was one of the saddest humans I have ever seen. Only months before he had been a healthy Filipino 16-year-old; now he lay on the thin hospital mattress, wasted to 50 pounds, moaning with his eyes.

He was paraplegic, his back broken in an accident. His sacrum and each hip were corroded by giant decubitus ulcers. Every few minutes he suffered painful spasms that stiffened his upper body. He could not swallow, causing him to drool. One feared to touch him, as he would again spasm. Toyo (whose name I have changed) had tetanus. The spores of *Clostridium tetani* had invaded his ulcers and germinated, releasing their deadly toxin. Mao, the surgical resident on

duty, recognized it instantly. Tetanus is not an uncommon diagnosis here, where preventive medicine is sporadic at best and villagers are not routinely immunized.

I saw four victims of tetanus during my stay—all died despite high-dose penicillin and tetanus immune globulin. Toyo became one of them. We took him to the operating room for a tracheostomy because he could not control his secretions. In trying to debride his decubites, we felt like fruit flies on a rotten watermelon. There was too much necrosis. Even a Valium drip could not prevent his spasms. We moved him to the isolation ward where he could rest in the dark and quiet. When he died, his mother and her friend sent up howls of mourning and beat on their chests. But I thought them hypocrites. Weren't they responsible for his condition? How does one develop four-inch decubites if he is properly cared for? In the U.S. these parents would likely have been arrested for child neglect. Then I began to wonder. Were his parents to blame, or a system that has no safety net? When a family can barely afford enough food, a wheelchair and a physical therapist for an injured child are pipe dreams. Three weeks later, I took a tour through Imelda Marcos's fantastic "closet" in Malacanang Palace, where she left 60 racks of evening gowns and 1,300 pairs of shoes. I thought of Toyo, and could only shake my head.

The uneducated townfolk and rural farmers around Roxas City often put their trust in "quack doctors" before real physicians. These herbalists would administer certain potions, burn leaves on the abdomen or perform some other mystical "treatment" in an effort to dispel the ailment. Usually, this simply meant the patient arrived at the hospital in worse condition because of the delay.

Andrew C. McIvor is the recipient of the North Carolina Medical Society's 1988 Award for the best essay by a medical student. We are pleased to publish his winning essay.

One elderly woman came into the emergency room suffering from congestive heart failure. While examining her, I noticed she had a piece of white tape on her forehead. I asked her why. Looking embarrassed, she told me it was to allow the "water spirits" to leave her body. When she opened her shirt, there were several more pieces on her chest and abdomen. I burst out laughing. Believing in water spirits was one thing, but imagining that such abstruse phantoms would pay attention to strips of simple tape. It seemed hilarious. But when I saw her sheepishly pulling off the tape, I felt a little guilty. I had forgotten where I was. To her, that tape was as real as furosemide or digitalis. No one had ever told her any different. Filipinos have a great sense of humor, but I would have to be careful where I laughed.

About a week later, a young boy was brought in with agitation, hallucinations and hydrophobia. When offered a glass of water to drink, he cringed and cried. His parents reported that he had been bitten by a dog about two weeks before. Someone thought the dog was acting strange, so the owner killed it and the parents made the boy eat the dog's liver. They hoped this would prevent the transfer of disease to their son. Again, the resident, Mao, who had lost a brother to rabies and had sworn that no patient under his care would suffer the same fate, made the diagnosis. There are only a handful of reported survivals from rabies, so there was little to do but make the child comfortable and inform the parents of his imminent death. They laced a plastic picture of Jesus around his neck and waited. Later I saw the patient during a lucid interval. He was alert, and I remember looking into his soft, dark eyes and sensing a strange mixture of calm and dread. That night the encephalitis spread and the boy cried out, hallucinating and spastic. He died before dawn.

And so, in the Philippines, life ended, and life went on. During my rotation, my appreciation of the U.S. health care system grew. The vast majority of Americans are insured and can afford good health care. Those who cannot are absorbed into the system, and while they wait in stark waiting rooms in resident clinics, they receive substantially similar care, at least where I come from. But patients in the Philippines generally have no health insurance, and a regional economic slump, on a baseline of poverty, had left my host hospital in debt. This forced the hospital to take a hard line toward non-paying patients. Such a policy disturbed me, and often seemed to oppose common sense. For instance, the hospital, fearful that they would lose track of one debtor patient, and his money, refused to issue an exit pass. Since an armed guard sits at the hospital entrance, this is an important document. The hospital, of course, continued to supply the patient's food and lodging, thus compounding his bill. So, his worldly possessions collected neatly around his bed, he enjoyed their hospitality for three months, until the administrator came to her senses and released him.

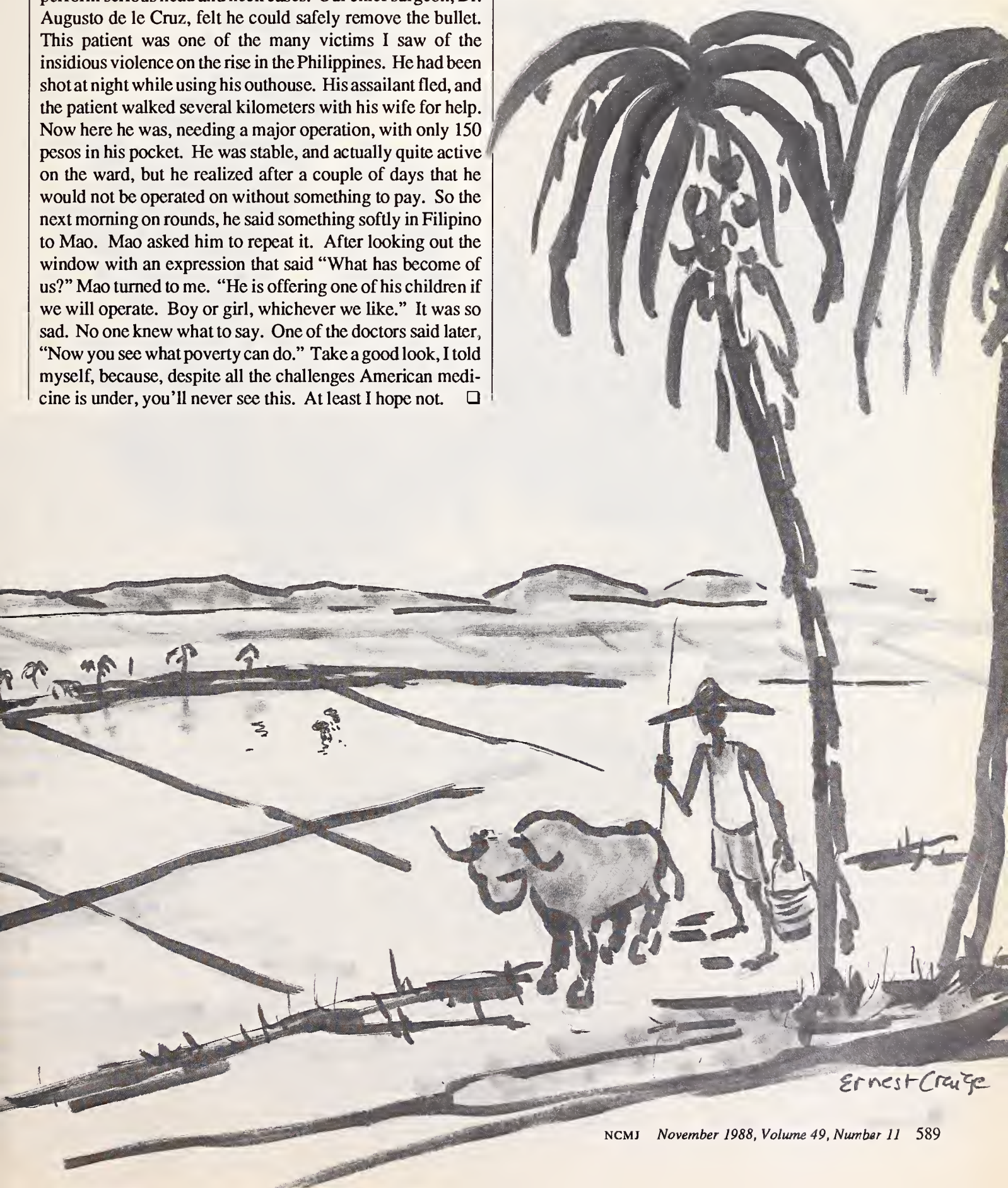
Obviously, poverty is usually not so amusing. The hospital's policy of requesting a deposit before permitting emergency surgery had critical consequences. Since the bill for use of the major operating room and seven to 10 days of hospitalization, with dressing changes and drugs, cost 5,000

pesos (\$250) or more, the business office often asked for a deposit of 2,000 to 3,000 pesos (\$100-\$500). In fact, one of our routine pre-op orders was "B.O. (business office) clearance." Such a large deposit was more than many people could afford, so relatives of trauma patients often had to run out at night and search for money from friends, family or political candidates. Meanwhile, patients waited in pain on the ward, and the doctors, who were often willing to work for free, stood by, frustrated.

I remember one old lady, an alcoholic, who had been stabbed by her cousin. (An argument between them several years ago had ended the same way.) Protruding out of her wound was a six-inch loop of small bowel. We carefully wrapped it in a saline-soaked sterile towel, and informed her and her friends that she needed an exploratory laparotomy. She had no money, so the people with her left to find the required deposit. Unfortunately, they never returned. Her only family, it turned out, was a young adopted daughter who stayed by her bedside that night as the alcohol wore off and the moaning began. By morning, the patient was in severe pain. Nearly all of her small bowel had peristalsed out the wound and lay, red and swollen, in a pile by her side. The covering had not been kept moist by the nurses and was stuck to the intestines. As I redressed her wound, she pleaded, "Help me, doctor, help me." I wanted to tell her that I wished I could help her, that is what I had traveled 10,000 miles to do, and had she been lucky enough to be born in a wealthier country, she would already have been recovering from her operation. As it was she had no money, so she had to be

transferred to the government hospital across town. Amazingly, she survived, and I saw her there about a week later, looking cheerful.

Near the end of my stay, a man was transferred to us from the government hospital with a bullet between the vertebral bodies of C4 and C5. The government doctors are mostly general practitioners, paid \$200 a month, and they do not perform serious head and neck cases. Our chief surgeon, Dr. Augusto de le Cruz, felt he could safely remove the bullet. This patient was one of the many victims I saw of the insidious violence on the rise in the Philippines. He had been shot at night while using his outhouse. His assailant fled, and the patient walked several kilometers with his wife for help. Now here he was, needing a major operation, with only 150 pesos in his pocket. He was stable, and actually quite active on the ward, but he realized after a couple of days that he would not be operated on without something to pay. So the next morning on rounds, he said something softly in Filipino to Mao. Mao asked him to repeat it. After looking out the window with an expression that said "What has become of us?" Mao turned to me. "He is offering one of his children if we will operate. Boy or girl, whichever we like." It was so sad. No one knew what to say. One of the doctors said later, "Now you see what poverty can do." Take a good look, I told myself, because, despite all the challenges American medicine is under, you'll never see this. At least I hope not. □



THE LOWER RESPIRATORY TRACT— More vulnerable to infection in smokers and older adults



Experience counts

Ceclor[®] Pulvules[®]
250 mg
cefaclor

think of it first

For respiratory tract infections due to susceptible strains of indicated organisms.

Summary.
Consult the package literature for prescribing information.

Indication: Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A β -hemolytic streptococci).

Contraindication: Known allergy to cephalosporins.

Warnings: CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.
Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:

- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in

moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.

- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:

- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] and toxic epidermal necrolysis or the above skin manifestations accompanied by arthritis/arthralgia, and frequently, fever): 1.5%; usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
 - As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
 - Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
 - Other: eosinophilia, 2%, genital pruritus or vaginitis, less than 1%, and, rarely, thrombocytopenia.
- Abnormalities in laboratory results of uncertain etiology**
- Slight elevations in hepatic enzymes.
 - Transient fluctuations in leukocyte count (especially in infants and children).
 - Abnormal urinalysis; elevations in BUN or serum creatinine.
 - Positive direct Coombs' test.
 - False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clintest[®] tablets but not with Tes-Tape[®] (glucose enzymatic test strip, Lilly).

[061088L]

Additional information available from
Eli Lilly and Company, Indianapolis, Indiana 46285.



Eli Lilly Industries, Inc
Carolina, Puerto Rico 00630

Emperor's Clothes Are Costly

James A. Bryan II, M.D.

What does "peer review" accomplish, and at what cost? Is the operation, as currently organized, serving the patient? The profession? Or is it merely a mechanism to control costs?

A recent "Sounding Board" in the *New England Journal of Medicine* mused about "Transformation of American Health Care: The Role of the Medical Profession."¹ The writers, both non-practitioners, discussed the transformation of the physician-patient relationship from that of covenant—"whereby the patient trusted the physician to do what is best"—to "a contractual relationship in which the physician provides a specified, measurable service at a negotiated price." They also called on physicians to "continue to serve as the patient's advocate when disagreements arise between patients and providers." They stated that as a profession, we have "a responsibility to determine what effect the corporate organization of services has on patients and physicians." In asking for wider support for peer-review organizations they noted that the current operation of these organizations lack two needed prerequisites: "Sufficient information about what constitutes appropriate practice, and the commitment to use such information in confronting those who do not meet standards."

As a practitioner, I have been following with interest the activities of "peer review" in our state, particularly the evolution and behavior of the Medical Review of North Carolina (MRNC) as it reflects and is dependent on the largest corporate organization for services in our society, namely the Medicare Program of the U.S. Government as administered through the Health Care Financing Administration (HCFA). The MRNC guidelines are set by HCFA, and MRNC support stems from a contract with that group. One could question the source and standard of their "review." One could also question what is being accomplished by the type of review

being carried out, as well as the direct and indirect costs of these activities.

Although the practicing medical professional is being reviewed only in his or her hospital work on Medicare patients, the review is being carried out using "screens" based on "guidelines" using implied level of severity of illness based on therapeutic interventions such as parenterals, etc. These "screens" are applied using nurse reviewers, then reviewed by a physician (? a peer) who uses chart criteria (charts reproduced by the hospital and sent to MRNC) to deny or reprimand.

The MRNC has been kind enough to outline their most recent "costs" that were available (period July 1, 1986 to June 30, 1987):²

- 1 Personnel costs: \$1,131,858
- 2 Number of reviews accomplished: 62,055
- 3 Number of denials: 1,009
- 4 Number of appeals: 761
- 5 Number of reversals: 357 (cases overturned at reconsideration)
- 6 Number of sanctions: 5 (sanctions submitted by MRNC to DHHS)
- 7 Number of appeals: 0 (there have been no appeals requested and completed for sanctions, even though one was requested and withdrawn without completion)
- 8 Number of reversals: 2 (two sanctions were approved on technical grounds, but DHHS decided not to pursue).

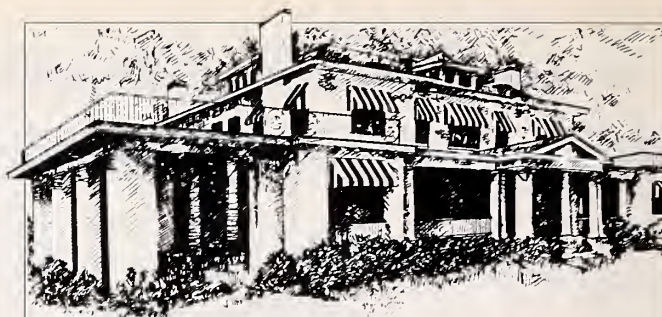
These costs of course do not reflect the cost to each hospital, as hospitals have had to establish an internal organization of nurses to review and to undertake the chart duplication work required by MRNC. Not at all computed is the time and energy expended by the denials and reprisals of the system.³ Most frustrating of course is the fact that the current system makes little or no attempt to improve definitions about "appropriate practice," or to complete the feedback loop and illuminate clearly those who do not meet standards. Maybe one of the main problems is that the standards being applied have to do with diagnoses and procedures and not with patients.

From the University of North Carolina School of Medicine, Old Clinic Building 226 H, Chapel Hill 27514.

Maybe the "peer" review should be on a shorter loop, i.e., within the hospital—where experiences could be shared, compared, and discussed—and not linked to a system that is clearly designed to cut costs, not to increase quality. Should our profession support this? Speaking of costs, is society buying a suit of the Emperor's clothes? □

References

- 1 Winkenwerder W, and Ball JR. Transformation of American health care: the role of the medical profession. NEJM 1988;318:317-9.
- 2 Lewis H. Coker, Associate Director, Planning and Development, MRNC—personal communication stimulated by repeated letters to Dr. Ralph Snyder. This is the first "accounting" I have seen.
- 3 Lewis Thorp, M.D., (personal communication)—"On this day our 280 bed hospital had 10 calls from physicians to the MRNC, all of which were awarded in our favor. I think it is time we turned the quality review around toward MRNC."



FROM OUR HOUSE TO YOURS

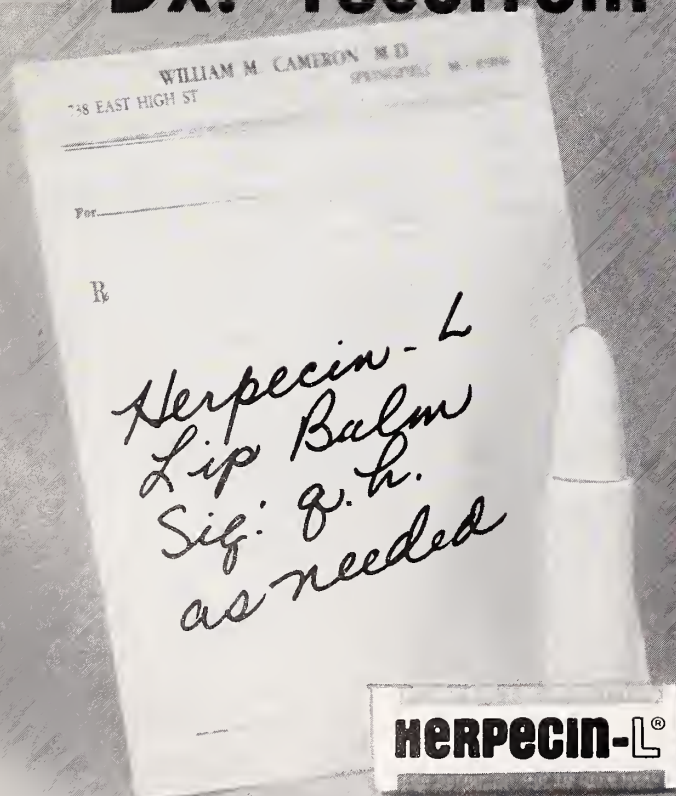
Teer House,
home of the

Duke Substance Abuse Program for Youth, provides the warm and uplifting environment that teens need to resolve their problems with alcohol and drugs. Our treatment program lets adolescents participate in family and school activities, putting what they learn in our house into practice in theirs. Call 479-5554 for more information on our all-day and after-school programs.

TEER HOUSE

The Duke Substance Abuse Program for Youth

Dx: recurrent herpes labialis



"HERPECIN-L is my treatment of choice for perioral herpes." GP, NY

"HERPECIN-L appears to actually prevent the blisters . . . used soon enough." DDS, MN

"HERPECIN-L . . . a conservative approach with low risk/high benefits." MD, FL

"Used at prodromal symptoms . . . blisters never formed . . . remarkable." DH, MA

"(In clinical trials) . . . response was dramatic. HERPECIN-L . . . proven far superior." DDS, PA

"All patients claimed shorter duration . . . at prodromal symptoms . . . HERPECIN-L averted the attacks." MD, AK

OTC. See P.D.R. for information. For samples to make your own clinical evaluation, write: CAMPBELL LABORATORIES, INC., P.O. BOX 812-MD, FDR STATION, NEW YORK, N.Y. 10150

In North Carolina HERPECIN-L is available at all Crown, Eckerd, Kerr, Mutual Drug, Revco and RiteAid and other select pharmacies.

A Medic Computer System Located Hundreds Of Unpaid Medical Bills.



And Not By Accident.

It's true. When a Medic Computer System replaced another in one large practice, it found thousands of dollars in bills never sent and insurance claims never filed.

Medic can help solve your cash flow problems just as easily. Since each transaction has a unique number, payments are easy to track. Our Aged Accounts Receivable Report will list overdue accounts by any amount or time frame you choose. And our Aged Insurance Claims Report even calculates the number of days since a claim was filed. So you can act before a bill gets too large or a claim gets too old.

Medic's already at work in more than 2,000 practices from coast to coast. And more than 6,000 physicians enjoy the security of a system backed by a \$2.5 billion organization. Plus Texas Instruments hardware, a leader in expandability, compatibility and reliability. That makes Medic the system you can start with and stay with.

So choose a system that will turn your bottom line

around. Call Medic. The specialists in computer systems for America's medical community.



Please tell me how Medic Computer Systems can help my practice
Name _____
Address _____
City _____ State _____ Zip _____
Phone () _____ Number of physicians in practice _____
Specialty _____

Medic Computer Systems

8601 Six Forks Rd., Suite 300, Raleigh NC 27615 11/88 NC



8601 Six Forks Rd., Suite 300, Raleigh, NC 27615, 919-847-8102. In NC Call: 1-800-877-5678. Outside NC Call: 1-800-334-8534.
Other Offices: Ann Arbor, Atlanta, Austin, Chicago, Cincinnati, Dallas, Denver, Ft. Lauderdale, Hartford, Houston, Jackson, Kansas City, Los Angeles, Minneapolis, Nashville, Oklahoma City, Orlando, Philadelphia, Phoenix, Pittsburgh, Richmond, San Antonio, San Diego, San Francisco, Tampa.

FOR ALCOHOLISM AND CHEMICAL
DEPENDENCY

SOMETIMES STAYING NEAR

**HOME
SWEET
HOME**

Offering
EXECUTIVE
RECOVERY
MANAGEMENT
Program

MAKES

**GOOD
CLINICAL
SENSE**

P.O. BOX 240197
1715 SHARON ROAD WEST
CHARLOTTE, NC 28224
704/554-8373

JCAHO Accredited
Member NAATP
Member NCHA

**Charlotte
Treatment
Center**



IS AMETHYST*

JACK E. HARVILLE
EXECUTIVE DIRECTOR

*Amethyst - from the Greek: **NOT DRUNKEN**

Some Thoughts on Drug Abuse

Marvin P. Rozear, M.D.

At a recent Driver Medical Evaluation Conference, a presentation and discussion of drug screening for athletes at the University of North Carolina prompted some thoughts on drug abuse. It seems to me that the current massive effort to keep drugs out of the country is futile. The experience of prohibition in the 1920s and 1930s should have taught us that if a significant fraction of the population is determined to manufacture and consume a particular product, there is no legislation that will effectively prevent it. Enterprising citizens in a free society will always outwit the relatively slow-moving government and weak civil law enforcement agencies. Furthermore, when the authorities are successful in restricting activities, the price of the product is driven up, incentive for production is greater, and the profit motive wins out again.

Successful raids and "sting" operations have the additional effect of encouraging the good guys, giving us the feeling that if we just tried harder, threw a little more money and effort into the fight, we could clean this mess up. Yet we smile at episodes of the "The Untouchables" romantically portraying the quixotic Elliott Ness and partners attempting to rid Chicago of illegal alcohol. Surely, our current efforts will be similarly portrayed to our children and grandchildren, who will also smile.

The only way that law enforcement can keep drugs out of this country is to achieve something approaching a police state, a situation intolerable to most Americans. If Americans want the kind of freedom that they are used to, they will have to put up with a certain amount of freedom for the individual to choose whether to use drugs or not.

Imagine the most absurd situation possible: every other American is assigned to guard another American against the use of drugs. Each guard tails his or her potential user 24 hours a day. When would the guards sleep? Who would guard the guards? There could not be one guard for two or more people, because the suspects would be going in differ-

ent directions at the same time. This is hopeless.

There are of course some occupations which demand abstinence from drugs: operators of public transport vehicles, air traffic controllers, military personnel in certain situations, etc. Just as technology will always win out in the production, trafficking and distribution of drugs, I think technology can also be used effectively to monitor drugs. The requirement for young athletes to go in after a basketball game and urinate into a receptacle for testing seems Neanderthal to me. We must develop methods of detection using not fluids, but exhaled air. Sensitive equipment can detect the presence of a particular molecule in a large volume (a few parts per million). This should be developed for frequent and automatic screening of all people in certain positions.

For instance, a 747 pilot (A) comes to work and, in the presence of witnesses, blows into a tube which screens exhaled air for alcohol, TCH, cocaine, etc. The airplane simply will not start until he or she does this. If pilot A does not blow clean, another pilot (B), who does, starts the plane and takes off. Pilot A stays on the ground and reports to the next level of testing. Possibly the problem was some harmless contaminant from a prior meal. Pilot A then has a more detailed and expensive but specific urine test which absolves him or her completely, and he or she goes back into the flying rotation. Nothing goes on the pilot's record and he or she mainly learns to avoid certain types of food before a flight. If the urine test confirms the presence of significant molecules, Pilot A is processed on up the line, and appropriate action taken.

This would be similar to the process of using metal detectors to screen passengers at airports. An over-sensitive, nonspecific test screens everyone for metal. The majority who are positive have innocent materials such as large metal belt buckles and are cleared by the more time consuming but more specific detectors. In fact, this method probably prevents skyjacking attempts more often than it detects them in development. The proposed method would similarly discourage drug use more often than detect it. An approach of this type would also remove threatening aspects from the process. One would know before starting a job that everyone would complete the process daily, possibly several times a day. If one didn't want to go through it, he or she could go into

From the Department of Medicine, Duke University Medical Center, Box 3849, Durham 27710.

some other line of work.

It seems a shame to single out athletes for screening. I am much more concerned about my airline pilot or bus driver. However, it may make a difference to the athlete. A particular person or team may feel that if they stay clean and others use drugs, the users have an unfair advantage. If this is so, let the athletes themselves legislate and supervise the process.

With improved technology and decreasing costs, screening equipment might be useful on privately-owned vehicles. For example, a device could be developed that would have to be blown clean from time to time to keep the motor running. Sensors could be installed in vehicles, similar to our current smoke detectors, which would cut the engine off (after an appropriate alarm) if alcohol or certain other substances were detected in the inside air.

Of course, systems of this type could be beaten by determined (and perverted) individuals. Maybe the whole crew of the 747 is high and conspires to have the pilot blow into the device with an artificial airbag, so that intoxication would not be picked up. This seems unlikely. Furthermore, safeguards such as the smoke detector-type device in a cockpit could pick up the problem. Of course, I am not suggesting a system in which power to the vehicle is shut off in midflight. An alarm could sound on the ground and in the craft, alerting responsible parties.

In this way, technology could evolve which could stay ahead of the abusers and evaders. For inventors, developers and providers of innovative, reliable devices, monetary rewards would be great—comparable to those gained by producing and distributing drugs. If a reward of a billion dollars were promised to the first developer of a reliable device to screen for seven toxic substances in the gaseous state, such a device (if it is not already available) would probably be in the return mail. The cost would compare

favorably to the cost of a few days' civilian and military war on drugs. If Americans are anything, they are clever at developing technology to overcome difficult problems. With this approach, inventive minds could be put to work helping, rather than trying to beat the system. Spinoffs of such innovations would produce far-reaching benefits for the masses who may or may not have had anything to do with drugs.

All this raises questions about who we are and about how we want to arrange and regulate our lives. Most Americans enjoy their freedoms and are proud of them. We don't thank the founding fathers enough for the incredible wisdom and fortitude they showed in giving us this system. But it is not perfect, and they had no way of knowing all of the problems to come. It is noteworthy that they were well aware of alcohol, and did nothing to suppress it. Instead, they instituted a system in which individuals could make choices, and need only suffer the consequences. This is the essence of being an American.

There is nothing wrong with spending a lot of money (but a mere fraction of that required for Prohibition and suppression) on: (1) education, ensuring that people know exactly what it is they are getting into, and then turning them loose and letting them develop and differentiate as they please; and (2) screening and further testing of a few individuals in critical positions.

It is so very expensive, futile, and boring to be perpetual keeper of the masses. Of course, an approach such as I suggest might take years to evolve, depending on the rate of development of appropriate and effective technology. In the meantime, let us not gear up our economy to support the current war on drugs, diverting billions to the Coast Guard and other policing agencies. We need to start working on plans today to shift the emphasis in future. □

Who Is to Blame?

Lewis F. Brinton, M.D.

There has been a noticeable increase in the demand for drugs among patients over the past 25 years. When I started my surgical practice I might give my patients a prescription for Demerol or Dilaudid after major surgery but never would I have patients come in demanding these drugs. I wonder whether physicians or patients are at fault for causing this dangerous trend.

I have a patient who came to me with the following history. Several years ago while under a certain amount of pressure from his work he went to a local doctor because of his headache. The doctor was in a hurry and ended up by giving him a "shot" of Demerol. The patient did not know for sure what was given but his headache "went away and he felt so much better." He felt better for a couple of days and felt he could lick the whole world. The next time he had a headache he knew where to go to get relief. This sequence of events repeated itself more frequently (pressure-headache-

doctor's visit-shot of Demerol-felt good for a couple of days). The headaches became more severe and more frequent. The patient was given many prescriptions of Demerol 100mgs tablets by several doctors. He informed me that he found it necessary to go to the ER of the local hospital for relief at night. I tried to work him up for the cause of his headaches but to no avail. I would not give him any Demerol and anything weaker would not give him relief. I found it necessary to refer him to a neurologist and pain center. The last I heard was that he still had these headaches with no permanent relief.

It is very difficult to analyze this case. Who is responsible for this man's condition? Is it the patient who had a mild headache and went to the doctor for permanent relief, the doctors who gave him prescriptions of Demerol tablets so he could take them when he wanted to, or the Emergency Room doctor who fed the patient's habit with another shot? □

From Brinton Surgical Center, P.A., 603 East Center Ave.,
Mooresville 28115.

AIM HIGH

YOU CAN KEEP THEM IN BALANCE— YOUR FAMILY LIFE AND YOUR MEDICAL PRACTICE.



We'd like to help you spend more time with your family yet receive professional satisfaction from your medical practice. As a member of the Air Force health care team, you'll be able to participate in our group practice concept which will free you of most administrative duties.

Air Force benefits are also very attractive. You and your family will enjoy 30 days of vacation with pay each year plus many more Air Force advantages. Call

CAPT CHUCK HELVEY

919-850-9549

STATION-TO-STATION COLLECT



Winchester
"SERVICE SINCE 1919"

Winchester Surgical Supply Company

P.O. Box 35488 Charlotte, NC 28235
704/372-2240 or 800-868-5588

Winchester Home Healthcare

Medical supplies and equipment for your patients at home

Charlotte, N.C.	Greensboro, N.C.	Hickory, N.C.
704/332-1217	919/275-0319	704/324-0336
704/547-0708		

Serving the Medical Profession and their patients

Our salesmen are located in all parts of North Carolina.

We have DISPLAYED at every N.C. State Medical Society Meeting since 1921 and advertised CONTINUOUSLY in the N.C. Journal since January 1940 issue.

Fair Dinkum Koala Kruisine — Eucalyptus Oil Poisoning

Ronald B. Mack, M.D.

By now it is common knowledge that in the spring of the year the Food and Drug Administration asked for a nationwide recall of one-ounce bottles of the HUMCO brand of ipecac syrup.¹ It was alleged that some batches of this particular brand of ipecac contained eucalyptus oil. It is reasonable to ask what is eucalyptus oil, what is it used for and why is it still available in this era of magnetic resonance imaging, radionuclide scans and organ transplants?

Eucalyptus oil belongs to a group of products, obtained from plants, that are known as volatile oils, AKA essential or ethereal oils. These chemicals all share the property of evaporating at room temperature and consist of mixtures of saturated or unsaturated cyclic hydrocarbons, ethers, alcohols, esters and ketones. Many plants contain essential oil, e.g. nutmeg, pennyroyal, pine, clove, camphor, eucalyptus, turpentine and menthol, to name a few; many of these chemicals have been used therapeutically for at least 100 years in this country.² Eucalyptus oil was first described in 1790 by John White, surgeon to the first Australian settlement.³

Eucalyptus oil is a colorless or pale yellow oil with a characteristic aromatic camphor-like odor and a pungent cooling taste. It is obtained by reclarifying the oil distilled from the fresh leaves and terminal branches of various species of Eucalyptus. The oil contains approximately 38% to 65% eucalyptol.⁴ Even as we speak this non-medicine is still available in over-the-counter products, e.g., oral use for upper respiratory infections, as a substance for inhalation (often in combination with other volatile compounds) and as an ointment for topical usage for the treatment of muscle pain and arthritis. Adult "therapeutics" dose recommendations include, orally, 0.05 ml to 0.2 ml per dose (5 to 10 drops on a sugar cube), 1% drops intranasally, one teaspoon in a hot steam vaporizer for inhalation and as a 0.5% to 3% ointment. In the 1988 edition of the Physician's Desk Reference for Non-prescription Drugs, eight products containing oil of eucalyptus are listed and include cough tablets, an antiseptic, skin cleansing pads, medicated skin cream, a vaporizer fluid

to be inhaled and a "decongestant ointment" to be placed in a steam vaporizer or directly onto skin.⁵ (Angels and ministers of grace, defend us!!)

The Eucalyptus genus encompasses a group of evergreen shrubs or trees of the Myrtle family. It is often referred to as the ironbark, bloodwood or gum tree and is a characteristic component of the flora of Australia. This rather tall example of the wonders of nature is used for timber, for the harvesting of essential oils and as the primary food source for the koala.⁶ An adult koala eats over two pounds of leaves, buds and stems every day. Their favorite food is the tender light green shoots that grow on the tips of branches of the eucalyptus tree. There are 600 species of this tree in Australia but the koala only eats 35 to 50 of these species. Koalas in the wild must keep moving from tree to tree to find their main food supply because each species of eucalyptus tree is only "in tip" for a few months each year, with each tree having its own growing season. Why don't the essential oils make them sick? The koala, often erroneously referred to as the koala bear, is in reality an arboreal, nocturnal, marsupial. These cute, fuzzy, gray, short (two to two and a half feet long and 12 to 17 pounds) animals with black noses, large furry ears and no tail are quite lazy and look as if they were designed by a committee, the same committee, by the way, who designed the camel. (Take it easy, Mack, you haven't been looking too good yourself lately.) The adult male koala is really a fellow who wants to be alone except when mating; he does not have too much to do with lady koalas except for you-know-what. Once the female is pregnant, she leaves the male. Can you blame her? The male koala has been overheard, prior to mating, using such lines as "what's your sign?", "where have you been all my life?" and "haven't we met before?" The female has likewise been overheard answering these queries with such scolding as "buzz off, eucalyptus breath, your face looks like ten miles of bad road."

This entire therapeutic anachronism could be looked upon merely as a harmless relic of our innocent past when post hoc ergo propter hoc was the "scientific" method of choice and double blind studies were not even mentioned, if this plant product did not have such a perilous potential for poisoning. Eucalyptol is absorbed quite well through mucous membranes and is excreted through the lungs as well as, to some degree, through the urine, feces and skin. Gastroin-

From the Department of Pediatrics, Bowman Gray School of Medicine, Wake Forest University, 300 S. Hawthorne Dr., Winston-Salem 27103.

testinal absorption is quite rapid.

The initial clinical adversities resulting from a toxic encounter with eucalyptus oil are typically gastrointestinal, and include vomiting, diarrhea and epigastric pain.⁴ Within reason, the spontaneous emesis seen with this poisoning can be salutary, as it helps to limit the exposure. Because this volatile oil is absorbed so rapidly, central nervous system (CNS) difficulty can occur quite rapidly after ingestion. CNS depression and coma can be delayed as long as four hours. Miosis⁷ is commonly seen but is not pathognomonic, as this sign (pupils 2mm or less) is seen in such prominent overdoses as opiates (except meperidine), clonidine, phenothiazines, propoxyphene, PCP, and of course, the ever popular anticholinesterases, e.g., organophosphate insecticides and carbamates. Miosis, especially when associated with depressed respiration and coma, can certainly confuse the front line physician who is not sure whether to give the patient such antidotes as naloxone for opiate intoxication or atropine for organophosphate poisoning, for instance. Here, in the absence of a revealing history, the odor of eucalyptus should help to make the diagnosis succinct.

The CNS can respond abnormally, not only by a profound decrease in consciousness but by seizure activity as well. Seizures are more common in children who are poisoned with eucalyptus oil than in adults. Deep tendon reflexes are remarkably decreased or even absent in this overdose. Those patients not in coma can experience giddiness, ataxia and disorientation within minutes of ingestion.⁸ Muscle weakness is a common feature as is a burning sensation in the mouth. The respiratory system can respond by exhibiting bronchospasm, pulmonary edema, tachypnea or irregular shallow respirations. The non-comatose patient often complains of a feeling of suffocation. Aspiration pneumonia is a distinct possibility with this toxin. Tachycardia or a weak, feeble pulse can be present.⁹ The picture is not a pretty one. Why is this stuff still available? It is almost the 21st century.

The exact toxic dose of eucalyptus oil is unknown. Fatalities have occurred with ingestions of 4 ml to 480 ml.³ Survival, on the other hand, has been reported with ingestion of 21 ml to 30 ml in an eight-year-old, 23 ml in an adult and 120 ml to 240 ml in a treated adult. A fairly recent case of severe poisoning involves survival in a child who ingested 10 ml of eucalyptus oil.¹⁰ This three-year-old boy, seen within 30 minutes of ingestion, was found to be deeply comatose, had miosis, absent DTRs, and shallow, irregular respirations. On his breath was the strong odor of eucalyptus.

The treatment is quite non-specific. There is no antidote and all ingestions should be considered as potentially life-threatening. Transient coma has followed ingestion of as little as 1 ml and death 3.5 ml.³ This is one poisoning where ipecac is contraindicated because of the rapid absorption of the drug and the rapid onset of seizures and coma and the possibility of aspiration. Gastric lavage may be indicated very soon after ingestion and if the airway is protected. Activated charcoal administration followed by a saline cathartic or sorbitol seems to be a prudent therapeutic maneuver.

Treatment is supportive. Peritoneal and hemodialysis has been successful in at least one severe eucalyptus oil overdose.³

This recent contamination of ipecac should not be taken as an indictment of this substance; it still belongs in every home where children live or visit. This compound is indicated for acute emetic use only and induces vomiting within 35 minutes in over 90% of patients. It has stood the test of time and has been OTC for more than 20 years. Properly used it has an enviable record of success and efficiency. Improperly used, as in patients who chronically and voluntarily abuse this substance, e.g., bulimics, severe cardiac consequences and myopathy can ensue. It is true that in the future, home use of ipecac may be abandoned and a new emetic substituted, e.g., a liquid detergent similar to Ivory dishwashing liquid, or that emetics may be completely eliminated for administration by laypersons in the home and activated charcoal given instead. But, currently, ipecac syrup is the only game in town. Current literature¹¹ continues to recommend that ipecac be present in every home where children live or are likely to visit. That is good advice and I strongly concur.

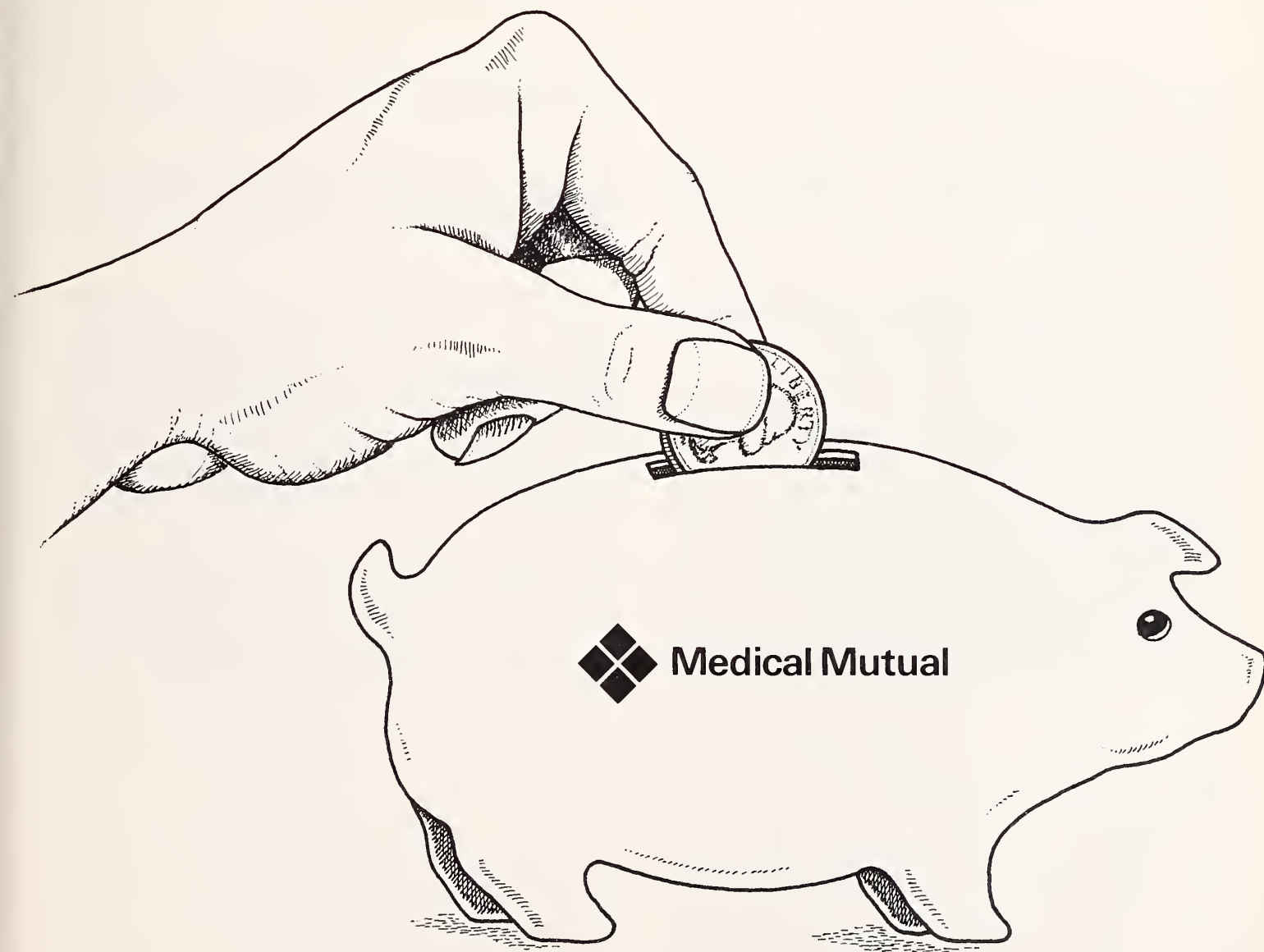
We do need ipecac syrup but there is no evidence that we need eucalyptus oil. I also believe that male koalas have to stop wearing polyester suits and begin more direct courting rituals such as saying: "g'day beautiful, your eucalyptus tree or mine?"

References

- 1 Consumer Product Safety Alert. Replace your HUMCO brand ipecac syrup. May 1988.
- 2 Arena JM, Drew RH. Poisoning, 5th edition. Charles C. Thomas, publisher, 1986, p. 647.
- 3 Gurr FW. Eucalyptus oil poisoning treated by dialysis and mannitol infusion. *Aust Ann Med* 1965;4:238.
- 4 Eucalyptus Oil. Poisindex, Micromedex Inc:57.
- 5 Physicians desk reference for nonprescription drugs, 9th edition, 1988, p.309.
- 6 Arnold C. Koalas. New York: William Morrow and Co., 1987.
- 7 Ellenhorn MJ, Barceloux DG. Medical toxicology. New York: Elsevier, 1988.
- 8 Kirkness WR. Poisoning by oil of eucalyptus. *Br Med J* 1910;1:261. 9 Kreuger RP. Chemical pneumonitis from medicated vapor aerosol spraying. *Clinical Pediatrics* 1967;6:465.
- 10 Patel S, Wiggins J. Eucalyptus oil poisoning. *Arch Dis Child* 1980;55:405.
- 11 Banner WB, Veltri JC. The case for ipecac syrup. *AJDC* 1988;142:596

A note to our readers: We regret that in the September, 1988 issue of the *Journal* we omitted the reference section of Dr. Mack's "Toxic Encounters" article, "Return with Us Now to those Thrilling Days of Yesteryear: Argyrol and Argyria." Please write or call the Managing Editor if you would like a copy of the references: Box 3910 DUMC, Durham 27710; 919/684-5728.

Medical Insurance Agency. It's Like Doing Business With Yourself.



Medical Insurance Agency is not like any other insurance agency. When you do business with us, the profits come back to you.

It's simple, really. Medical Insurance Agency is a subsidiary of Medical Mutual that provides a full line of insurance policies geared to physicians' needs. While Medical Mutual provides professional liability coverage on a break-even basis, the Agency serves as an income source, returning profits to the company.

Endorsements from both the North Carolina Medical Society and

North Carolina Dental Society have helped Medical Insurance Agency demonstrate its potential. In 1987 profits generated by the Agency benefited all Medical Mutual policyholders, in effect subsidizing each professional liability premium by \$32. Members of the North Carolina Medical Society save again through lower rates on premiums.

And that's just the beginning. The state's professional endorsements give Medical Insurance Agency great buying power, which results in special coverages and prices for our insureds.

This means that we can continue to enhance our policies to meet the unique needs of physicians, with special programs such as our non-cancellable disability income plan to protect your future earnings.

Doing business with Medical Insurance Agency. It's simply good business.



Medical Insurance Agency, Inc.

Subsidiary of Medical Mutual Insurance Company
of North Carolina

Suite 101 Lower Level, 222 North Person Street
Post Office Box 28388 Raleigh, NC 27611-6088
919/828-9336 1/800-822-6561

Drug Enforcement Administration

Renewal of Physician Registration

The Board of Medical Examiners of North Carolina must charge a fee to all physicians applying for a license to practice in North Carolina.

During every even year, each physician must reregister his or her North Carolina medical license. The charge has been \$50 for processing of this registration.

The N.C. Legislature has authorized the Board of Medical Examiners to increase this fee to \$100, if necessary.

The Board of Medical Examiners wants to call the attention of all physicians in North Carolina to the fact that in 1990, at the next reregistration of licenses, the registration fee will be \$70. This additional \$20 over the usual fee is to be used to greatly strengthen the health and effectiveness program for physicians who abuse alcohol and/or drugs in North Carolina. Although most physicians do not need such treat-

ment, the Board of Medical Examiners feels that this is a justifiable expense in order to rehabilitate as many of our colleagues as possible.

Alcohol and other chemicals which affect the central nervous system may be addictive and often are, and dependence upon alcohol may be a genetically determined disease. Since addiction to these substances is prevalent in the general population, including the members of the medical profession, the Board of Medical Examiners believes an increase in the physician registration fee will be a fair method of providing funds for a program to deal effectively with these problems.

Cooperation in this project has been authorized by the legislature to enable the N.C. Board of Medical Examiners to work with the N.C. Medical Society in implementing this program, which is now under extensive study and for which highly qualified leadership is now being sought.

From Eben Alexander, Jr., M.D., Chairman, North Carolina Board of Medical Examiners, The Bowman Gray School of Medicine, Wake Forest University, Winston-Salem 27103.

Edward C. Halperin, M.D., Book Review Editor

***The Physician as Teacher*, by Thomas L. Schwenk and Neal Whitman. Baltimore: Williams & Wilkins (\$21.50).**

Reviewed by Arthur C. Christakos, M.D., Department of Obstetrics and Gynecology, Duke University Medical Center.

This book, dealing with the physician as a teacher, is a collaborative effort on the part of a physician and a professional educator. The foreword is written by a distinguished medical educator, J. Willis Hurst, Chief of Cardiology at the Emory University School of Medicine.

Physicians must communicate with their patients to teach them how to prevent disease and how to participate in their own care. Teaching medical students and house officers is also regarded as a form of communication. Indeed, the first part of this two-part book is dedicated to communication. This book approaches the entire topic with the premise that learning is a basic human experience and teaching is a basic interpersonal communication skill that "is intuitive to physicians." The authors contend that there are certain characteristics of the employer-employee, parent-child, and physician-patient relationships which have applicability to the teacher-learner relationship.

The teacher-learner relationship is a communication relationship between two people. The teacher has certain roles to play that vary according to the situation or the learner, just as the physician varies his style with different patients in different situations. The learner, on the other hand, also plays a role and like the patient tends to play the same role most of the time. It is pointed out that medical students and house officers are adults who prefer to apply what they learn after learning it as well as preferring to learn concepts rather than

facts. They also like to set their own learning objectives and to receive feedback to help them evaluate their own performance. The authors describe an active/passive model of the physician-patient relationship as an analogy to the teacher-learner relationship where either can be active or passive. The participants in both models play complementary roles.

Schwenk and Whitman identify specific behaviors that can be applied to any teaching encounter. These behaviors are equally divided into three categories: attentive silence, cooperative negotiation, and persuasive confrontation. In the first category are silence, observation, purposeful eye contact, tracking, open-ended encouragement and advocacy, surface paraphrasing, and exploration. In the category of cooperative negotiation are self-disclosure, active listening, intensive paraphrasing, open-ended questioning, and feedback. Under persuasive confrontation the following behaviors are identified: summarizing and interpreting, information giving and prescribing, critiquing, correcting, closed questioning, and finally, persuasion change and confrontation. Again, the authors make the point that these types of behavior are derived directly from related behaviors that a physician might use with a patient.

The second part of this book presents specific and practical guidelines in becoming a good teacher in didactic and clinical settings. The five teaching responsibilities of the physician are discussed. These include lectures, group discussions, teaching rounds and morning report, bedside teaching, and clinical teaching in the ambulatory setting. These five responsibilities are discussed with objectives, techniques and tips which are practical in nature and worthy of consideration by anyone interested in teaching medical students and house officers.

One of the objectives of lectures is to present information which cannot be read in a book. Six levels of cognitive objectives are listed: knowledge; comprehension; application; analysis; synthesis; and evaluation.

The techniques of lecturing include the use of anecdotes to illustrate a principle while at the same time being enjoyable. The authors recommend that the anecdote be personal, giving the students an impression of the teacher as a person. Furthermore, the student should be able to relate to the situation described and, if at all possible, the anecdote should be funny. Among the tips for giving lectures is mental rehearsal with actual practice so that the lecturer is com-

From the Division of Radiation Oncology, Box 3085, Duke University Medical Center, Durham 27710.

pletely familiar with the material and will feel free to alter plans and respond to unexpected situations.

One of the author's most significant messages regarding lectures is one that is dear to my heart. It is pointed out that "because of the passive role of learners in a lecture, their attention span is relatively short ... we recommend that teachers use a technique to help maintain attention at the 15 to 20 minute mark of their lectures." These techniques include questioning, brainstorming, demonstration, role-playing and problem solving. I would like to make a strong plea for shorter lectures, feeling that if it cannot be said in 20 minutes it probably cannot be said in an hour. The authors do agree that once the physician-teacher has improved his or her lectures, fewer lectures need be given.

In group discussion teachers lose some control over the situation but learners are forced into sharing responsibility for the teaching-learning interaction. These sessions can be quite fruitful if the teacher establishes a personal, yet professional, rapport with the learners thereby creating a tension level that challenges the best thinking.

In teaching rounds, the authors feel, the types of skills that are best learned are independent reasoning and clinical judgment, effective communication of clinical material, and the art of critique in clinical consultations. I could not agree more with Schwenk and Whitman when they say that teaching rounds should be relatively short and not marathons that involve the attending speaking with the chief resident to the exclusion of all others in attendance. It is extremely important for the teacher to approach problem solving in such a way that several levels of learner experience and knowledge are addressed, since teaching rounds and morning report include students and house officers at various levels of experience and training. Constructive criticism in the form of feedback and personal evaluation is mandatory to improve future performance (formative) and to assess past performance (summative). Various suggestions for good technique for teaching rounds and morning report are discussed.

Active learner participation by an enthusiastic teacher stressing problem solving is highly recommended. It is also highly recommended that a humanistic orientation be used, including stressing the social and psychological aspects of patient care while dealing with students and hospital personnel in a friendly, sensitive manner. Liberal reference to appropriate research and publications is emphasized.

Throughout the discussion on teaching rounds and morning report, reference is made to the humane treatment of learners without resorting to ridicule and embarrassment. Feedback of a positive nature is emphasized throughout this discussion as well as throughout the rest of this book.

I could not agree with the authors more when they suggest that all paging be the responsibility of a designated member of the health care team so that the house officers are not taken away from the teaching sessions.

In the discussion on bedside teaching, Osler is quoted as saying "there should be 'no teaching without a patient for a text and the best teaching is that taught by the patient himself.'" The four basic objectives of bedside teaching are

given as follows: all teaching should be based on data generated by or about the patient; the patient's comfort and dignity should be respected during conduct of bedside rounds; psychomotor skills should be taught; and feedback should be provided to learners at every opportunity in bedside teaching. Bedside teaching should not be incorporated with morning report. It is preferable for learners at the same level of experience to be included in bedside teaching sessions. If this is not possible, then those learners of higher experience should be used to help teach those with less experience and knowledge.

The final responsibility for the teacher is clinical teaching in the ambulatory setting. It has become increasingly evident in recent years that teaching in the ambulatory care or primary care setting is becoming more important because of changes taking place in the site of patient care. Because of the one-on-one relationship in ambulatory care education, the authors feel that the dominant principle is that the strength of the learner-patient relationship is the best predictor of the impact of ambulatory teaching.

Ambulatory care teaching is considered one of the hardest types of teaching for several reasons. One is the time consuming nature of this type of teaching. The other is that teacher-learner interactions, discussions, and didactic teaching should emphasize learning how to make clinical decisions with incomplete data and in complex psychosocial situations. It is also a difficult process because the patient in the ambulatory care setting is more active in the physician-patient relationship. The patient is more independent of physical support systems, giving the patient the "advantage," since he or she is in a position to judge the physician's performance more overtly on behavior rather than technical criteria.

This book deals primarily with teaching as a form of communication which allows the teacher to become innovative. Success depends as much on consistency and what the teacher says and does—whether it be in the classroom or the clinic. In paraphrasing the golden rule, Schwenk and Whitman capture the essence of their book when they say "If you treat your residents and students as you would have them treat their patients, you will free them to do their best."

There are few criticisms of this book from my standpoint. I was appalled to see misspelling of the plural of curriculum at the end of the eighth chapter on bedside teaching: curricula was misspelled "curriculi." The size of the book is unusual. It is wider than the usual paperback and not as big as the usual textbook. It was somewhat uncomfortable for me to hold this book and read it. Some of the prose is rambling and stilted.

In general, I think this book is an excellent analysis of teaching from the standpoint of the physician-teacher. I think it would be a useful addition to the academician's library. I especially think that it would be helpful to young academicians on our house staffs and in our fellowships. Doctors Schwenk and Whitman have done us a great service by analyzing medical teaching and giving us food for thought in an area where we have been poorly trained.

On Moral Medicine: Theological Perspectives in Medical Ethics, edited by Stephen E. Lammers and Allen Verhey. Grand Rapids: William B. Eerdmans Publishing Co., 657 pp (\$24.95).

Reviewed by Edward C. Halperin, M.D.


Technical advances in medicine continuously raise moral questions. The discussion of these questions within the medical profession and in public forums has been vigorous. The practice of modern medicine forces the physician to take stands on contraception, gene manipulation, abortion, euthanasia, the utilization of neonatal intensive care, informed consent, and human and animal research. The medical profession must also impart guidance to our successors through bioethics courses in our medical schools.

There is a tendency to focus on "objective" standards when physicians discuss bioethics. The most commonly employed standard is "the greatest good for the greatest number" form of argument. We may adopt views, for example, on access to medical care, transplantation, or vivisection based upon cost-benefit analyses—a utilitarian view of individual and societal good. Physicians also often revert to autonomy arguments in bioethics debates. We tend to place great emphasis on freedom of choice in discussions of informed consent, human research, or abortion.

Both the utilitarian and the autonomy arguments belie a considerable source of teaching in bioethics. A large proportion of the general patient population, and of American physicians, seek guidance and solace from theological perspectives. In their anthology, *On Moral Medicine*, Lammers and Verhey, both Professors of Religion at liberal arts colleges, offer an extensive set of readings on the religious dimensions of medical morality. The anthology is almost entirely drawn from the Christian tradition. It will prove useful for practicing physicians and in undergraduate and professional school courses in medical ethics.

Nineteen chapters address the major issues in medical ethics today. Each chapter begins with an introductory overview by the editors followed by selected readings. In the chapter on contraception, there is Pope Paul VI's Encyclical Letter "Of Human Life (*Humanae Vitae*)" followed by Catholic and Protestant responses by the noted authorities Charles Curran, Karl Barth, and Carl Braaten. These are crucial readings from which to develop a basis of understanding of the Catholic Church's view on contraception. A rather fascinating chapter considers the issues of social justice and access to health care. The theological perspective has much to contribute on this issue.

On Moral Medicine is best treated as a reference anthology. I turned to it periodically, over several months, for reading an article or two—or for browsing. My copy is already heavily underlined. Instructors in medical ethics and members of hospital ethics committees might consider keeping a copy near their desk. The book will be a valuable contribution to any medical ethics library. □



"The Power of the Pen"

When you decide to use Bactrim, use the power of the pen as well. Protect your prescribing decision in accordance with your state regulations to prevent substitution. It guarantees your patients will get the power of Bactrim.

Specify
"Dispense as written"

BactrimTM
(trimethoprim and
sulfamethoxazole/Roche)



Roche Laboratories
a division of Hoffmann-La Roche Inc.

340 Kingsland Street, Nutley, New Jersey 07110-1199

Copyright © 1988 by Hoffmann-La Roche Inc. All rights reserved.

Roles For a Small Museum

The Case of the Country Doctor Museum

Paul I. Crellin

Questions about the functions of small medical museums and about lay attitudes toward medicine have been raised by recent public discussions—even controversy—over moving the Country Doctor Museum in Bailey, North Carolina, from its present site. The discussions have spotlighted issues of general interest for physicians concerned with medicine's public image, and that is one of my reasons for writing this note. Another is to encourage much-needed support for the Museum on the basis of its activities and potential, just as comparable small institutions elsewhere deserve similar consideration.

Brief details about the Museum are appropriate because they point to issues faced by many small museums devoted primarily to medicine and pharmacy. Founded in 1967 through the enthusiasm of four physicians—Gloria Graham, Josephine Melchior, Josephine Newell and Rose Pully, along with some friends—the main building of the museum was constructed from two nineteenth-century doctors' office buildings moved to the Bailey site. Almost all exhibits were donated or loaned, and most were given as memorabilia of North Carolina physicians. This underscored the founding purpose of the Museum, namely to pay homage to the country doctor who by the 1960s had all but disappeared from the increasingly complex landscape of American health care delivery.

Much publicity in the Museum's early years helped to establish its place as one of the nation's more interesting small medical museums. During the past decade, however, many changes, local and national, have affected the Museum. It has become difficult to significantly improve annual attendance, which has rarely exceeded five hundred during the past ten years. Additionally, the conspicuous increase in the

number of museums throughout the United States, both specialist and general, with medical and pharmaceutical exhibits (and often a considerable range of educational activities), has meant an increase in competition, particularly on the east coast. During the past three years, a time when the Country Doctor Museum has acquired its first full-time curator, discerning visitors not content with the curiosity value of the exhibits have begun to ask penetrating questions about the purpose of a small museum in a small North Carolina town.

Many visitors are perplexed, given the Museum's name, by the fact that its collections are no different from those found in countless other museums, so that common questions asked are "why a Country Doctor Museum?" or "why pay homage to a country doctor?" New exhibits and curatorial information partly answer these questions, but it is clear from visitors' comments that the Museum faces an enormous task in contributing to a better public understanding of past (and present) directions in medicine, and specifically of the role of country doctors. In many respects this task is no different from that of wealthier museums with richer collections which also face a spectrum of views among lay visitors, ranging from rose-tinted, rather romantic notions of the goodness and altruism of physicians to very jaundiced opinions of modern-day medicine. If a museum is to have meaningful impact it can no longer rest on passive exhibiting. For this reason the Country Doctor Museum has made considerable efforts in developing its activities in recent years and has reevaluated its exhibit philosophy.

A Museum and Its Artifacts

It has to be said that, aside from physician collectors of medical antiques, the support by the medical profession for medical museums is erratic and quixotic. Among many reasons for this is that museums often strike medical visitors as little more than cabinets of curiosities. A ceramic drug jar, for instance, however attractively displayed, often produces the response that it's "pretty," even "handsome," but "what

From The Country Doctor Museum. Correspondence: Paul I. Crellin, The Medical Foundation of East Carolina University, 2000 Venture Tower Dr., Suite 210, Greenville 27858-4354.

does it really tell us about medicine or even about society?" Historians, too, have long shown a reluctance to use artifacts as sources of information, even in order to question the written historical record. Because of this some general comments are appropriate to justify the Country Doctor Museum's seeking help in building up areas of its collections to develop more significant exhibits and to move away from having to incorporate items on display that are best kept for storage.

Historians sometimes say in defense of their neglect of artifacts that museum collections generally only reveal insights into the activities of the middle and upper levels of society. There is substance to this partial excuse, and in recognition of the unbalanced nature of many artifact collections, curators increasingly attempt to collect more broadly so as to represent activities from all levels of society. But in just what sense can the study of artifacts be "useful" apart from lifting the mind or prompting such questions as, for example, why were so many enema pumps manufactured during the nineteenth century?

In fact the cataloging of objects, particularly those which can be placed and dated reasonably accurately, provides a useful index of, for instance, the persistence of various beliefs of the application of theory to practice. Thus the awareness of the widespread use of charms and amulets—nowadays found in many museum collections—to prevent and to treat disease throughout the nineteenth century sharpens the understanding of the background against which various physician writers viewed the connections between superstitions and the practice of medicine.

But to ask further questions about the cultural place of the object, we need to go beyond the object. Objects of course have a limited capacity to invoke details about their psychological meaning, such as whether or not the decorative value of, say, invalid feeders and foodwarmers had a cheering effect on eighteenth-century patients. Yet objects prompt many questions. Although the use of aesthetically pleasing ceramics might enhance the mood of today's hospital patient (and it is increasingly acknowledged that art has a place in modern hospitals), it is more probable that highly decorative wares were used in the eighteenth-century sickroom merely because health care was an integrated element of domestic life. This applies not only to the objects used in home care, but also to many used by medical practitioners and featuring stylistic elements in common with wooden, silver, leather, glass, and ceramic objects made for non-medical purposes. All this is in stark contrast to today, when knowledge of the role of microbial agents in disease is so deeply entrenched—along with associated ideas of cleanliness and sterilization—that we expect objects used in invalid care or the feeding of infants to be made of materials readily cleansed and to have a utilitarian "clinical" look to them.

Objects, then, are excellent resources and educational aids to illuminate trends and to pose specific and subtle questions about attitudes toward medicine and health care. Yet the Country Doctor Museum is very much handicapped in its efforts to carry out this task because of the limited range

of its collections. Throughout its history it has relied on donated items rather than actively seeking artifacts to develop a more rounded collection. It needs to be able to illustrate the major events in the development of, say, obstetrics in country practice, as well as illuminate social attitudes and other factors shaping medicine. The Museum wants the opportunity to acquire donations from the attics of physicians who will ask the question: "is this helpful for your collections or can you exchange it or sell it in order to purchase other items?" Perhaps, too, income from the sale of objects could go into the general research fund to support the curatorial policy of garnering as much background and usage information as possible about acquisitions, in part through oral history.

Oral History

The Museum has a substantial library, mostly of textbooks from the nineteenth and early twentieth centuries. These books rarely give sufficient insight into everyday country medical practice such as is often found in physicians' autobiographies of the period. As useful as these books are, they do have their biases and somewhat self-centered points of view. Because of this, an oral history program is being developed by the Museum to supplement and balance its resources and to provide evocative details for its exhibits. In the area of midwifery and country obstetrics, tape-recorded data garnered from granny midwives, most of whom were black, and from herbalists, can add much to a rather prosaic story of forceps and other medical advances. Such a history could tell of the practice, for instance, of the midwife's "butting" out the baby by pushing on the abdomen with her head, or of the use of cotton root tea, best known as an abortifacient.

Another example of intriguing background material was provided in 1987 by 91-year-old Dr. I. Hayden Lutterloh of Sanford. He gave insights on the medical profession's lack of interest in birth control during the 1930s, and donated samples of diaphragms which were being commercially promoted at the time. It is not especially easy to assess medical attitudes from the printed record, at least not without the prompting of anecdote, information and surviving artifacts.

Should You Support the Museum's Activities?

Even among those generally supportive of such institutions as the Country Doctor Museum, who recognize its role in helping with the public image of medicine (as well as through other activities not discussed here), the question may remain: can small museums have a sufficient impact—bearing in mind they only reach select groups of the population—to justify the considerable cost of their upkeep? Of course there is no single or simple answer. But in reaching any balanced

decision the following points should be considered. Is there a need for multiple sources of information and perspective to help the public better understand medicine? Is there a need for voices that seemingly have some measure of independence, that is, that are not professional bodies or educational institutions which may be seen rightly or wrongly as self-serving? Is there a need for sources of information to be widely dispersed outside urban areas? Do small museums contribute significantly to the cultural ambience and hence quality of life in a region (apart from serving as tourist attractions)? Can small museums add to the professional education of physicians and other health care workers in ways not covered by educational institutions or larger museums?

The 20-year history of the Country Doctor Museum suggests that the answer to these questions is yes. Not only is the Museum contributing more and more to the general educational services in its area, but it is also making a significant effort at helping the public understand the trials and tribulations of sickness and health care. Admittedly this is done by focusing on the recent past, but many of the insights gained provide perspective on today's problems.

Those who agree that the Museum's roles are important should consider helping the Museum acquire urgently needed public and private support. They may visit the Museum or write for full details of its programs and needs to: P.O. Box 34, Bailey, NC 27807. □

Acknowledgement

I am grateful for helpful comments from Gloria Graham, M.D., and for access to an unpublished manuscript by J.K. Crellin and F. Nowell-Smith on the Drake collection of the Toronto Academy of Medicine.



BRIEF SUMMARY

CONTRAINDICATIONS

There are no known contraindications to the use of sucralfate.

PRECAUTIONS

Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that simultaneous administration of CARAFATE (sucralfate) with tetracycline, phenytoin, digoxin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The clinical significance of these animal studies is yet to be defined. However, because of the potential of CARAFATE to alter the absorption of some drugs from the gastrointestinal tract, the separate administration of CARAFATE from that of other agents should be considered when alterations in bioavailability are felt to be critical for concomitantly administered drugs.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Chronic oral toxicity studies of 24 months' duration were conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). There was no evidence of drug-related tumorigenicity. A reproduction study in rats at doses up to 12 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies were not conducted.

Pregnancy: Teratogenic effects. Pregnancy Category B. Teratology studies have been performed in mice, rats, and rabbits at doses up to 5 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients treated with sucralfate, adverse effects were reported in 121 (4.7%).

Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

OVERDOSAGE

There is no experience in humans with overdosage. Acute oral toxicity studies in animals, however, using doses up to 12 gm/kg body weight, could not find a lethal dose. Risks associated with overdosage should, therefore, be minimal.

DOSAGE AND ADMINISTRATION

The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week of treatment, treatment should be continued for 4 to 8 weeks unless healing is demonstrated by x-ray or endoscopic examination.

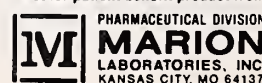
HOW SUPPLIED

CARAFATE (sucralfate) 1-gm tablets are supplied in bottles of 100 (NDC 0088-1712-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1712-49). Light pink scored oblong tablets are embossed with CARAFATE on one side and 1712 bracketed by C's on the other. Issued 1/87

Reference:

1. Eliakim R, Ophir M, Rachmilewitz D: *J Clin Gastroenterol* 1987;9(4):395-399.

Another patient benefit product from



CAFAD276

0160N8

ō·mō·hŭn'·drō
communications

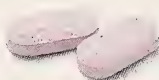
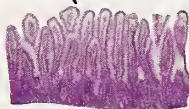
Writing and
editing for
the medical
and health
sciences

(919) 493-2060
1412 Vickers Avenue
Durham, North Carolina 27707



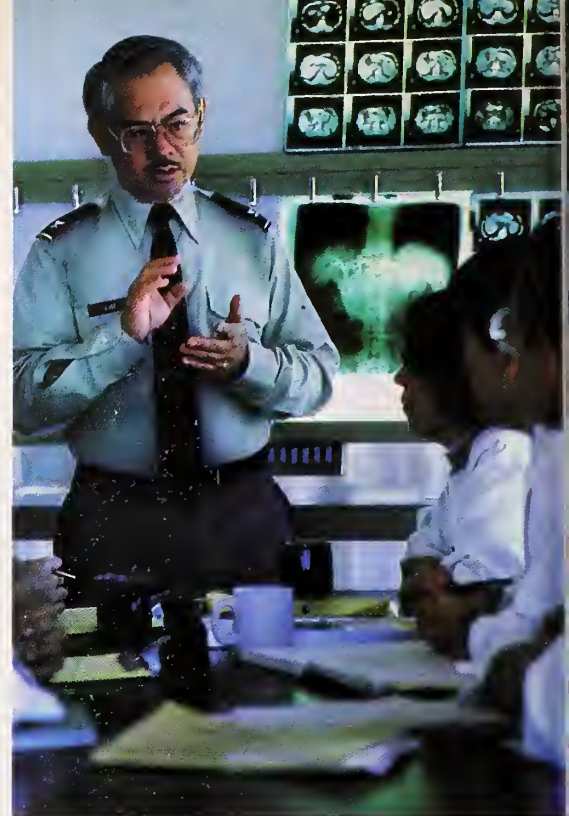
Carafate® for the ulcer-prone NSAID patient

Aspirin and other nonsteroidal anti-inflammatory drugs weaken mucosal defenses, which may lead NSAID users to become prone to duodenal ulcers! For those NSAID users who do develop duodenal ulcers, CARAFATE® (sucralfate/Marion) is ideal first-line therapy. Carafate rebuilds mucosal defenses through a unique, nonsystemic mode of action. Carafate enhances the body's natural healing ability while it protects damaged mucosa from further injury. So the next time you see an arthritis patient with a duodenal ulcer, prescribe nonsystemic Carafate: therapy for the ulcer-prone patient.



Unique, nonsystemic

CARAFATE®
sucralfate/Marion



EXTEND YOUR PRACTICE.

If you're looking to extend your practice, and your career, look into Army Reserve medicine.

We'll give you the opportunity to practice in a variety of challenging fields—teaching, research, patient care, even field work.

We'll also give you the kind of flexibility you can't always have in civilian hospitals, such as the chance to practice a new specialty, or to broaden your experience in your current one.

Since we know how busy you are, we'll also be flexible about the hours you work. You can join a local medical unit and normally serve sixteen hours every month plus fourteen days of active duty during the year.

Army Reserve medicine is more than a chance to broaden your practice. It's a chance to broaden your horizons.

If you would like more information about specific programs, call toll-free 1-800-USA-ARMY.

**ARMY RESERVE
MEDICINE.
BE ALL YOU CAN BE.**

The Numbers Racket

William B. Blythe, M.D.

One day, three doctors and some medical students sat around a conference table—far removed from the wards, impatiently waiting to hear of the new cases of the day.

The medical student, Anxious and Anxious-to-Please, was asked to present the cases. One of the doctors said, “Anxious and Anxious-to-please, be brief—no fol-de-rol—just give us the numbers—the numbers are what we want.”

Anxious-to-Please, hereinafter known as A.T.P., began, “The first patient is a poor historian and I didn’t get a history. The physical examination showed...”

“Did it reveal any abnormalities?” interrupted Dr. Cock-sure, one of the three doctors.

“I don’t think so,” said A.T.P.

“Well, come on with it, man, and give us the numbers,” exclaimed Dr. Technology-Is-Everything, “the numbers, man, the numbers.”

The “lytes” were as follows, said A.T.P. “The Na was 200, Cl 180, HCO₃ 5; the B.U.N. was 640, and the creatinine was 0.6.”

“Ah, that’s easy,” responded Cock-sure, knowingly. “I can tell that the patient is dehydrated, because the B.U.N. is elevated, the plasma creatinine is normal, and the HCO₃ is low. Furthermore, some sloppy person gave ‘hot salt’ by mistake. We’ve got to stop the ‘hot salt’ and give water.”

“Well, I’m not so sure of *that*,” said Technology-Is-Everything with a horrifying look of anguish. “I’d like to know what the Ca, P, T.P., Alb, urine ‘lytes,’ renal echo, urine NAGs, S.G.O.T., C.P.K., G.G.T., L.D.H., Aldolase, Ammo-

nia, Amylase, Arsenic, Bilirubin, Carotene, Ethanol, Lactic Acid, Magnesium, Salicylates, Triglycerides, Uric Acid, cardiac ejection fraction and pulmonary wedge pressures are. We may be missing something important here.”

The last of the three, Dr. Clear-Head, asked quietly, “may we see the patient?”

“Oh come on, Clear-Head!” shouted Cock-sure and Technology-Is-Everything simultaneously and disgustedly. “Don’t be so pedantic. We’ve got a lot of ground to cover, man. Next case.”

“No! I insist that we see the patient,” insisted Clear-Head.

So after a moment’s ritual of mumbling and grumbling and with A.T.P. and his colleagues no longer anxious-to-please, but anxious to see a fight, off they loudly went, waking up the dead along the way.

They entered the patient’s room, looked in the bed, and Clear-Head exclaimed, “This is a shark—probably a normal shark. A shark is an elasmobranch and elasmobranchs have very high plasma sodium, chloride and urea concentrations. How did this shark get here?”

“I’m afraid I’m responsible,” said Technology-Is-Everything. “I was shown the numbers, and anybody with numbers like that should be admitted.”

“Well,” said Clear-Head, “the challenge here is not to get water into the patient, but the patient into water!”

The moral, dear friends: don’t forget to have a look at the patient first. The numbers come last.

From the Department of Medicine, University of North Carolina School of Medicine, Chapel Hill 27514.

When it comes to
there's no place like



ender, loving care... home.



No one likes being in the hospital. And no one likes paying a big hospital bill. This is especially true for companies and families wrestling with the high cost of health care.

As a result, more people are looking at home care as a viable option to prolonged hospital stays.

New technologies and services are making it possible for patients to be discharged from the hospital sooner, while continuing medical treatment in the comfort and convenience of the home or workplace.

Baxter is the largest supplier of health care products and services in the world and pioneered the concept of home therapy.

In the last year alone, we provided products and services to more than 40,000 home care patients. Patients requiring complex care. Patients on kidney dialysis and cancer chemotherapy. Patients receiving intravenous antibiotics and parenteral nutrition. Patients requiring immune deficiency therapy. And more.

We work closely with doctors, nurses, hospitals and insurers to make sure that their patients go home with confidence. And that they continue to receive quality care, personal attention and cost effective therapy for as long as it is needed.

So when your patients, employees or family members need some extra TLC, call Caremark Homecare. We believe it's possible to reduce the cost of health care *without sacrificing quality*. Baxter Healthcare Corporation, Caremark Homecare, Raleigh-Durham Pharmacy, 100 Perimeter Park Drive, Suite A, Morrisville, North Carolina 27560. Phone 800.245.2463.

Baxter

Letters to the Editor

On Dr. Stead's NLM Article

To the Editor:

Bob Mehnert, a member of the National Library staff, sent me your excellent piece on the National Library of Medicine in the North Carolina Medical Journal (1988;49:360). You managed to deliver a strong, valuable message in a concise, interesting way. The article should be read by administrators and chiefs-of-staff of every community hospital in the country, and I hope it will be widely distributed.

Lois DeBakey, Ph. D.
Professor of Scientific Communication
Baylor College of Medicine
One Baylor Plaza
Houston, TX 77030

Concerns about nursing home care

To the Editor:

I am writing this letter out of concern for the many elderly, sick, handicapped, and disabled people in our society that are faced with no other choice but to be confined to a nursing home. I have a close friend of 14 years who had a stroke four and a half months ago at the age of 54. His speech and right side of his body were affected by the stroke. After his release from Danville Memorial Hospital, he was accepted at the Brian Center located in Yanceyville, North Carolina.

As I visit this facility every day, I see reason for concern. My concern is about the infrequency with which patients receive hygienic care such as baths or showers, head washings, shavings, toe and fingernail care, and the changing of bed linens. The lack of patient supervision, in my opinion, is due to the facility being understaffed and overworked. I have personally talked with aides that work double shifts, work on their days off, and work many consecutive days. I see that there is a lack of communication between the nurses, aides and family members.

I am thankful that my friend is so nearby that I can visit him every day, and only by doing so have these things been made aware to me. I urge each family member or friend of a patient in a facility of this kind to visit, and visit regularly. Don't take for granted that the infirm are cared for adequately. If you are a friend, let the family of the patient know of any problems you discover.

I realize everyday visits are impossible for many, but

make yourself aware of the care a family member or friend is receiving as a patient. Let us all work together for the welfare of the ones who can't help themselves. If you find need for improvements, bring it to the attention of the management of the facility, or contact the list below for health care improvements:

Health Care Facility Branch, 701 Barbour Drive, Raleigh 27603. 919/733-2786.

Kimberly Dawkins, Regional Long Care, OMBUDSMAN, Piedmont Triad Council of Government, 2216 West Meadowview Road, Suite 201, Greensboro 27417-3480. 919/294-4950.

Governor James Martin, 116 West Jones Street, Raleigh 27603. 1-800/662-7952.

George Daniels, State Senator representing the 21st Districts of Caswell and Alamance Counties. 919/694-4363.

We, the visitors, must help these patients, for most of them can't help themselves. Please visit regularly and be AWARE.

Bonnie Haney Carter
Rt. 2, Box 6A
Pelham 27311

U.S. Postal Service STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION (Required by 39 U.S.C. 3685)		
1A. TITLE OF PUBLICATION North Carolina Medical Journal	1B. PUBLICATION NO. 0 0 2 9 2 5 5 9	2. DATE OF FILING 10-15-88
3. FREQUENCY OF ISSUE Monthly	3A. NO. OF ISSUES PUBLISHED ANNUALLY 12	3B. ANNUAL SUBSCRIPTION PRICE \$12.00
4. COMPLETE MAILING ADDRESS OF KNOWN OFFICE OF PUBLICATION (Street, City, County, State and ZIP Code) (Not printers)		
222 North Person Street, Raleigh, NC 27611		
5. COMPLETE MAILING ADDRESS OF THE HEADQUARTERS OF GENERAL BUSINESS OFFICES OF THE PUBLISHER (Not printers)		
222 North Person Street, Raleigh, NC 27611		
6. FULL NAMES AND COMPLETE MAILING ADDRESS OF PUBLISHER, EDITOR, AND MANAGING EDITOR (Not from 3A, 3B, 3C, 3D, 3E, 3F, 3G, 3H, 3I, 3J, 3K, 3L, 3M, 3N, 3O, 3P, 3Q, 3R, 3S, 3T, 3U, 3V, 3W, 3X, 3Y, 3Z, 3AA, 3AB, 3AC, 3AD, 3AE, 3AF, 3AG, 3AH, 3AI, 3AJ, 3AK, 3AL, 3AM, 3AN, 3AO, 3AP, 3AQ, 3AR, 3AS, 3AT, 3AU, 3AV, 3AW, 3AX, 3AY, 3AZ, 3BA, 3BB, 3BC, 3BD, 3BE, 3BF, 3BG, 3BH, 3BI, 3BJ, 3BK, 3BL, 3BM, 3BN, 3BO, 3BP, 3BQ, 3BR, 3BS, 3BT, 3BU, 3BV, 3BW, 3BX, 3BY, 3BZ, 3CA, 3CB, 3CC, 3CD, 3CE, 3CF, 3CG, 3CH, 3CI, 3CJ, 3CK, 3CL, 3CM, 3CN, 3CO, 3CP, 3CQ, 3CR, 3CS, 3CT, 3CU, 3CV, 3CW, 3CX, 3CY, 3CZ, 3DA, 3DB, 3DC, 3DD, 3DE, 3DF, 3DG, 3DH, 3DI, 3DJ, 3DK, 3DL, 3DM, 3DN, 3DO, 3DP, 3DQ, 3DR, 3DS, 3DT, 3DU, 3DV, 3DW, 3DX, 3DY, 3DZ, 3EA, 3EB, 3EC, 3ED, 3EE, 3EF, 3EG, 3EH, 3EI, 3EJ, 3EK, 3EL, 3EM, 3EN, 3EO, 3EP, 3EQ, 3ER, 3ES, 3ET, 3EU, 3EV, 3EW, 3EX, 3EY, 3EZ, 3FA, 3FB, 3FC, 3FD, 3FE, 3FF, 3FG, 3FH, 3FI, 3FJ, 3FK, 3FL, 3FM, 3FN, 3FO, 3FP, 3FQ, 3FR, 3FS, 3FT, 3FU, 3FV, 3FW, 3FX, 3FY, 3FZ, 3GA, 3GB, 3GC, 3GD, 3GE, 3GF, 3GG, 3GH, 3GI, 3GJ, 3GK, 3GL, 3GM, 3GN, 3GO, 3GP, 3GQ, 3GR, 3GS, 3GT, 3GU, 3GV, 3GW, 3GX, 3GY, 3GZ, 3HA, 3HB, 3HC, 3HD, 3HE, 3HF, 3HG, 3HH, 3HI, 3HJ, 3HK, 3HL, 3HM, 3HN, 3HO, 3HP, 3HQ, 3HR, 3HS, 3HT, 3HU, 3HV, 3HW, 3HX, 3HY, 3HZ, 3IA, 3IB, 3IC, 3ID, 3IE, 3IF, 3IG, 3IH, 3II, 3IJ, 3IK, 3IL, 3IM, 3IN, 3IO, 3IP, 3IQ, 3IR, 3IS, 3IT, 3IU, 3IV, 3IW, 3IX, 3IY, 3IZ, 3JA, 3JB, 3JC, 3JD, 3JE, 3JF, 3JG, 3JH, 3JI, 3JJ, 3JK, 3JL, 3JM, 3JN, 3JO, 3JP, 3JQ, 3JR, 3JS, 3JT, 3JU, 3JV, 3JW, 3JX, 3JY, 3JZ, 3KA, 3KB, 3KC, 3KD, 3KE, 3KF, 3KG, 3KH, 3KI, 3KJ, 3KK, 3KL, 3KM, 3KN, 3KO, 3KP, 3KQ, 3KR, 3KS, 3KT, 3KU, 3KV, 3KW, 3KX, 3KY, 3KZ, 3LA, 3LB, 3LC, 3LD, 3LE, 3LF, 3LG, 3LH, 3LI, 3LJ, 3LK, 3LL, 3LM, 3LN, 3LO, 3LP, 3LQ, 3LR, 3LS, 3LT, 3LU, 3LV, 3LW, 3LX, 3LY, 3LZ, 3MA, 3MB, 3MC, 3MD, 3ME, 3MF, 3MG, 3MH, 3MI, 3MJ, 3MK, 3ML, 3MM, 3MN, 3MO, 3MP, 3MQ, 3MR, 3MS, 3MT, 3MU, 3MV, 3MW, 3MX, 3MY, 3MZ, 3NA, 3NB, 3NC, 3ND, 3NE, 3NF, 3NG, 3NH, 3NI, 3NJ, 3NK, 3NL, 3NM, 3NN, 3NO, 3NP, 3NQ, 3NR, 3NS, 3NT, 3NU, 3NV, 3NW, 3NX, 3NY, 3NZ, 3OA, 3OB, 3OC, 3OD, 3OE, 3OF, 3OG, 3OH, 3OI, 3OJ, 3OK, 3OL, 3OM, 3ON, 3OO, 3OP, 3OQ, 3OR, 3OS, 3OT, 3OU, 3OV, 3OW, 3OX, 3OY, 3OZ, 3PA, 3PB, 3PC, 3PD, 3PE, 3PF, 3PG, 3PH, 3PI, 3PJ, 3PK, 3PL, 3PM, 3PN, 3PO, 3PP, 3PQ, 3PR, 3PS, 3PT, 3PU, 3PV, 3PW, 3PX, 3PY, 3PZ, 3QA, 3QB, 3QC, 3QD, 3QE, 3QF, 3QG, 3QH, 3QI, 3QJ, 3QK, 3QL, 3QM, 3QN, 3QO, 3QP, 3QQ, 3QR, 3QS, 3QT, 3QU, 3QV, 3QW, 3QX, 3QY, 3QZ, 3RA, 3RB, 3RC, 3RD, 3RE, 3RF, 3RG, 3RH, 3RI, 3RJ, 3RK, 3RL, 3RM, 3RN, 3RO, 3RP, 3RQ, 3RR, 3RS, 3RT, 3RU, 3RV, 3RW, 3RX, 3RY, 3RZ, 3SA, 3SB, 3SC, 3SD, 3SE, 3SF, 3SG, 3SH, 3SI, 3SJ, 3SK, 3SL, 3SM, 3SN, 3SO, 3SP, 3SQ, 3SR, 3SS, 3ST, 3SU, 3SV, 3SW, 3SX, 3SY, 3SZ, 3TA, 3TB, 3TC, 3TD, 3TE, 3TF, 3TG, 3TH, 3TI, 3TJ, 3TK, 3TL, 3TM, 3TN, 3TO, 3TP, 3TQ, 3TR, 3TS, 3TT, 3TU, 3TV, 3TW, 3TX, 3TY, 3TZ, 3UA, 3UB, 3UC, 3UD, 3UE, 3UF, 3UG, 3UH, 3UI, 3UJ, 3UK, 3UL, 3UM, 3UN, 3UO, 3UP, 3UQ, 3UR, 3US, 3UT, 3UU, 3UV, 3UW, 3UX, 3UY, 3UZ, 3VA, 3VB, 3VC, 3VD, 3VE, 3VF, 3VG, 3VH, 3VI, 3VJ, 3VK, 3VL, 3VM, 3VN, 3VO, 3VP, 3VQ, 3VR, 3VS, 3VT, 3VU, 3VV, 3VW, 3VX, 3VY, 3VZ, 3WA, 3WB, 3WC, 3WD, 3WE, 3WF, 3WG, 3WH, 3WI, 3WJ, 3WK, 3WL, 3WM, 3WN, 3WO, 3WP, 3WQ, 3WR, 3WS, 3WT, 3WU, 3WV, 3WW, 3WX, 3WY, 3WZ, 3XA, 3XB, 3XC, 3XD, 3XE, 3XF, 3XG, 3XH, 3XI, 3XJ, 3XK, 3XL, 3XM, 3XN, 3XO, 3XP, 3XQ, 3XR, 3XS, 3XT, 3XU, 3XV, 3XW, 3XX, 3XY, 3XZ, 3YA, 3YB, 3YC, 3YD, 3YE, 3YF, 3YG, 3YH, 3YI, 3YJ, 3YK, 3YL, 3YM, 3YN, 3YO, 3YP, 3YQ, 3YR, 3YS, 3YT, 3YU, 3YV, 3YW, 3YX, 3YY, 3YZ, 3ZA, 3ZB, 3ZC, 3ZD, 3ZE, 3ZF, 3ZG, 3ZH, 3ZI, 3ZJ, 3ZK, 3ZL, 3ZM, 3ZN, 3ZO, 3ZP, 3ZQ, 3ZR, 3ZS, 3ZT, 3ZU, 3ZV, 3ZW, 3ZX, 3ZY, 3ZZ, 3AA, 3AB, 3AC, 3AD, 3AE, 3AF, 3AG, 3AH, 3AI, 3AJ, 3AK, 3AL, 3AM, 3AN, 3AO, 3AP, 3AQ, 3AR, 3AS, 3AT, 3AU, 3AV, 3AW, 3AX, 3AY, 3AZ, 3BA, 3BB, 3BC, 3BD, 3BE, 3BF, 3BG, 3BH, 3BI, 3BJ, 3BK, 3BL, 3BM, 3BN, 3BO, 3BP, 3BQ, 3BR, 3BS, 3BT, 3BU, 3BV, 3BW, 3BX, 3BY, 3BZ, 3CA, 3CB, 3CC, 3CD, 3CE, 3CF, 3CG, 3CH, 3CI, 3CJ, 3CK, 3CL, 3CM, 3CN, 3CO, 3CP, 3CQ, 3CR, 3CS, 3CT, 3CU, 3CV, 3CW, 3CX, 3CY, 3CZ, 3DA, 3DB, 3DC, 3DD, 3DE, 3DF, 3DG, 3DH, 3DI, 3DJ, 3DK, 3DL, 3DM, 3DN, 3DO, 3DP, 3DQ, 3DR, 3DS, 3DT, 3DU, 3DV, 3DW, 3DX, 3DY, 3DZ, 3EA, 3EB, 3EC, 3ED, 3EE, 3EF, 3EG, 3EH, 3EI, 3EJ, 3EK, 3EL, 3EM, 3EN, 3EO, 3EP, 3EQ, 3ER, 3ES, 3ET, 3EU, 3EV, 3EW, 3EX, 3EY, 3EZ, 3FA, 3FB, 3FC, 3FD, 3FE, 3FF, 3FG, 3FH, 3FI, 3FJ, 3FK, 3FL, 3FM, 3FN, 3FO, 3FP, 3FQ, 3FR, 3FS, 3FT, 3FU, 3FV, 3FW, 3FX, 3FY, 3FZ, 3GA, 3GB, 3GC, 3GD, 3GE, 3GF, 3GG, 3GH, 3GI, 3GJ, 3GK, 3GL, 3GM, 3GN, 3GO, 3GP, 3GQ, 3GR, 3GS, 3GT, 3GU, 3GV, 3GW, 3GX, 3GY, 3GZ, 3HA, 3HB, 3HC, 3HD, 3HE, 3HF, 3HG, 3HH, 3HI, 3HJ, 3HK, 3HL, 3HM, 3HN, 3HO, 3HP, 3HQ, 3HR, 3HS, 3HT, 3HU, 3HV, 3HW, 3HX, 3HY, 3HZ, 3IA, 3IB, 3IC, 3ID, 3IE, 3IF, 3IG, 3IH, 3II, 3IJ, 3IK, 3IL, 3IM, 3IN, 3IO, 3IP, 3IQ, 3IR, 3IS, 3IT, 3IU, 3IV, 3IW, 3IX, 3IY, 3IZ, 3JA, 3JB, 3JC, 3JD, 3JE, 3JF, 3JG, 3JH, 3JI, 3JJ, 3JK, 3JL, 3JM, 3JN, 3JO, 3JP, 3JQ, 3JR, 3JS, 3JT, 3JU, 3JV, 3JW, 3JX, 3JY, 3JZ, 3KA, 3KB, 3KC, 3KD, 3KE, 3KF, 3KG, 3KH, 3KI, 3KJ, 3KK, 3KL, 3KM, 3KN, 3KO, 3KP, 3KQ, 3KR, 3KS, 3KT, 3KU, 3KV, 3KW, 3KX, 3KY, 3KZ, 3LA, 3LB, 3LC, 3LD, 3LE, 3LF, 3LG, 3LH, 3LI, 3LJ, 3LK, 3LM, 3LN, 3LO, 3LP, 3LQ, 3LR, 3LS, 3LT, 3LU, 3LV, 3LW, 3LX, 3LY, 3LZ, 3MA, 3MB, 3MC, 3MD, 3ME, 3MF, 3MG, 3MH, 3MI, 3MJ, 3MK, 3ML, 3MM, 3MN, 3MO, 3MP, 3MQ, 3MR, 3MS, 3MT, 3MU, 3MV, 3MW, 3MX, 3MY, 3MZ, 3NA, 3NB, 3NC, 3ND, 3NE, 3NF, 3NG, 3NH, 3NI, 3NJ, 3NK, 3NL, 3NM, 3NN, 3NO, 3NP, 3NQ, 3NR, 3NS, 3NT, 3NU, 3NV, 3NW, 3NX, 3NY, 3NZ, 3OA, 3OB, 3OC, 3OD, 3OE, 3OF, 3OG, 3OH, 3OI, 3OJ, 3OK, 3OL, 3OM, 3ON, 3OO, 3OP, 3OQ, 3OR, 3OS, 3OT, 3OU, 3OV, 3OW, 3OX, 3OY, 3OZ, 3PA, 3PB, 3PC, 3PD, 3PE, 3PF, 3PG, 3PH, 3PI, 3PJ, 3PK, 3PL, 3PM, 3PN, 3PO, 3PP, 3PQ, 3PR, 3PS, 3PT, 3PU, 3PV, 3PW, 3PX, 3PY, 3PZ, 3QA, 3QB, 3QC, 3QD, 3QE, 3QF, 3QG, 3QH, 3QI, 3QJ, 3QK, 3QL, 3QM, 3QN, 3QO, 3QP, 3QQ, 3QR, 3QS, 3QT, 3QU, 3QV, 3QW, 3QX, 3QY, 3QZ, 3RA, 3RB, 3RC, 3RD, 3RE, 3RF, 3RG, 3RH, 3RI, 3RJ, 3RK, 3RL, 3RM, 3RN, 3RO, 3RP, 3RQ, 3RR, 3RS, 3RT, 3RU, 3RV, 3RW, 3RX, 3RY, 3RZ, 3SA, 3SB, 3SC, 3SD, 3SE, 3SF, 3SG, 3SH, 3SI, 3SJ, 3SK, 3SL, 3SM, 3SN, 3SO, 3SP, 3SQ, 3SR, 3SS, 3ST, 3SU, 3SV, 3SW, 3SX, 3SY, 3SZ, 3TA, 3TB, 3TC, 3TD, 3TE, 3TF, 3TG, 3TH, 3TI, 3TJ, 3TK, 3TL, 3TM, 3TN, 3TO, 3TP, 3TQ, 3TR, 3TS, 3TT, 3TU, 3TV, 3TW, 3TX, 3TY, 3TZ, 3UA, 3UB, 3UC, 3UD, 3UE, 3UF, 3UG, 3UH, 3UI, 3UJ, 3UK, 3UL, 3UM, 3UN, 3UO, 3UP, 3UQ, 3UR, 3US, 3UT, 3UU, 3UV, 3UW, 3UX, 3UY, 3UZ, 3VA, 3VB, 3VC, 3VD, 3VE, 3VF, 3VG, 3VH, 3VI, 3VJ, 3VK, 3VL, 3VM, 3VN, 3VO, 3VP, 3VQ, 3VR, 3VS, 3VT, 3VU, 3VV, 3VW, 3VX, 3VY, 3VZ, 3WA, 3WB, 3WC, 3WD, 3WE, 3WF, 3WG, 3WH, 3WI, 3WJ, 3WK, 3WL, 3WM, 3WN, 3WO, 3WP, 3WQ, 3WR, 3WS, 3WT, 3WU, 3WV, 3WW, 3WX, 3WY, 3WZ, 3XA, 3XB, 3XC, 3XD, 3XE, 3XF, 3XG, 3XH, 3XI, 3XJ, 3XK, 3XL, 3XM, 3XN, 3XO, 3XP, 3XQ, 3XR, 3XS, 3XT, 3XU, 3XV, 3XW, 3XX, 3XY, 3XZ, 3YA, 3YB, 3YC, 3YD, 3YE, 3YF, 3YG, 3YH, 3YI, 3YJ, 3YK, 3YL, 3YM, 3YN, 3YO, 3YP, 3YQ, 3YR, 3YS, 3YT, 3YU, 3YV, 3YW, 3YX, 3YY, 3YZ, 3ZA, 3ZB, 3ZC, 3ZD, 3ZE, 3ZF, 3ZG, 3ZH, 3ZI, 3ZJ, 3ZK, 3ZL, 3ZM, 3ZN, 3ZO, 3ZP, 3ZQ, 3ZR, 3ZS, 3ZT, 3ZU, 3ZV, 3ZW, 3ZX, 3ZY, 3ZZ, 3AA, 3AB, 3AC, 3AD, 3AE, 3AF, 3AG, 3AH, 3AI, 3AJ, 3AK, 3AL, 3AM, 3AN, 3AO, 3AP, 3AQ, 3AR, 3AS, 3AT, 3AU, 3AV, 3AW, 3AX, 3AY, 3AZ, 3BA, 3BB, 3BC, 3BD, 3BE, 3BF, 3BG, 3BH, 3BI, 3BJ, 3BK, 3BL, 3BM, 3BN, 3BO, 3BP, 3BQ, 3BR, 3BS, 3BT, 3BU, 3BV, 3BW, 3BX, 3BY, 3BZ, 3CA, 3CB, 3CC, 3CD, 3CE, 3CF, 3CG, 3CH, 3CI, 3CJ, 3CK, 3CL, 3CM, 3CN, 3CO, 3CP, 3CQ, 3CR, 3CS, 3CT, 3CU, 3CV, 3CW, 3CX, 3CY, 3CZ, 3DA, 3DB, 3DC, 3DD, 3DE, 3DF, 3DG, 3DH, 3DI, 3DJ, 3DK, 3DL, 3DM, 3DN, 3DO, 3DP, 3DQ, 3DR, 3DS, 3DT, 3DU, 3DV, 3DW, 3DX, 3DY, 3DZ, 3EA, 3EB, 3EC, 3ED, 3EE, 3EF, 3EG, 3EH, 3EI, 3EJ, 3EK, 3EL, 3EM, 3EN, 3EO, 3EP, 3EQ, 3ER, 3ES, 3ET, 3EU, 3EV, 3EW, 3EX, 3EY, 3EZ, 3FA, 3FB, 3FC, 3FD, 3FE, 3FF, 3FG, 3FH, 3FI, 3FJ, 3FK, 3FL, 3FM, 3FN, 3FO, 3FP, 3FQ, 3FR, 3FS, 3FT, 3FU, 3FV, 3FW, 3FX, 3FY, 3FZ, 3GA, 3GB, 3GC, 3GD, 3GE, 3GF, 3GG, 3GH, 3GI, 3GJ, 3GK, 3GL, 3GM, 3GN, 3GO, 3GP, 3GQ, 3GR, 3GS, 3GT, 3GU, 3GV, 3GW, 3GX, 3GY, 3GZ, 3HA, 3HB, 3HC, 3HD, 3HE, 3HF, 3HG, 3HH, 3HI, 3HJ, 3HK, 3HL, 3HM, 3HN, 3HO, 3HP, 3HQ, 3HR, 3HS, 3HT, 3HU, 3HV, 3HW, 3HX, 3HY, 3HZ, 3IA, 3IB, 3IC, 3ID, 3IE, 3IF, 3IG, 3IH, 3II, 3IJ, 3IK, 3IL, 3IM, 3IN, 3IO, 3IP, 3IQ, 3IR, 3IS, 3IT, 3IU, 3IV, 3IW, 3IX, 3IY, 3IZ, 3JA, 3JB, 3JC, 3JD, 3JE, 3JF, 3JG, 3JH, 3JI, 3JJ, 3JK, 3JL, 3JM, 3JN, 3JO, 3JP, 3JQ, 3JR, 3JS, 3JT, 3JU, 3JV, 3JW, 3JX, 3JY, 3JZ, 3KA, 3KB, 3KC, 3KD, 3KE, 3KF, 3KG, 3KH, 3KI, 3KJ, 3KK, 3KL, 3KM, 3KN, 3KO, 3KP, 3KQ, 3KR, 3KS, 3KT, 3KU, 3KV, 3KW, 3KX, 3KY, 3KZ, 3LA, 3LB, 3LC, 3LD, 3LE, 3LF, 3LG, 3LH, 3LI, 3LJ, 3LK, 3LM, 3LN, 3LO, 3LP, 3LQ, 3LR, 3LS, 3LT, 3LU, 3LV, 3LW, 3LX, 3LY, 3LZ, 3MA, 3MB, 3MC, 3MD, 3ME, 3MF, 3MG, 3MH, 3MI, 3MJ, 3MK, 3ML, 3MM, 3MN, 3MO, 3MP, 3MQ, 3MR, 3MS, 3MT, 3MU, 3MV, 3MW, 3MX, 3MY, 3MZ, 3NA, 3NB, 3NC, 3ND, 3NE, 3NF, 3NG, 3NH, 3NI, 3NJ, 3NK, 3NL, 3NM, 3NN, 3NO, 3NP, 3NQ, 3NR, 3NS, 3NT, 3NU, 3NV, 3NW, 3NX, 3NY, 3NZ, 3OA, 3OB, 3OC, 3OD, 3OE, 3OF, 3OG, 3OH, 3OI, 3OJ, 3OK, 3OL, 3OM, 3ON, 3OO, 3OP, 3OQ, 3OR, 3OS, 3OT, 3OU, 3OV, 3OW, 3OX, 3OY, 3OZ, 3PA, 3PB, 3PC, 3PD, 3PE, 3PF, 3PG, 3PH, 3PI, 3PJ, 3PK, 3PL, 3PM, 3PN, 3PO, 3PP, 3PQ, 3PR, 3PS, 3PT, 3PU, 3PV, 3PW, 3PX, 3PY, 3PZ, 3QA, 3QB, 3QC, 3QD, 3QE, 3QF, 3QG, 3QH, 3QI, 3QJ, 3QK, 3QL, 3QM, 3QN, 3QO, 3QP, 3QQ, 3QR, 3QS, 3QT, 3QU, 3QV, 3QW, 3QX, 3QY, 3QZ, 3RA, 3RB, 3RC, 3RD, 3RE, 3RF, 3RG, 3RH, 3RI, 3RJ, 3RK, 3RL, 3RM, 3RN, 3RO, 3RP, 3RQ, 3RR, 3RS, 3RT, 3RU, 3RV, 3RW, 3RX, 3RY, 3RZ, 3SA, 3SB, 3SC, 3SD, 3SE, 3SF, 3SG, 3SH, 3SI, 3SJ, 3SK, 3SL, 3SM, 3SN, 3SO, 3SP, 3SQ, 3SR, 3SS, 3ST, 3SU, 3SV, 3SW, 3SX, 3SY, 3SZ, 3TA, 3TB, 3TC, 3TD, 3TE, 3TF, 3TG, 3TH, 3TI, 3TJ, 3TK, 3TL, 3TM, 3TN, 3TO, 3TP, 3TQ, 3TR, 3TS, 3TT, 3TU, 3TV, 3TW, 3TX, 3TY, 3TZ, 3UA, 3UB, 3UC, 3UD, 3UE, 3UF, 3UG, 3UH, 3UI, 3UJ, 3UK, 3UL, 3UM, 3UN, 3UO, 3UP, 3UQ, 3UR, 3US, 3UT, 3UU, 3UV, 3UW, 3UX, 3UY, 3UZ, 3VA, 3VB, 3VC, 3VD, 3VE, 3VF, 3VG, 3VH, 3VI, 3VJ, 3VK, 3VL, 3VM, 3VN, 3VO, 3VP, 3VQ, 3VR, 3VS, 3VT, 3VU, 3VV, 3VW, 3VX, 3VY, 3VZ, 3WA, 3WB, 3WC, 3WD, 3WE, 3WF, 3WG, 3WH, 3WI, 3WJ, 3WK, 3WL, 3WM, 3WN, 3WO, 3WP, 3WQ, 3WR, 3WS, 3WT, 3WU, 3WV, 3WW, 3WX, 3WY, 3WZ, 3XA, 3XB, 3XC, 3XD, 3XE, 3XF, 3XG, 3XH, 3XI, 3XJ, 3XK, 3XL, 3XM, 3XN, 3XO, 3XP, 3XQ, 3XR, 3XS, 3XT, 3XU, 3XV, 3XW, 3XX, 3XY, 3XZ, 3YA, 3YB, 3YC, 3YD, 3YE, 3YF, 3YG, 3YH, 3YI, 3YJ, 3YK, 3YL, 3YM, 3YN, 3YO, 3YP, 3YQ, 3YR, 3YS, 3YT, 3YU, 3YV, 3YW, 3YX, 3YY, 3YZ, 3ZA, 3ZB, 3ZC, 3ZD, 3ZE, 3ZF, 3ZG, 3ZH, 3ZI, 3ZJ, 3ZK, 3ZL, 3ZM, 3ZN, 3ZO, 3ZP, 3ZQ, 3ZR, 3ZS, 3ZT, 3ZU, 3ZV, 3ZW, 3ZX, 3ZY, 3ZZ, 3AA, 3AB, 3AC, 3AD, 3AE, 3AF, 3AG, 3AH, 3AI, 3AJ, 3AK, 3AL, 3AM, 3AN, 3AO, 3AP, 3AQ, 3AR, 3AS, 3AT, 3AU, 3AV, 3AW, 3AX, 3AY, 3AZ, 3BA, 3BB, 3BC, 3BD, 3BE, 3BF, 3BG, 3BH, 3BI, 3BJ, 3BK, 3BL, 3BM, 3BN, 3BO, 3BP, 3BQ, 3BR, 3BS, 3BT, 3BU, 3BV, 3BW, 3BX, 3BY, 3BZ, 3CA, 3CB, 3CC, 3CD, 3CE, 3CF, 3CG, 3CH, 3CI, 3CJ, 3CK, 3CL, 3CM, 3CN, 3CO, 3CP, 3CQ, 3CR, 3CS, 3CT, 3CU, 3CV, 3CW, 3CX, 3CY, 3CZ, 3DA, 3DB, 3DC, 3DD, 3DE, 3DF, 3DG, 3DH, 3DI, 3DJ, 3DK, 3DL, 3DM, 3DN, 3DO, 3DP, 3DQ, 3DR, 3DS, 3DT, 3DU, 3DV, 3DW, 3DX, 3DY, 3DZ, 3EA, 3EB, 3EC, 3ED, 3EE, 3EF, 3EG, 3EH, 3EI, 3EJ, 3EK, 3EL, 3EM, 3EN, 3EO, 3EP, 3EQ, 3ER, 3ES, 3ET, 3EU, 3EV, 3EW, 3EX, 3EY, 3EZ, 3FA, 3FB, 3FC, 3FD, 3FE, 3FF, 3FG, 3FH, 3FI, 3FJ, 3FK, 3FL, 3FM, 3FN, 3FO, 3FP, 3FQ, 3FR, 3FS, 3FT, 3FU, 3FV, 3FW, 3FX, 3FY, 3FZ, 3GA, 3GB, 3GC, 3GD, 3GE, 3GF, 3GG, 3GH, 3GI, 3GJ, 3GK, 3GL, 3GM, 3GN, 3GO, 3GP, 3GQ, 3GR, 3GS, 3GT, 3GU, 3GV, 3GW, 3GX, 3GY, 3GZ, 3HA, 3HB, 3HC, 3HD, 3HE, 3HF, 3HG, 3HH, 3HI, 3HJ, 3HK, 3HL, 3HM, 3HN, 3HO, 3HP, 3HQ, 3HR, 3HS, 3HT, 3HU, 3HV, 3HW, 3HX, 3HY, 3HZ, 3IA, 3IB, 3IC, 3ID, 3IE, 3IF, 3IG, 3IH, 3II, 3IJ, 3IK, 3IL, 3IM, 3IN, 3IO, 3IP, 3IQ, 3IR, 3IS, 3IT, 3IU, 3IV, 3IW, 3IX, 3IY, 3IZ, 3JA, 3JB, 3JC, 3JD, 3JE, 3JF, 3JG, 3JH, 3JI, 3JJ, 3JK, 3JL, 3JM, 3JN, 3JO, 3JP, 3JQ, 3JR, 3JS, 3JT, 3JU, 3JV, 3JW, 3JX, 3JY, 3JZ, 3KA, 3KB, 3KC, 3KD, 3KE, 3KF, 3KG, 3KH, 3KI, 3KJ, 3KK, 3KL, 3KM, 3KN, 3KO, 3KP, 3KQ, 3KR, 3KS, 3KT, 3KU, 3KV, 3KW, 3KX, 3KY, 3KZ, 3LA, 3LB, 3LC, 3LD, 3LE, 3LF, 3LG, 3LH, 3LI, 3LJ, 3LK, 3LM, 3LN, 3LO, 3LP, 3LQ, 3LR, 3LS, 3LT, 3LU, 3LV, 3LW, 3LX, 3LY, 3LZ, 3MA, 3MB, 3MC, 3MD, 3ME, 3MF, 3MG, 3MH, 3MI, 3MJ, 3MK, 3ML, 3MM, 3MN, 3MO, 3MP, 3MQ, 3MR, 3MS, 3MT, 3MU, 3MV, 3MW, 3MX, 3MY, 3MZ, 3NA, 3NB, 3NC, 3ND, 3NE, 3NF, 3NG, 3NH, 3NI, 3NJ, 3NK, 3NL, 3NM, 3NN, 3NO, 3NP, 3NQ, 3NR, 3NS, 3NT, 3NU, 3NV, 3NW, 3NX, 3NY, 3NZ, 3OA, 3OB, 3OC, 3OD, 3OE, 3OF, 3OG, 3OH, 3OI, 3OJ, 3OK, 3OL, 3OM, 3ON, 3OO, 3OP, 3OQ, 3OR, 3OS, 3OT, 3OU, 3OV, 3OW, 3OX, 3OY, 3OZ, 3PA, 3PB, 3PC, 3PD, 3PE, 3PF, 3PG, 3PH, 3PI, 3PJ, 3PK, 3PL, 3PM, 3PN, 3PO, 3PP, 3PQ, 3PR, 3PS, 3PT, 3PU, 3PV, 3PW, 3PX, 3PY, 3PZ, 3QA, 3QB, 3QC, 3QD, 3QE, 3QF, 3QG, 3QH, 3QI, 3QJ, 3QK, 3QL, 3QM, 3QN, 3QO, 3QP, 3QQ, 3QR, 3QS, 3QT, 3QU, 3QV, 3QW, 3QX, 3QY, 3QZ, 3RA, 3RB, 3RC, 3RD, 3RE, 3RF, 3RG, 3RH, 3RI, 3RJ, 3RK, 3RL, 3RM, 3RN, 3RO, 3RP, 3RQ, 3RR, 3RS, 3RT, 3RU, 3RV, 3RW, 3RX, 3RY, 3RZ, 3SA, 3SB, 3SC, 3SD, 3SE, 3SF, 3SG, 3SH, 3SI, 3SJ, 3SK, 3SL, 3SM, 3SN, 3SO, 3SP, 3SQ, 3SR, 3SS, 3ST, 3SU, 3SV, 3SW, 3SX, 3SY, 3SZ, 3TA, 3TB, 3TC, 3TD, 3TE, 3TF, 3TG, 3TH, 3TI, 3TJ, 3TK, 3TL, 3TM, 3TN, 3TO, 3TP		

Continuing Medical Education

November 7-8 & November 21-22

1988 Perinatal Conference: Graviditas at Risk

Place: Asheville and Wrightsville Beach

Credit: 1.4 CEU

Fee: NC Registrants - \$55; Others - \$75

Info: Registrar: Department of OB/GYN, Bowman Gray School of Medicine, Winston-Salem, 27103. 919/748-3662

November 17-19

DUMC Alumni Weekend

Place: Durham

Credit: Category I, CEU

Info: Cindi Easterling, Office of CME, DUMC, Durham 27710. 919/684-6878

December 1-3

The First Regional Conference on the Fragile X Syndrome: A New Insight Into Mental Retardation, Learning Disorders, and Autism

Place: Durham

Credit: 13 hours Category I AMA, 1.3 CEU

Info: Cindi Easterling, Office of CME, DUMC, Durham 27710. 919/684-6878

December 2-3

3rd Annual Sports Medicine Symposium

Place: Chapel Hill

Credit: 9.5 hours Category I AMA, AAFP

Info: Office of CME, UNC School of Medicine, CB# 7000, 231 MacNider Bldg. Chapel Hill 27599-7000. 919/962-2118

December 3

UNC Ophthalmology Residents Day

Place: Chapel Hill

Credit: 6 hours, Category I AMA

Fee: None

Info: Baird S. Grimson, M.D., Department of Ophthalmology, CB#7040, 617 Clinical Science Bldg UNC, Chapel Hill 27599-7040. 919/966-5296.

December 4-7

Small Group and Lecture Skills

Place: Rougemont

Info: Cindi Easterling, Office of CME, DUMC, Box 3108, Durham 27710. 919/684-6878

December 6

1988 Series - Duke Tuesday

Place: Durham

Credit: 5 hours, Category I AMA; 0.5 CEU

Info: Cindi Easterling, Office of CME, DUMC, Box 3108, Durham 27710. 919/684-6878

December 8 & 9

Lasers in Surgery/Lasers for Nurses

Place: Greenville

Credit: 14.5 hours Category I AMA

Info: Mary C. Valand, Office of Continuing Medical Education, P.O. Box 7224, Greenville 27835-7224. 919/551-5200

January 8-11

Educational Negotiations: Content and Process

Place: Rougemont

Credit: 20 hours Category I AMA, 2.0 CEU, 20 AAFP

Info: Cindi Easterling, Office of CME, DUMC, Durham 27710. 919/684-6878

January 9-13

Diagnostic Ultrasound: Obstetrics

Place: Winston-Salem

Credit: 7 hours per day, Category I AMA

Info: Registrar, Ultrasound Center, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4505

January 11-14

Therapeutic ERCP - International Symposium

Place: Durham

Credit: 23 hours Category I AMA, 2.3 CEU

Info: Cindi Easterling, Office of CME, DUMC, Durham 27710. 919/684-6878

January 16-20

Diagnostic Ultrasound - Radiology (Abdomen)

Place: Winston-Salem

Credit: 7 hours per day, Category I AMA

Info: Registrar, Ultrasound Center, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4505

January 20

Neurology Day

Place: Greenville

Credit: 6.5 hours Category I AMA

Info: Mary C. Valand, Office of CME, ECU School of Medicine, Greenville 27835-7224. 919/551-5200

January 23-27

Diagnostic Ultrasound: Neurovascular

Place: Winston-Salem

Credit: 7 hours per day Category I AMA

Info: Registrar, Ultrasound Center, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4505

January 30-31

Diagnostic Ultrasound: Transcranial Doppler

Place: Winston-Salem

Credit: 7 hours per day, Category I AMA

Info: Registrar, Ultrasound Center, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4505

New Members

Brunswick

Mark David Hilz (EM), 111 Mullett, Holden Beach 28462
Caldwell

Frank Russell Graybeal, Jr. (DR), PO Box 659, Lenoir 28645

Durham-Orange

Michael David Bates (STUDENT), Box 3287, DUMC, Durham 27710

Nancy Custer Chescheir (OBG), UNC, 214 MacNider Bldg., Div. Maternal-Fetal Med., Chapel Hill 27599

William Dearaujo (STUDENT), 302 Forest Ct., Carrboro 27510

Larry John Fowler (PTH), 333 Wesley Dr., Chapel Hill 27514

Theodor Thomas Herwig (RESIDENT), 1438 New Castle D-2, Durham 27704

Peter Thomas Janicki (RESIDENT), DUMC, Div. of Otolaryngology, Durham 27710

Lydia Marie Jeffries (RESIDENT), 917 N. Buchanan, Durham 27701

John Turner Kihm (RESIDENT), Box 3072, DUMC, Durham 27710

Kim Edward Koger (STUDENT), 2628 Chapel Hill Rd., Durham 27707

Charles Gordon Lampley (STUDENT), 100 Rock Creek Dr. M-206, Carrboro 27510

Richard Adam Leder (RESIDENT), 4800 University Dr, Apt. 15-O, Durham 27707

Mary Alice Marshbanks (STUDENT), 21 Lanark Rd., Chapel Hill 27514

Albert Jackson Naftel, JR. (RESIDENT), NC Memorial Hospital, Chapel Hill 27514

James Edward Nitka (RESIDENT), 1426 Vanguard Pl., Durham 27713

Spencer Ian Rozin (RESIDENT), 1321 New Castle Rd, Apt. L-8, Durham 27704

Mary Lynne Segars (RESIDENT), 112 Mallard Ct., Chapel Hill 27514

Andrew Brian Wallach (STUDENT), 101-A Mistywoods Cir., Chapel Hill 27514

Forsyth-Stokes-Davie

Nicholas Bandarenko, III (STUDENT), 1232 Forsyth St., Winston-Salem 27101

David McKenzie Clark (STUDENT), 1631-I Northwest Blvd., Winston-Salem 27104

Joe Carey Ellington, Jr., (STUDENT), 816 Gales Ave., Winston-Salem 27103

Gregory Colin Hinn (STUDENT), 335 Crafton St., Apt. #4, Winston-Salem 27103

Jeffrey Franklin Patton (RESIDENT), 630-F Rugby Row, Winston-Salem 27106

Marnie Elizabeth Stone (STUDENT), 1651-G Northwest Blvd., Winston-Salem 27104

John Matthew Whitley (STUDENT), 3261-E Zuider Zee Dr., Winston-Salem 27127

Mark Anastacio Yap (RESIDENT), 806 Brickwood Pl., Winston-Salem 27127

Nash

Nelson T. Macedo (NS), 2416 Professional Dr., PO Box 7546, Rocky Mount 27801

Vinod Chitta Vallabh (IM), 117 Foy Dr., PO Box 7366, Rocky Mount 27804

Pitt

Steven Fredrick Chapman (RESIDENT), 106 Berkshire Rd., Greenville 27858

William Douglas Clark (STUDENT), 2703 Mulberry Ln., Arlington Square Apts., Greenville 27858

Veronica E. Curtin (STUDENT), 205 Hillcrest Dr., Greenville 27858

Timothy Nicholas Patselas (RESIDENT), 209 1/2 N. Jarvis St., Greenville 27858

Thomas Michael Sherrill (STUDENT), 201 Pineridge Dr., Greenville 27834

Polk

Richard Ryan Gentry (R), PO Box 578, Columbus 28722

Robeson

Van Edward Helms (EM), 2504 Rowland Ave., Lumberton 28358

Scotland

Bradford Keith Faulkenberry (FP), 500-A Lauchwood Dr., Laurinburg 28352

Surry-Yadkin

Mohammed Azhar Athar (FP), 146 Renfro St., Mt. Airy 27030

Watauga

North Carolina Medical Journal

Subscribe for yourself or a friend

Name _____

Address _____

Zip _____

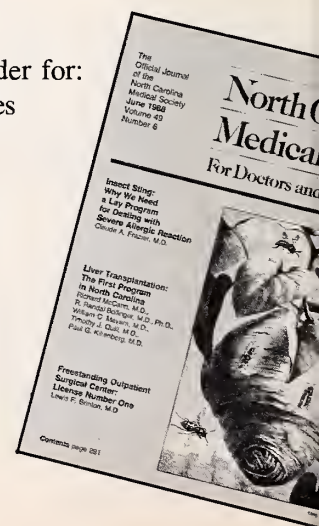
Please enclose a check or money order for:

☐ \$12.60 (NC Residents; this includes 5% sales tax)

☐ \$12.00 (out of state subscribers)

☐ New ☐ Renewal

Send to NCMJ, Box 3910 DUMC, Durham 27710. (919/684-5728)



Classified Ads

50-YEAR-OLD PRACTICE FOR SALE - Physician retiring. 510 N.W. Broad Street, Southern Pines, NC. Phone 919/692-6022 or 919/295-6891.

GENERAL SURGEON needs an associate surgeon in a multi-specialty outpatient clinic and outpatient surgery facility. Brinton Surgical Center, P.A., 603 East Center Avenue, Mooresville, NC 28115.

PHYSICIANS OFFICE FOR SALE. Located near Research Triangle on Hwy. 55 in Apex. Building will accommodate two physicians. Reply to Eddie Stiles, Box A, Apex, NC 27502 or call 919/362-7374.

NORTH CAROLINA: Attending faculty position available December 1, 1988 at the assistant professor level or above, in tenure track, depending upon candidate's qualifications. Emergency medicine residency training or board preparation preferred. Emergency department has fully autonomous academic departmental status. Emergency medicine residency began July 1983. Hospital designated as Level I regional trauma center. Helicopter service began April 1985. Compensation competitive, plus excellent fringe benefits. Contact: E. Jackson Allison, Jr., MD/MPH, FACEP, Professor & Chairman, Department of Emergency Medicine, East Carolina University School of Medicine, Pitt County Memorial Hospital, Greenville, NC 27858-4354; or call 919/551-4757. Federal Law requires proper documentation of identity and employability at the time of employment. It is requested this documentation be included with your application. ECU is an AA/EEO employer, and encourages applications from qualified women and minorities.

INTERNIST, with or without subspecialty - to associate with nephrologist in coastal North Carolina. Riverfront community near beaches. 200 bed hospital with most surgical specialties. Send CV and cover letter to Code 90, NCMJ, Box 3910, DUMC, Durham, NC 27710.

SEEKING BE/BC NEUROSURGEON to join popular two member neurosurgical group located in southeastern metro area near Smokey Mountains and large lake system. Supported by three progressive hospitals. Sound housing values, comfortable lifestyles with all amenities available. Contact Mary Wynkoop at Tyler & Co., 9040 Roswell Rd., Atlanta, GA 30350. Or call 404/641-6411.

MEDICAL OFFICES FOR LEASE - Several medical offices available at Glenwood Professional Village. Former

practitioners include pediatricians, internists and OB/GYN. Purchase option available. Call 919/872-4924.

FOR SALE - HOLTER: Complete two channel Datamedix Pegasus Ambulatory Monitoring System with printer and two monitors (AMUs). In excellent condition. Send inquiries to Code 95, NCMJ, Box 3910, DUMC, Durham, NC 27710 or call 919/629-4176.

FAMILY PRACTICE. BE/BC. Southeastern United States. Urgent care practice. Comprehensive benefits, competitive compensation and bonus. Malpractice coverage, advancement potential and flexible scheduling. Resume to James Hacker, SEI Health Services, 7725 Little Ave., Charlotte, NC 28226 or call 704/542-7100.

NORTH CAROLINA: Full-time or part-time Emergency Department physician. Join three fulltimers. Modern ED, 30,000 visits, pleasant community, Blue Ridge foothills, near Piedmont Triad. Hospital contractual with self-billing. Call C. V. Stabler, MD, ED Director, Northern Hospital of Surry County, Mount Airy 27030. 919/789-9541.

NORTH RALEIGH family practice for sale. Established 25 years. Retiring. Available January 1989. No OB, medicaid or HMO. 919/782-5601 after 6:00 pm for details.

EMERGENCY DEPARTMENT DIRECTORSHIPS, full-time and part-time opportunities available in Illinois, Indiana, Iowa, Kentucky, Michigan, Mississippi, New York, Ohio, Tennessee, Virginia, West Virginia, and Wisconsin. Guaranteed hourly rate and malpractice insurance. Benefit package available. Contact Emergency Consultants, Inc., 2240 South Airport Road, Room 33, Traverse City, MI 49684. 1-800/253-1795 or in Michigan 1-800/632-3496.

NORTH CAROLINA - Freestanding medical center seeks full-time physician to join staff. Please send CV to Luanne McCoy, First Health, 220 Beatty Drive, Belmont, NC 28012. 704/827-0253.

HICKORY - PSYCHIATRIST: 2nd M.D. needed to join multi-disciplinary fee-for-service group. Live in 1987 "All America City" and admit, as private attending, to three local hospitals with varied units (child, adult, adolescent A&D, eating disorder, pain...) that serve four + counties. Develop outpatient satellites. Competitive 1st

year salary guaranteed plus incentive. Call toll free in NC 1-800/537-9117 to request information packet, or send vitae to Philip J. Schmitt, M.D., Medical Director, Piedmont Treatment Center, P.O. Box 9149, Hickory, NC 28603.

FAMILY PRACTICE ESTABLISHED past 25 years seeking BC/BE physician to phase out senior partner in dual practice. Excellent hospital facilities in socially stimulating community. No obstetrics. CV to J. E. Minick, M.D., 5029 Country Club Road, Winston-Salem, NC 27104 or call 919/768-9515.

NEVADA: Family Practice, Internal Medicine, Pediatrics, OB-GYN, Radiology: Immediate openings in several rural communities; guaranteed salary, full benefits including paid malpractice, and possible university affiliation. No fee to applicant. Contact Sherry Semiatin Office of Rural Health, Reno, Nevada 89557-0046. 702/784-484.

NCMJ Classified Ads...

Send your ad to:

Editorial Assistant
NCMJ
Box 3910 Duke University Medical Center
Durham 27710

Please specify the number of months you'd like your ad to run, and tell us your name, address, and phone number.

Closing date is the 25th of the second prior month.

Rates:

NCMS members, \$15/25 words, plus 25¢ each additional word;
Others, \$25/25 words, plus 25¢ each additional word.

Send no money; you will be billed.
For further information, call 919/684-5728.

Index to Advertisers

Baron Financial	561	Medic Computer Systems	593
Burroughs Wellcome	573	Medical Mutual Insurance Co. of NC	601
Campbell Laboratories	592	Medical Protective Company	581
Carolina Consultation Center	585	MONY	562
Caremark Homecare	610-611	Omohundro Communications	608
Charlotte Treatment Center	595	Roche Laboratories	579, 605, Covers 3-4
Coast Realty & Construction Co.	580	Teer House	592
Compensation Consultant	567	Unique Boutique	586
Crumpton Company	Cover 2	U.S. Air Force	598
Eli Lilly & Company	590	U.S. Army Reserve	582, 608b
Hinrichs Financial Group	568	U.S. Navy Reserve	572
Marion Laboratories	608, 608a	Winchester Surgical Supply	598

Journal
of the
North Carolina
Medical Society
December 1988
Volume 49
Number 12

North Carolina Medical
Journal
UCSF LIBRARY
Received on: 12-27-88

North Carolina Medical Journal

For Doctors and their Patients

Coping with Separation and Divorce

Joanne E. Turnbull, Ph.D.

Feeding the Elderly Patient

Walter J. Pories, M.D.

The Model Health Care Provider Liability Reform Act: A Summary and Commentary

James P. Weaver, M.D.
Julian D. Bobbitt, Jr., J.D.
and Edward C. Halperin, M.D.

Medical Malpractice and the Potential for Alternative Dispute Resolution

Thomas B. Metzloff, J.D.,
and David Warren, J.D.



The Direct Line To Security And Peace of Mind



CRUMPTON COMPANY

Many N.C. Physicians participate in the
**Crumpton Plan of Disability Income
Protection —**

a plan that provides income when you cannot!

Because **we care** we have

- Benefits designed to meet today's needs
- Personalized claim service
- New broadened portfolio of insurance products

NOT PROMISES BUT PERFORMANCE
from the Disability Income Specialists who
have served N.C. Professionals for nearly
50 years!

Take a few minutes to call us today for
information on our expanded products and
services.

You will be glad you did!



CRUMPTON COMPANY
PROFESSIONAL INSURANCE ADMINISTRATORS
POST OFFICE BOX 51939, DURHAM, NC 27717-1939
919/493-2441 800/672-1674 (NC) 919/489-7380 (FAX)

STAFF

Eugene A. Stead, Jr., M.D.
Rt. 1, Box 194, Bullock
EDITOR
919/693-4531
Francis A. Neelon, M.D.
Durham
ASSOCIATE EDITOR
F. Maxton Mauney, Jr., M.D.
Asheville
ASSOCIATE EDITOR
Eben Alexander, Jr., M.D.
Winston-Salem
ASSOCIATE EDITOR
William B. Blythe, M.D.
Chapel Hill
ASSOCIATE EDITOR
Walter J. Pories, M.D.
Greenville
ASSOCIATE EDITOR
Edward C. Halperin, M.D.
Durham
ASSOCIATE EDITOR
Laurel Ferejohn
Durham
MANAGING EDITOR
919/684-5728

Jane Whalen
Durham
EDITORIAL ASSISTANT
George E. Moore
Raleigh
BUSINESS MANAGER

EDITORIAL BOARD

Charles W. Styron, M.D.
Raleigh
CHAIRMAN
Edwin W. Monroe, M.D.
Greenville
Robert W. Prichard, M.D.
Winston-Salem
Louis deS. Shaffner, M.D.
Winston-Salem
Jay Arena, M.D.
Durham
Jack Hughes, M.D.
Durham
William B. Blythe, M.D.
Chapel Hill
Margaret N. Harker, M.D.
Morehead City

The appearance of an advertisement in this publication does not constitute any endorsement of the subject or claims of the advertisement.

The Society is not to be considered as endorsing the views and opinions advanced by authors of papers delivered at the Annual Meeting or published in the official publication of the Society.
— *Constitution and Bylaws of the North Carolina Medical Society*, Chapter IV, Section 3, page 4.

NORTH CAROLINA MEDICAL JOURNAL

Box 3910, Duke University Medical Center, Durham, NC 27710 (919/684-5728), is owned and published by The North Carolina Medical Society under the direction of its Editorial Board. Copyright © The North Carolina Medical Society 1988. Address manuscripts and communications regarding editorial matters, advertising, subscription rates, etc., to the Managing Editor at the Durham address. All advertisements are accepted subject to the approval of a screening committee of the State Medical Journal Advertising Bureau, 711 South Blvd., Oak Park, Illinois 60302 and/or by a Committee of the Editorial Board of the North Carolina Medical Journal in respect to strictly local advertising. Instructions to authors appear in each issue (see table of contents). Annual Subscription, \$12.00 (+ tax in NC). Single copies, \$2.00. Publication office: The Ovid Bell Press, Inc., 1201-05 Bluff St., Fulton, MO 65251. *Second-class postage paid at Raleigh, North Carolina 27611 and additional mailing offices.* Postmaster: Send address changes to North Carolina Medical Society, 222 N. Person St., Raleigh, NC 27611.

NAVAL RESERVE PHYSICIAN

- Monthly Stipend for Physicians in training leading to qualifying as General/Orthopedic/Neurosurgeon or anesthesiologist.
- Loan repayment of up to \$20,000 for Board eligible General/Orthopedic surgeons and anesthesiologists.
- CME opportunities.
- Flexible drilling options.

*Promotion Opportunities

*Prestige

*For graduates of AMA approved
Medical Schools*

**CALL YOUR
NAVAL RESERVE FORCE
REPRESENTATIVE TODAY.**

1-800-443-6419



Keep those key employees in your corner.

MONY offers small businesses a series of benefit plans that can help keep your key employees happy.

And, that includes the most important employee of all. Yourself.

MONY'S BENEFIT PLANS INCLUDE:

Executive Bonus plans —

Motivate key employees with money you can deduct from your taxes.

Selective Executive plans —

Reward key employees with substantial future income.

Split Dollar plans —

See that key employees get additional life insurance at low cost.

Key Employee plans —

Protect your company in the event of the death of a key employee.

Business Continuation plans —

Provide for your heirs and the continuity of your business.

For more information about any of these plans, call or send in the coupon.

Send to: Sue Anne Schoonderwoerd (919)872-8666

MONY
FINANCIAL SERVICES

P.O. Box 95161
Raleigh, North Carolina 27625

Name

Address

City/State/Zip

Phone (W) (H)

The Mutual Life Insurance Company of New York, NY, NY.

MONY
FINANCIAL SERVICES

North Carolina Medical Journal

FOR DOCTORS AND THEIR PATIENTS

Contents / December 1988, Volume 49, Number 12

Cover drawing by Irene Roderick, Durham

MEDICO-LEGAL ISSUES

- 621 The Model Health Care Provider Liability Reform Act: A Summary and Commentary
James P. Weaver, Julian D. Bobbitt, Jr., and Edward C. Halperin
- 627 Medical Malpractice and the Potential for Alternative Dispute Resolution
Thomas B. Metzloff and David Warren

GERIATRIC MEDICINE

- 632 Feeding the Elderly Patient *Walter J. Pories*

EDITORIAL

- 639 Informed Consent *William A. Hensel*

FOR PATIENTS

- 641 Coping with Separation and Divorce *Joanne E. Turnbull*
- 645 When the Best Outcome Is Death *Marjorie A. Bowman*

SCIENTIFIC ARTICLE

- 651 Local Excision and Irradiation as Primary Treatment of Rectal Cancer
Joel Tepper, Charles Herbst, and Stephen Bernard

PUBLIC HEALTH

- 657 Look-Back: Transfusion-Acquired HIV Infection at Duke University Medical Center
Patti J. Allen and John A. Koepke

THE NAMES AND FACES OF MEDICINE

- 662 Marie's Disease *Carolyn A. Ellsworth and Francis A. Neelon*

CAROLINA PHYSICIANS BOOKSHELF

- 664 Book Review *Edited by Edward C. Halperin*

LETTERS TO THE EDITOR

BULLETIN BOARD

- 666 Classified Advertisements
- 668 Continuing Medical Education
- 668 New Members
- 669 Index to Advertisers
- 670 Annual Index, 1988: Author and Subject

The Number Of Blue Cross and Blue Shield Subscribers Is Reaching Epidemic Proportions.

More and more people are signing up for Blue Cross and Blue Shield coverage at a faster and faster rate. Today we have over a million subscribers in North Carolina.

And when you include subscribers' family members, the number is closer to two million. There are a lot of reasons for that success. But a large part of it is attributable to the variety of plans we offer. We provide a greater choice of group plans than any other carrier in the state. And we're giving



employers the opportunity to let each employee pick a plan that suits him or her best. We also offer coverage to people who don't qualify for group.

So next time you peek into your waiting room, chances are you'll be looking at a room full of our subscribers. Subscribers who have come to us for quality coverage and to you for quality care.



**Blue Cross
Blue Shield**
of North Carolina

The Choice Of Nearly
Two Million North Carolinians.
©1988 Blue Cross and Blue Shield of North Carolina



The Model Health Care Provider Liability Reform Act

A Summary and Commentary

James P. Weaver, M.D., Julian D. Bobbitt, Jr., J.D., Edward C. Halperin, M.D.

President Ronald Reagan called for a study of the medical liability problem in a 1986 message to Congress. The Department of Health and Human Services (HHS), directed by Secretary Otis R. Bowen, M.D., undertook such a study. The HHS task force was overseen by Undersecretary Don M. Newman. This task force has now issued its recommendations in the form of "The Model Health Care Provider Liability Reform Act." Secretary Bowen has sent each state governor as well as leaders of state legislatures this Act. It is intended to serve as an example for reform of state laws on medical liability.¹

The HHS proposal is a far reaching approach to the medical liability crisis. In this article, we will summarize the proposed Act. The summary is followed by commentaries by Dr. James Weaver, a thoracic surgeon practicing in Durham, and by Mr. Julian D. Bobbitt, Jr., the North Carolina Medical Society's legal counsel.

Summary of the Act

The Model Health Care Provider Liability Act would cover all physicians, pharmacists, dentists, nurses, hospitals, and health maintenance organizations. The Act is intended to foster two societal goals.² First, HHS wishes to ensure that those who are injured as a result of negligent conduct by a health care provider are swiftly compensated for injuries. Second the Model legislation is designed to correct some

aspects of the tort system which may impede the availability of competent and reasonably priced health care. In particular, the proposed legislation is aimed at minimizing costs that are unrelated to either compensation or the quality of medical care. HHS asserts that a significant portion of medical liability insurance costs arise from the unpredictability of the tort system. "Certain plaintiffs may receive large jury awards which are either out of proportion to the injuries that they suffered or do not reflect an actual malpractice. In contrast, other plaintiffs whose circumstances are equally compelling may receive little or no compensation . . . numerous studies have demonstrated that the transaction costs associated with tort litigation are substantial and are naturally passed on to the provider in the form of increased premiums."

The Act would create two avenues for dispute resolution. When a patient files a complaint and a physician responds, the court will be required to submit the matter to arbitration. The patient and the physician will select an arbitrator. If they are unable to agree, then the court will appoint a qualified arbitrator from a list designated by the governor. Presumably, a medico-legal speciality of malpractice arbitration would develop to fill the demand. Within six months of receiving the claim for arbitration, the arbitrator is required to file a decision. The court may, under reasonable circumstances, extend the time for the decision—but in no event may the matter remain in arbitration for longer than one year. If both parties accept the decision of the arbitrator, then the court would certify the judgment and there would be no appeal. If either party rejects the decision of the arbitrator, then the matter would be tried in court as if the arbitration had never taken place. The arbitrator's decision would not be admissible as evidence in such litigation. The Act attempts to minimize the likelihood that patients and physicians would reject an arbitrator's decision. If one party rejects the arbitrator's decision and, following a trial, ends up no better off than under the arbitrator's decision, then that party is obligated to pay the attorney's fees for all legal work incurred after the arbitration proceeding.

From The Durham Clinic, 1830 Hillandale Road, Durham 27710 (JPW); Smith, Anderson, Blout, Dorsett, Mitchell, and Jernigan, P.O. Box 12807, Raleigh 27605 (JDB); Division of Radiation Oncology, Duke University Medical Center, Durham 27710 (ECH). Reprint requests to Dr. Halperin at the Duke address.

The Model legislation accepts the common law definition for failure to provide informed consent. A patient must prove that he or she had not been fully informed of all the significant risks of a medical procedure, and that if he or she had been informed, he or she would not have undergone the treatment or would have undergone a different treatment. Patients may adopt an alternative approach—that is to try to prove that a reasonable person in the patient's position would not have undergone the treatment if suitably informed of all significant perils.

The Model Act rejects the legal principle which prohibits the introduction of evidence that a patient had been compensated for his or her injury from a source other than the defendant. This principle is called the "collateral source rule." Under the collateral source rule, evidence that a patient's medical expenses from an alleged malpractice had already been paid by private health insurance is inadmissible, and patients can receive "double compensation" for injury. The Model legislation would require an offset against any award, in an amount equal to the collateral source of payments received by patients, if that source had been previously paid damages from disability insurance or from an employer's private health insurance. The Model Act also eliminates the "doctrine of joint and several liability." Under this doctrine each physician is fully responsible for the entire damage award irrespective of the degree of culpability. For example, if a physician is only 5% responsible then, under current law, he or she may have to pay the entire award. The Model legislation would eliminate this doctrine except where doctors acted in concert to cause the injury.

The Model Act would significantly change damage awards. There would be a \$200,000 cap on non-economic damages such as pain and suffering, punitive damages, loss of consortium, or mental anguish. This cap would also apply to any person claiming derivative damages. For example, if a patient sues to recover damages for injuries alleged to be the result of malpractice and the person's spouse were also to sue for loss of consortium, the total amount of non-economic damages that could be awarded to both would be \$200,000. The Act would require installment payments rather than lump sum awards. It would also require that courts admit evidence of after-tax income loss. Juries would be instructed that a plaintiff is entitled to recover his or her after-tax income loss rather than the pre-tax salary.

As a guide to patient compensation, the proposed law would authorize the state to create a court operated "damage award data base." This data base would allow judges to review jury awards in the state for similar judgments. The judge would, presumably, use this information in modifying jury awards.

Accepting the concept that juries increase damage awards in order to take into account attorneys' contingency fees, the Model legislation would restrict such fees to 25% of the first \$100,000 recovered, 20% of the next \$100,000, plus 15% of the next \$100,000, and 10% of any amount in excess of \$300,000.

The Model Act argues that the tendency to use smaller

juries, and the requirement that juries only need a majority vote instead of a unanimous decision to reach a verdict, have increased the likelihood of aberrant verdicts. The Act would require a twelve-member jury and a unanimous vote to convict. The Act would also require that the judge's instructions to the jury be given in plain and simple language readily understandable by the average juror. The Model Act also makes use of the concept of "special jury interrogatories." This is a requirement that the jury answer a set of questions that would naturally lead to a verdict. The questions could also be used to require the jury to break up its damage award into its constituent parts.

The Act also creates a new statute of limitations for medical liability suits. In order to reduce the delay between the occurrence of an event and a claim for payment there would be a two year limit, from time of discovery, for bringing a suit. The time of discovery is defined as the actual time of discovery or that time where a reasonable person in the plaintiff's position ought to have discovered the relationship between the medical event and the injury, whichever is earlier.

In his letter to state governors, HHS Secretary Bowen stated that "the Model state legislation was drafted in an attempt to insure full, fair, and prompt compensation of those injured by the negligent conduct of a health care provider." Dr. Bowen also suggested that the Model legislation would "promote a medical liability climate that is both stable and predictable."

Commentary

Dr. Weaver:

Patients should receive compensation if they are injured through negligence. We must develop a settlement system that is fair to all concerned parties: plaintiffs, defendants, lawyers, and society. Plaintiffs deserve access to this system regardless of their financial status: they should be compensated equitably and promptly. Defendants should receive swift predictable verdicts that accurately reflect the extent of the deviation from accepted norms of practice and the resultant injury. The public must have continuing access to the benefits of medical care. Society should not have this access interrupted simply because its liability compensation procedures have inadvertently inflated the cost of providing and delivering that care to a level that becomes prohibitive. The "Health Care Provider Liability Reform Act," recently released by HHS, is a sensible approach to satisfying these objectives.

If our current system is fair, why change? Recently studies from multiple sources suggest a need for reform. The RAND Corporation's Institute on Civil Justice reported that only 43 cents out of each dollar spent on medical liability reaches the injured patient.³ In addition, their studies show that jury awards tend to be substantially more in medical

malpractice cases than in auto accident cases for an injury of the same magnitude.³ The HHS proposal supports taking medical liability proceedings out of the arena of the jury system, and placing them in the province of a skilled objective review board. This will direct more of the settlement into the hands of the plaintiff by eliminating "unnecessary" attorneys' fees which the jury system perpetuates. It will also add more predictability to a system that at present seems to be influenced as much by the theatrics of the plaintiff's attorney as by an objective assessment of circumstances of the injury.

It is significant that the AMA/Specialty Society Medical Liability Project model for tort reform, released at a January 13, 1988 press conference in Washington, D.C., also proposes elimination of the jury system as the initial mechanism for settling medical liability claims. The current jury system is expensive, unpredictable, time consuming, and as a result, inequitable for all parties. The technical considerations and emotional climate so frequent in medical liability proceedings dictate the need for trained disinterested persons to critically analyze the evidence in a particular case. I am not convinced that a jury of "peers" is necessary to obtain Justice. Eliminating juries as the primary forum for settlement of medical liability cases will improve the current system. I view this provision of the HHS proposal as the crux of liability reform.

Does the current system improve access to quality medical care? Evidence seems to indicate that it may do the opposite. Current AMA estimates indicate the total costs of "defensive medicine" to be between \$12 billion and \$13.7 billion annually. Between 1983 and 1985, the cost per inpatient day of hospital malpractice insurance coverage increased 85%.⁴ Physicians' premium cost increases averaged over 20% per year in the mid-1980s, and show no sign of slowing down. Premium increases for New York state from 1980-1985 ranged from 96% for anesthesiologists to 345% for obstetricians.⁵ These costs are "absorbed" by the public as higher medical insurance rates, higher physician fees, and in some areas of the country, the unavailability of medical services for lack of affordable insurance.

Provisions of the HHS proposal also speak to other costs to society. Limits on "non-economic damages," modifying the collateral source rule to include other sources into the final total settlement, informing juries that plaintiffs may only recover after-tax income loss, modifying the doctrine of joint and several liability so that each defendant is responsible only for his or her percentage of culpability, and capping attorneys' contingency fees, are all provisions designed to decrease the escalating costs and thus improve the affordability of the current system.

Tort reform failed in North Carolina during our last legislative session, and it will continue to fail unless physicians educate the public. At the presentation of the AMA tort reform plan in January, Dr. James Todd, an AMA representative, stated: "It is unrealistic to expect [the legal profession] will give us any sort of support, but I think the public will recognize [lawyers] have an economic motive in perpetuating the current system." The North Carolina Senate Judiciary

II Committee, in which last year's tort reform bills were considered, had five lawyers out of a total of eight members. I have some concerns that the citizens of this state will not get relief from the inequities of the current system unless our representatives in Raleigh are unbiased and without conflict of interest. During the next drive for tort reform, the North Carolina Medical Society will be more successful if they spend their time and money on the public, educating them to the critical issues, and developing a grass roots movement for tort reform rather than petitioning legislators of uncertain motivations.

Mr. Bobbitt:

As legal counsel for the North Carolina Medical Society, I have helped research and design legislative proposals to ameliorate the professional liability problem that threatens our health care system. When I first read the HHS Model Act, I was impressed with the familiarity of these proposals, but not surprised in that this effort was intended to achieve efficiency and fairness, the same principles that have guided the Medical Society's efforts.

Though familiar with what they say, I am impressed and gratified with what Dr. Bowen's proposals represent, a broadening and pervasive recognition of problems with our professional liability system, the damage to health care they create, and the need for at least these moderate improvements.

As to the specific proposals, North Carolina already has a few: (1) a reasonable man informed consent standard; and (2) data collection. Some of the new proposals may not always provide savings to physicians in North Carolina cases: (1) If we dissolve the doctrine of joint and several liability, as proposed in the Model Act, it will also mean that physicians will no longer be able to use the contributory negligence defense in malpractice suits. In the minds of the legislature, the use of the legal defense that a plaintiff's negligent act contributed to the injury is linked to the idea of defendants having joint liability. If one concept is given up, the other will have to go. The net effect may not benefit physicians. (2) If we make juries give itemized verdicts some evidence indicates that they may give awards larger than if they are just asked to select a single lump sum. (3) Arbitration may be harmful if the arbitration pool is not skilled as to medical issues or is comprised of plaintiff's attorneys as has happened in other states. The arbitration will not be binding and may simply force the physician to disclose his or her case or add another costly step to the dispute resolution process.

However, the majority of proposals could be very meaningful to balance the scales of justice. As one of the Medical Society's "team," we have advocated the benefits of these proposals and could provide pages of arguments and documentation for their enactment. Suffice it to say, for the purpose of this short commentary, that after years of rigorous investigation, analysis and research, the addition of the United States government to the growing proponents of these modest reforms confirms their need. Going to one of the

many counties in North Carolina with severe health care shortages, particularly obstetrical, confirms their need. Just compensation will not be deprived, but some of the more egregious problems with our liability system will be ameliorated.

As Dr. Weaver's commentary correctly notes, the question is not "whether" it is "how." Organized health care and its representatives are frustrated that the urgency of this problem have yet to strike home to the North Carolina General Assembly. These are good and fair proposals that are needed to deal with a serious problem. The message needs to get through. Each citizen must help. Governor Martin has presented the issue of "tort reform" to his North Carolina State Goals and Policy Board. That Board was presented specific information and arguments in support of these and other measures to improve the professional liability system regarding medical malpractice. Let us hope that receipt by the Governor of the Model Act from Dr. Bowen will add to the momentum to do something to resolve this problem. There is still significant resistance by the North Carolina General Assembly to altering of the legal system, and I suggest that a change in this attitude will take some period of time. Hopefully, the change will not be too late. □

References

- 1 HHS sends Model law to states limiting liability in health care. PT Bulletin 1987;2:1, 12/30/87.
- 2 Description of the Model Health Care Provider Liability Reform Act. Secretary, Department of Health and Human Services, Washington, D. C., 1987.
- 3 Trends in tort litigation. The RAND Corporation, 1987;R-3583-ICJ.
- 4 General Accounting Office, 1986.
- 5 General Accounting Office, 1987.

Winchester

"SERVICE SINCE 1919"

Winchester Surgical Supply Company

P.O. Box 35488 Charlotte, NC 28235
704/372-2240 or 800-868-5588

Winchester Home Healthcare

Medical supplies and equipment for your patients at home
Charlotte, N.C. Greensboro, N.C. Hickory, N.C.
704/332-1217 919/275-0319 704/324-0336
704/547-0708

Serving the Medical Profession and their patients

Our salesmen are located in all parts of North Carolina.

We have DISPLAYED at every N.C. State Medical Society Meeting since 1921
and advertised CONTINUOUSLY in the N.C. Journal since January 1940 issue.



(ciprofloxacin HCl/Miles)



A REVOLUTIONARY ORAL ANTIMICROBIAL WITH THE POWER OF PARENTERALS

- Highly active *in vitro* against a broad range of gram-positive and gram-negative pathogens, including methicillin-resistant *Staphylococcus aureus* and *Pseudomonas aeruginosa**
- For treatment of infections in the:
 - lower respiratory tract[†]
 - urinary tract[†]
 - skin/skin structure[†]
 - bones and joints[†]
- Convenient *B.I.D.* dosage – 250 mg, 500 mg and 750 mg tablets

**In vitro* activity does not necessarily imply a correlation with *in vivo* results.

[†]Due to susceptible strains of indicated pathogens. See indicated organisms in Brief Summary.

CIPRO* SHOULD NOT BE USED IN CHILDREN, ADOLESCENTS, OR PREGNANT WOMEN.

A history of hypersensitivity to ciprofloxacin is a contraindication to its use. A history of hypersensitivity to other quinolones may also contraindicate the use of ciprofloxacin.



Miles Inc.
Pharmaceutical Division
400 Morgan Lane
West Haven, CT 06516

Please see adjacent page of this advertisement for Brief Summary of Prescribing Information.

*Financial services that will get
you in shape for the future.
That's Blue Chip.*

We have a variety of insurance and investment options to make sure your future is financially strong. For example:

- Tax shelters, to keep more of your money working for you;
- Annuities, to make money available at retirement or whenever you need it;
- Insurance, to protect your family, your business and your income.

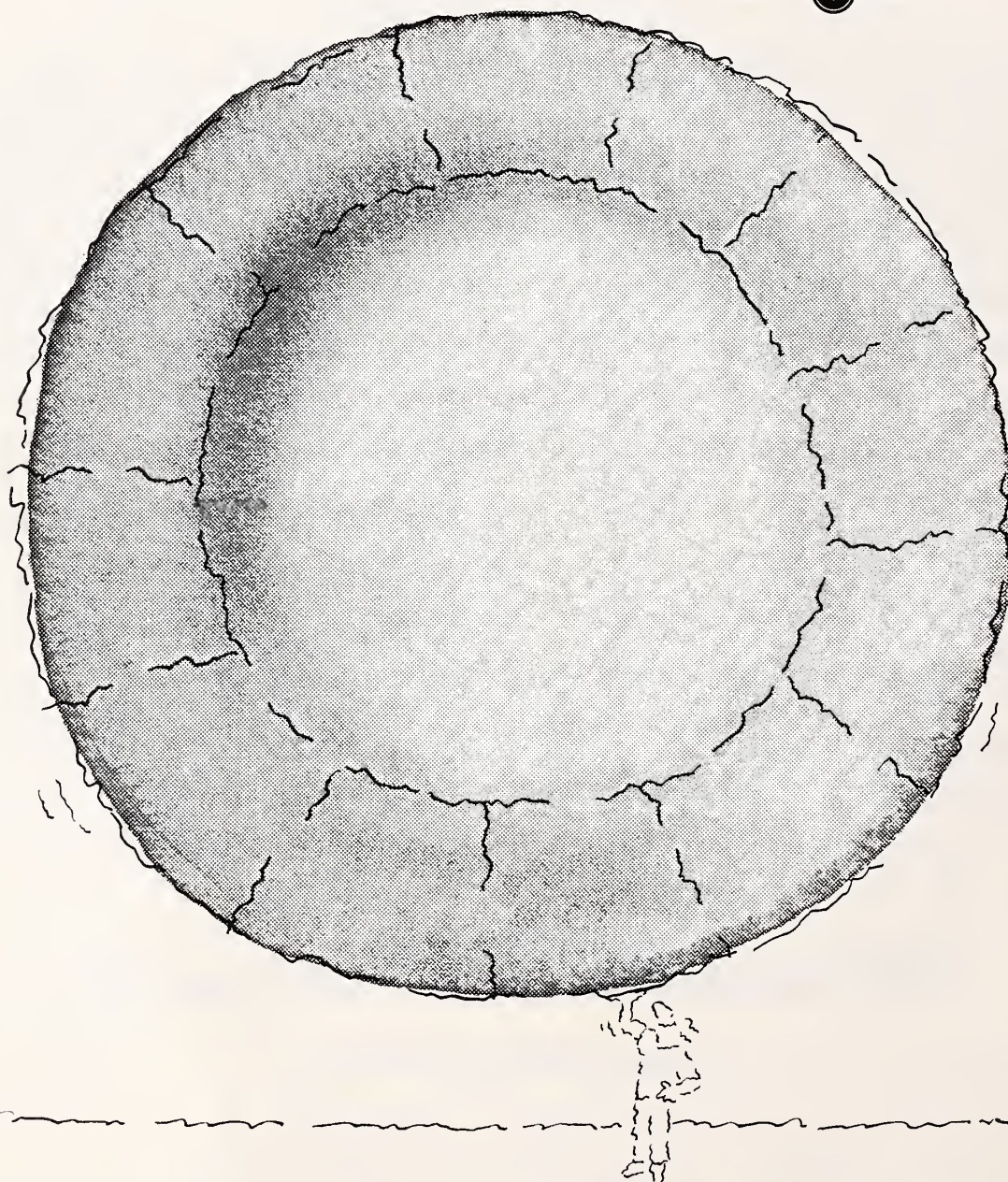
Our specialists will help you identify your needs and develop a program that's right for you.

Start shaping your future today.
Call or write us for details.

The Hinrichs Financial Group

1600 Charlotte Plaza Charlotte, NC 28244
(704) 371-8600

An affiliate of the  **CM Alliance**



Connecticut Mutual Life Insurance Co. (Hartford CT) • Connecticut Mutual Financial Services, Inc. • CM Life Insurance Company • Diversified Insurance Services of America, Inc. and its affiliates.

Medical Malpractice and the Potential for Alternative Dispute Resolution

Thomas B. Metzloff, J.D., and David Warren, J.D.

Physicians are not alone in their concern about medical malpractice. Perhaps no other area of litigation has raised as much public concern as that of medical malpractice. For at least the past fifteen years, a debate has been raging in many areas about how to resolve disputes between clients and their physicians. While the amount of hard evidence that we have is somewhat uneven given the importance of the issue, most would agree that malpractice litigation is expensive and frequently cumbersome. Many would go much further in criticizing the existing procedural system for being inconsistent and insensitive.

Given the concern, it is hardly surprising that many who have studied the problem have proposed the use of alternative dispute resolution (ADR) in malpractice cases. Indeed, in the mid-1970s, many states reacted to the first malpractice crisis by enacting a series of procedurally-based reforms. Several states moved to promote arbitration of malpractice claims. Even more states enacted a device known as the pre-trial screening panel to look over malpractice claims early in the dispute and make a preliminary judgment about the potential merits of the disputes. It was hoped that such a mandatory review would help weed out frivolous cases or encourage the parties to settle meritorious cases. To date, the evidence on the efficacy of these screening panels suggests that they have not succeeded in implementing these goals. Also, it is apparent that arbitration has not achieved the popularity many had hoped.

While the promotion of arbitration and the development of screening panels can be seen as "ADR" developments, there has been little systematic effort to apply many of the newer ADR techniques—such as mediation, summary jury, mini-trials, court-annexed arbitration, or early neutral evaluation—to malpractice cases.

More importantly, there has been little comprehensive analysis of the litigation process itself in malpractice cases. Such review is necessary before one concludes that we "need" ADR in the malpractice context or that a particular type of ADR will work for this especially complex type of litigation. Whether ADR is the "answer" to physicians' concerns about litigation cannot yet be determined. Indeed questions must first be answered about how the entrenched and longstanding litigation protocols relate to the proposed new role of ADR, and whether the legal system can accommodate ADR.

The Duke University School of Law, through its non-profit affiliate the Private Adjudication Center, recently embarked on a major three-year project to analyze litigation procedures in malpractice cases and then to develop ADR procedures specifically designed for malpractice cases.

Funding for the Medical Malpractice Research Project was received from the Robert Wood Johnson Foundation.

The three-year project is divided into two stages. Phase One, scheduled for completion by spring of 1989, consists of an in-depth examination of the present litigation system as applied to malpractice cases. Project personnel are in the midst of a painstaking review of court records and other files in all malpractice cases litigated in North Carolina over the past three years. From this review—estimated to involve over 900 cases—the Project's researchers will be in a position to document specific problem areas under the current litigation practices as well as identify procedural opportunities that might exist.

In addition to reviewing records in all litigated cases, the researchers will select approximately 50 cases in which to do an in-depth review consisting of detailed interviews with the relevant parties—plaintiffs, defendants, their attorneys, insurance claims managers, judges, witnesses, and even jurors. This more impressionistic data will provide the anecdotal richness needed to help understand and interpret the hard data gathered from the court records and selected insurance files.

After the first year, the Project will enter Phase Two. During this two-year phase, the Private Adjudication Center will first design a series of specific ADR mechanisms to offer

in North Carolina for handling malpractice cases. The actual design will depend on an analysis of the litigation problems and opportunities revealed during Phase One. The researchers will specifically address the potential use of summary jury trials, mediation, mini-trials, early neutral evaluation, arbitration and other specific ADR techniques.

The specially designed ADR procedures will then be applied to a significant number of actual malpractice disputes. These cases will come largely from voluntary referrals of cases from insurers, plaintiffs, defendants, and perhaps

judges. These cases will be carefully analyzed in order to test the utility and fairness of the new ADR procedures used. A final report will assess these procedures and make recommendations concerning the use of ADR.

While the Medical Malpractice Research Project is initially focusing on North Carolina malpractice cases, it is hoped that our findings will have national impact. Given the widespread interest in procedural reform, Duke expects that the insights into the process will act as a catalyst for the use of efficient ADR techniques throughout the country. □

AIM HIGH

YOU CAN KEEP THEM IN BALANCE— YOUR FAMILY LIFE AND YOUR MEDICAL PRACTICE.



We'd like to help you spend more time with your family yet receive professional satisfaction from your medical practice. As a member of the Air Force health care team, you'll be able to participate in our group practice concept which will free you of most administrative duties.

Air Force benefits are also very attractive. You and your family will enjoy 30 days of vacation with pay each year plus many more Air Force advantages. Call

CAPT CHUCK HELVEY

919-850-9549

STATION-TO-STATION COLLECT





Sudafed[®]

(Pseudoephedrine HCl)
Nasal Decongestant

Stops Symptoms Fast, But Won't Stop Her.



Today's active woman can't let cold symptoms slow her down. Recommend SUDAFED when she comes to you seeking relief from sinus congestion — the most uncomfortable cold symptom.

- Fast, effective relief from nasal and sinus congestion
- No antihistamines that can cause drowsiness
- The nasal decongestant most recommended by physicians*
- SUDAFED 12 Hour available for convenient, twice-a-day dosage

Recommend SUDAFED, the dependable decongestant that will stop her symptoms but won't stop her.



SUDAFED Tablets
SUDAFED 12 Hour Safety-Sealed Capsules

*Data on file, B.W. Co., 1987.



When it comes to
there's no place like



tender, loving care... home.



No one likes being in the hospital. And no one likes paying a big hospital bill. This is especially true for companies and families wrestling with the high cost of health care.

As a result, more people are looking at home care as a viable option to prolonged hospital stays.

New technologies and services are making it possible for patients to be discharged from the hospital sooner, while continuing medical treatment in the comfort and convenience of the home or workplace.

Baxter is the largest supplier of health care products and services in the world and pioneered the concept of home therapy.

In the last year alone, we provided products and services to more than 40,000 home care patients. Patients requiring complex care. Patients on kidney dialysis and cancer chemotherapy. Patients receiving intravenous antibiotics and parenteral nutrition. Patients requiring immune deficiency therapy. And more.

We work closely with doctors, nurses, hospitals and insurers to make sure that their patients go home with confidence. And that they continue to receive quality care, personal attention and cost effective therapy for as long as it is needed.

So when your patients, employees or family members need some extra TLC, call Caremark Homecare. We believe it's possible to reduce the cost of health care *without sacrificing quality*. Baxter Healthcare Corporation, Caremark Homecare, Raleigh-Durham Pharmacy, 100 Perimeter Park Drive, Suite A, Morrisville, North Carolina 27560. Phone 800.245.2463.

Baxter

Feeding the Elderly Patient

Walter J. Pories, M.D.

It shouldn't be all that hard to learn about the optimal diet for the elderly patient. There is no lack of scientific articles: a review of the computer service "Mesh Medline" from 1983 to 1985 revealed 2,764 articles dealing with dietary research involving elderly patients. However, judging from an extensive scan of over 500 of the most recent citations, few deal with a common-sense approach to providing good nutrition for the elderly patient.

Accordingly, especially since many of my patients are old and since both of my parents are over 86, it appeared reasonable to collect some information from the elderly and those who care for them every day. In contrast to most of those other thousands of articles in the peer reviewed journals, this paper will not describe experiments and provide p-values, but will, instead, reflect discussions with dietitians, managers of facilities for the elderly, and, most important, a number of my aged patients and friends.

This article deals primarily with the nutrition of the feeble elderly, or as they are sometimes called, the "old old." The stratification usually includes those individuals who are over 85, but basing the classification mainly on age is not appropriate. Some of the feeble elderly are still in their sixties; in contrast, when my father was ninety, he was still an active functioning man who enjoyed beer, Wiener Schnitzel, caraway potatoes and a healthy slice of cheesecake.

These answers, based on experience and common sense, are worth sharing. In essence, the message of the survey can be summarized into a few points: (1) malnutrition is common and often insidious among the aged; (2) most tests and nutritional indices are a waste of time and money in the elderly; (3) access to food and the preparation of meals may be a major challenge; (4) most of the elderly do best on the diets which they have enjoyed all of their lives; (5) dietary "scientific" advances should be tried on others first and adopted only after several years of trial; (6) hospitals may be dangerous to good nutrition; (7) if you don't know what to do about a patient's nutrition, first ask the patient.

Malnutrition is Common

Malnutrition is common among the aged, especially those outside of the social mainstream. The elderly eat poorly for a number of reasons: difficulty in gaining access to food because of limited funds or transportation; problems with food preparation because of a lack of facilities or because of physical disabilities; and limitations in taste, smell, chewing, swallowing, or digestion.

Accordingly, malnutrition should be considered a major concern in the evaluation of the elderly patient. The malnutrition may well be the explanation for neuropathies, a lack of energy, mild confusion, weight loss, anemia, constipation, and a number of other diffuse complaints so often encountered among the aged. Correction of the dietary deficiencies not only may relieve these problems, but also will increase the ability of the patient to cope with the challenges of daily living.

The best diagnostic approach is a good dietary history which, in the spirit of trying to get to know the patient better, includes a non-threatening discussion about the patient's general food intake, method of preparation and preservation, financial status, and overall ability to handle the complexity of personal food management. Especially important is the evaluation of weight change by assessing a change in the fit of clothing and belts. If at all possible, the data should be checked with relatives and friends who have known the individual for some years.

The diagnosis of malnutrition in the elderly is not always easy. The initial history may not be reliable because the aged become increasingly timid and, in that fear, tend to deny that anything may be amiss. The patient may be embarrassed by poverty or the inability to shop. In fact, the constriction of diet, due to the inability to prepare food, may have been so gradual that even the patient is unaware of its imbalance. Obesity is not a guarantee of good nutrition. The overweight patient is frequently malnourished; our studies in the morbidly obese have demonstrated that many of these individuals are deficient in iron and vitamins, especially vitamin B-12. Malnutrition is especially likely if the patient's skin sags in loose folds, suggesting that there has been recent significant weight loss.

Dr. Pories is Professor and Chairman, Department of Surgery, East Carolina University School of Medicine, Greenville 27834.

Limit the Laboratory Tests

Although a number of complex indices of nutrition, caliper measurements, and height/weight ratios have been described, none have proven to be clinically useful.

There are, however, some measures which provide reasonably reliable indicators of significant malnutrition: a serum total protein level below 6 gms%, a serum albumen below 3.0 gms%, a hematocrit less than 35% in the absence of blood loss, and a documented recent weight loss exceeding 10% of the patient's ideal body weight, especially if the patient was not actively dieting. Testing beyond these indices is rarely useful; it is less expensive to begin good nutrition well supplemented with vitamins and minerals.

Improve Access to Good Food

The purchase, transport, and preparation of food is often a major challenge to the elderly patient. Each of these tasks requires complex resources: enough funds, access to a vehicle, the ability to carry and put away grocery purchases and competence to cook with a stove or microwave oven.

The best approach to resolve these problems is through the recruitment of community resources. Even in the most rural and indigent sections of eastern North Carolina, help can be found through friends, neighbors, and churches. Ministers, especially among the more rural corner towns, can do wonders. In larger communities, the agencies for the aged can help schedule Meals on Wheels through their own programs, home health nurses, day care centers for the elderly, and other local volunteer organizations.

Only rarely does one encounter a patient for whom community help cannot be recruited. The recruitment is not always easy and social agency help is not as available as one might wish, but, if the physician and the nursing staff persevere, access to food can almost always be improved.

In resolving such problems, the watchword is "inspect, don't expect." Is the patient regaining lost weight? Are the anemia and the hypoproteinemia improving? The first apparently wonderful solution may, in practice, not be effective. Promises made may not be kept; the lack of a working automobile may sabotage the most elegant answers.

Nutrition is best monitored with an accurate log of intake, weekly weighing under supervision, and a visual assessment of the patient in terms of skin turgor, fit of clothing, lassitude, and overall appearance of health. Laboratory tests are rarely needed, but improvement in total protein, serum albumen, blood urea, iron levels, and hematocrit can be useful objective indicators. Measurements of nitrogen balance and other more sophisticated tests of anabolism are not clinically useful.

The most useful of these indicators is the daily log of food intake because it reflects not only the quantity and the quality of the food, but also the intellectual and emotional resources invested by the patient and the family. The log, best kept in a spiral inexpensive notebook, can be maintained

either by the patient or the family. It is remarkable how well such logs are usually kept; family members usually take great pride in entering the data: at least the task is one that they can do among the many frustrating impossible changes.

The Patient's Usual Diet Is the Best Diet

We know precious little about human nutrition, in spite of the torrent of scientific articles. We are far more erudite in respect to the nutrition of swine and poultry, but the diets used in animal husbandry are designed for rapid growth and weight gain and, thus, have limited relevance to the dietary needs of adults, whose objectives are longevity and prolonged function.

"There is no love sincerer than the love of food."

—George Bernard Shaw, *Man and Superman*

"I eat, therefore I am."

—Anonymous

"The Chinese do not draw any distinction between food and medicine."

—Lin Yutang, *The Importance of Living*

"An article of food or drink which is slightly worse, but more palatable, is to be preferred to such as are better but less palatable."

—Hippocrates

"If the physician and the cook had to enter into a competition... the physician would be starved to death."

—Plato

"Like the diet prescribed by doctors, which neither restores the strength of the patient nor allows him to succumb."

—Demosthenes

"Our doctors... eat the melon and drink the new wine while they keep their patient tied down to syrups and slops."

—Montaigne

"Kitchen physic is the best physic."

—Jonathan Swift

"First need in the reform of hospital management? That's easy! The death of all dieticians and the resurrection of a French Chef."

—Martin H. Fisher

"The first rule to proper diet? Ask them what they want and then give it to them. There are few exceptions."

—Idem

God is great;
God is good;
Let us thank Him
For our food.

It is silly and cruel to change someone's eating habits unless there are compelling health reasons to do so. The elderly patient, merely by living into the late eighties, has already demonstrated that his or her diet has worked well. Simply that a cholesterol has climbed to 280 or that the blood pressure may have risen to 148/92 is not an adequate reason to change a patient's (and often the whole family's) diet. In spite of many claims, there is no clear evidence that lowering the dietary cholesterol or instituting a low salt diet in the otherwise asymptomatic elderly patient has any benefit.

Further, eating may be one of the very few remaining real pleasures. My elderly patients delight in their food. When they are asked about their most recent trip, meeting with friends, wedding, or funeral, food is the most common theme, whether among the rich or the poor. Think back to your own last trip or special occasion; food is a common joy. And I mean food, real food with taste and color and crunch, not diets or nutrition.

Physicians and nurses should be sparing with advice about diet when all is going well. Small offhand suggestions made in the office are rapidly translated into restrictive laws at home. Prohibiting someone from eating ice cream, cake, salami, ham, and crunchy rolls is a serious sentence.

Food preferences and customs vary greatly among the various ethnic groups in the U.S., and, at least to the present, little evidence exists that one diet is markedly superior to another. Further, food choices are rarely made only for nutrition; most foods have strong emotional and cultural overlays which appear to become increasingly important as patients get older. A comparison of the intakes of an orthodox Jew, an ethnic factory worker from the midwest, and one of our farmers from coastal Carolina underscores the differences in taste, texture, and food preparation. Of particular interest is the fact that each of these groups has about the same proportion of individuals who live into their late eighties and nineties.

Being judicious about dietary advice, however, does not mean that such advice is not useful or should not be given. Useful changes can be made in most diets without altering their cost, taste, or acceptability. For example, corn oil can replace shortening, low calorie salad dressings can be used instead of mayonnaise, meats can be trimmed, and fruits and ice milk can be substituted for heavy desserts.

Avoid Dietary "Scientific" Advances

The world is hungry for scientific advances which promise longer life, better health and continued function. Waves of dietary misinformation sweep through our newspapers and magazines every day. The elderly are easily swayed: they have the time to read the popular articles; they are deeply concerned about their health and their mortality; and the apparent differences in aging are readily attributed to the latest breakthrough. Thus we have seen, even in only the last few years, the parade of dietary nostrums: selenium, zinc, fish oil, bran, fiber, and now the low cholesterol craze.

The "breakthroughs" are generally based on excellent data collected through accepted research methodology. There is little question that selenium and zinc are essential trace elements, that bran and fiber are necessary for good bowel function and that high cholesterol levels promote atherosclerosis. The real question, however, is whether a major change in diet will help your patient live a happier, healthier, and more effective life.

Much more likely, these dietary intrusions fail to improve the lot of the aged patient; further, adherence to the new instructions just adds another complication to an already fragile existence. Fortunately, most of the elderly soon forget to maintain the regimen. If they did not, we would have still one other common cause of the malnutrition, constipation, and failure of diabetic control so commonly seen in food faddists.

Hospitals Can Be Dangerous to Good Nutrition

Malnutrition in the elderly is particularly common in hospitals. The patients are frequently ill before they are admitted with diseases which interfere in intake or digestion or with conditions which have disabled them to the degree that the procurement of food has become difficult.

Many tests require that the patient be NPO; If these examinations are not well sequenced, the already malnourished inpatient may miss a number of the scheduled meal times.

Good nutrition is essential for recovery. It is difficult to think of a condition which will not heal more quickly in the well nourished patient. Accordingly, the patient's diet orders should be well considered. There are a few useful rules: (1) regular hospital diets are better than special diets; (2) special diets are better than enteral feedings given through a tube; (3) tube feedings are better than Total Parenteral Nutrition (TPN); (4) TPN is better than ordinary intravenous solutions.

Edentia is not a reason to order either ground meat or pureed food. Most of the elderly do very well without any teeth. If the meat is well cooked and lubricated with gravy, even the edentulous can gum the meal with delight. On the other hand, many of the elderly are afraid of pureed foods because, besides being singularly tasteless and unattractive, these meals can interfere with the airway by adhering to and occluding the posterior pharynx. Similarly, ground meat is often too dry to swallow, especially in patients with diminished saliva, mediastinal radiation, or overall upper gut motility problems.

Milk can be troublesome to those patients with an acquired lactase deficiency due to age. Most of these patients know that milk products can give them diarrhea; in such patients dairy products should be minimized. Occasionally, for an unexplained reason, they can tolerate some milk products and not others; it is not uncommon that they can drink buttermilk or eat certain cheeses even though they are unable to digest regular or skim milk.

How to Starve the Elderly Patient

It's really not that hard to starve the elderly patient. In fact, many of the aged present with poor nutrition; with only a few simple approaches, real malnutrition is easily induced:

- 1 Schedule the various diagnostic tests in sequence so that the patient is NPO much of the day and misses any of the remaining meals.
- 2 Provide 5% dextrose and water and assure the family and the patient that the nutritional needs are being met.
- 3 Avoid any concern about multivitamins, vitamin B-12, fat soluble vitamins, magnesium, calcium, iron, trace elements, and essential fatty acids.
- 4 If possible, avoid normal diets and substitute special diets, tube feedings, and TPN.
- 5 Dubhoff feeding tubes are useful in that they can provide not only inadequate tube feedings, but also, by making the cardia incompetent, aspiration pneumonia.
- 6 Serve all food cold, especially french fries.
- 7 When possible serve beef in leatherlike slices which are impossible to chew or as a dried ground beef patty which is impossible to swallow.
- 8 If the patient is on bed-rest with rail, place the food on the bed-tray but barely out of reach of the patient.
- 9 If the patient is unable to manage eating utensils, do not provide finger food, but set the tray with a plastic knife and fork, preferably on a styrofoam plate.
- 10 For those aged who have a lactase deficiency, serve a lot of milk. The resulting diarrhea will help them clean out the colon several times a day.
- 11 Be sure to provide a diet quite different from the one the patient has eaten over the last eighty years. When one is sick and in the hospital is a good time to learn about new foods.
- 12 Do not allow family members to bring in the patient's favorite foods. He might eat these.
- 13 Never help the patient eat.

If there is a need to use one of the liquid high-protein food supplements, try Sustacal first. Perhaps because Sustacal is sweeter, some of the aged will accept this product better than Ensure, Ensure-Plus, or Citrotein, even though all of these are generally well tolerated in younger patients.

For the patient who "just won't eat," try these tricks recommended by Ms. Melbourn, one of the experienced dietitians at the Durham Veterans Administration Hospital: (1) try serving breakfast three times a day, especially grits and eggs; (2) favorite foods among the very old veterans include those which have a strong lubricating gravy, e.g., chicken and pastry, ham and red-eye gravy, and mashed potatoes with gravy; (3) avoid foods with Italian seasonings such as lasagna or spaghetti with tomato sauce. They appear to cause reflux and heartburn in many; (4) old tastebuds can be dulled. In an effort to taste, many of the old veterans will use a lot of

salt. Malt vinegar is a safe, no-sodium replacement, better tolerated than the potassium salts. Texas Pete Hot Sauce also works well. Both of these products do not spoil and can be kept in the bed-side table.

Tube feedings are often necessary in institutionalized patients but they present special hazards: (1) Tube feedings, given through the Dubhoff or other nasogastric tubes, immobilize the cardia and often produce aspiration pneumonia; (2) if tube feedings are needed, consider the safer approaches of either gastrostomy or enterostomy intubation; (3) tube feedings and TPN consist of artificial diets which may not be well managed by the incomplete enzyme systems of the elderly—Confusion and liver failure are frequently seen with these methods of feeding; and (4) if a patient does not tolerate the commercial tube feeding products, have the spouse prepare two portions of everything he or she eats and drinks and run the patient's portion through a blender. Not only is that diet likely to be far more balanced, it is also far cheaper.

Sometimes nothing seems to work, and the patient, in spite of the best attempts to feed him or her, will still lose weight and fail to thrive in the hospital. In those cases, if possible, try to see how well the patient does at home in familiar surroundings, fed more often, with familiar foods, by loved ones. We have seen remarkable results achieved at home in some cases where the best our hospital had to offer was not good enough.

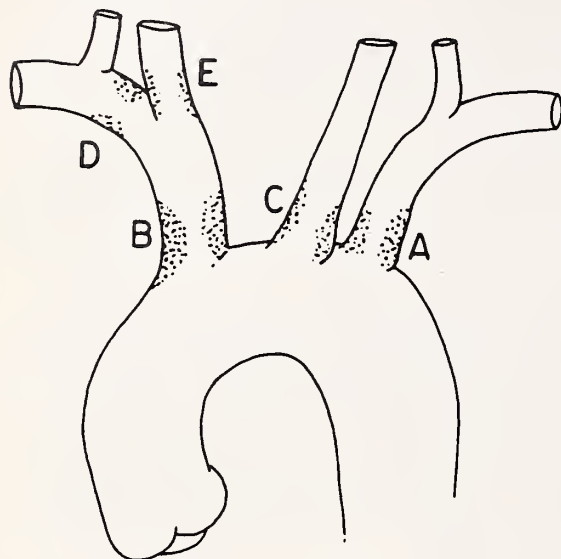
In summary, in spite of a storehouse of research data and a formulary of supplements, dietary management of the elderly is primarily an exercise of common sense, understanding, and, often, innovation to make the best of what is available. Eating remains one of life's great joys, often the only joy left when reading, hearing, sports, power, and sex have all faded into memory. Often the physician cannot cure or even palliate, but if he or she preserves the ability to eat and enjoy food, every meal is a wonderful gift. □

Selected Readings

- Stamler J. Risk factor modification trials: implications for the elderly. *Eur Heart J* 1988;D:9-53. (Review).
- Hodkinson HM. Diet and maintenance of mental health in the elderly. *Nutr Rev* 1988;46:79-82. (Review).
- Smith EL, Smith PE, Gilligan C. Diet, exercise, and chronic disease patterns in older adults. *Nutr Rev* 1988;46:52-61.
- Sutnick MR. Dietary guidance for the elderly. *Clin Geriatr Med* 1988;4:193-202. (Review).
- Potts MC. An evaluation of the nutrient intake of a group of elderly people attending a luncheon club. *Hum Nutr Appl Nutr* 1987;41:352-6.
- Shifflett PA. Future time perspective, past experiences, and negotiation of food use patterns among the aged. *Gerontologist* 1987;27:611-5.
- Munro HN, McGandy RB, Hartz SC, et al. Protein nutriture of a group of free-living elderly. *Am J Clin Nutr* 1987;46:586-92.

CORRECTION

This figure was published without the accompanying information in our November 1988 issue. (Campbell PT and Simel DL. Left arm pain isn't always angina. 49:564-7; figure on p. 566.) We are in the process of eliminating the "bugs" from our new production technique. This figure fell victim to one of them. Our apologies to the authors and readers.



Location of arterial occlusion	Percent	Symptoms
Left subclavian (A)	50	Upper extremity ischemia +/- neurological
Innominate (B)	16	Neurological and upper extremity ischemia
Left common carotid (C)	15	Neurological
Right subclavian (D)	14	Upper extremity ischemia +/- neurological
Right common carotid (E)	5	Neurological

Figure 3. Frequency (percentage of total occlusive lesions) of arterial lesions and associated symptoms.

THE ULTIMATE TAX SHELTER.

- Fund Your Pension Plans At 25% Of Payroll With A Cost Of Only 5-11% For Staff Employees
- Add A Supplemental Retirement Plan For Key Employee Physicians And Spend No Additional Funds For Staff
- EQUALS: 85-95% Of All Retirement Funding Benefits Allocated To Key Employee Physicians!

For Information Call:

Baron Benefits Management, Inc.

A BARON FINANCIAL COMPANY

Executive Compensation and Employee Benefit Specialists

4110 Wake Forest Road, Suite 211
Raleigh, N.C. 27609
(919) 790-9904/(800) 222-8783

300 Wendover Avenue East, Suite 202
Greensboro, N.C. 27401
(919) 379-8207/(800) 822-1086

Are You Only Smiling For The Camera?



Or do you know someone who is?

Saint Albans Psychiatric Hospital in Radford, Virginia has been helping people deal with life since 1916. We offer comprehensive programs for adults and adolescents in chemical dependency, eating disorders, depression, out-of-control behavior and other life problems — all supervised by a skillful and compassionate staff.

When you know someone in need of psychiatric help, call Saint Albans.

We build real smiles.

*In Virginia: 1-800-572-3120
Outside Virginia: 1-800-368-3468
P.O. Box 3608 Radford, Va., 24143*



**Saint Albans
Psychiatric Hospital**
Radford, Virginia

THE ARMY RESERVE OFFERS NEW FINANCIAL INCENTIVES FOR RESIDENTS.



If you are a resident in Anesthesiology or Surgery*, the Army Reserve has a new and exciting opportunity for you. The new Specialized Training Assistance Program will provide you with financial incentives while you're training in one of these specialties.

Here's how the program can work for you. If you qualify, you may be selected to participate in the Specialized Training Program. You'll serve in a local Army Reserve medical unit with flexible scheduling so it won't interfere with your residency

training, and in addition to your regular monthly Reserve pay, you'll receive a stipend of \$678 a month.

You'll also have the opportunity to practice your specialty for two weeks a year at one of the Army's prestigious Medical Centers.

Find out more about the Army Reserve's new Specialized Training Assistance Program.

Call or write your US Army Medical Department Reserve Personnel Counselor:

**Army Reserve Health Care Team
2634 Chapel Hill Blvd.
Suite 205
Durham, NC 27707-2875
(919) 493-1364 Collect**

* General, Orthopaedic, Neuro, Colon/Rectal, Cardio/Thoracic, Pediatric, Peripheral/Vascular, or Plastic Surgery.

ARMY RESERVE MEDICINE. BE ALL YOU CAN BE.

Informed Consent

William A. Hensel, M.D.

Rob and I were quiet on our way to see Harold. I knew Harold well, having followed him in my office for nine months, and I sensed that there was much to learn that day. As we walked on in silence, I tried to focus on the conflicts facing Rob.

Rob was early in his first year of residency and had assumed primary responsibility for Harold's care during this final hospitalization. Harold was Rob's first patient to face death. At only 53 years of age, Harold had severe diabetic cardiomyopathy (ejection fraction = 17%) and diabetic nephropathy aggravated by prerenal azotemia. Pulmonary edema was causing Harold to spend more time in the hospital than at home. Rob's conflicts were over how aggressive to be with Harold's treatment. Harold had already been subjected to multiple diagnostic tests, which Rob felt weren't changing our therapy or improving his prognosis. Yet our consultants recommended further study.

The time had come to make a decision about how aggressive the treatment should be. We were going to talk with Harold and involve him in the decision-making process. What I did not tell Rob was that I already knew what the decision would be.

Despite the fact that I had only been Harold's doctor for a short time, we had grown close. He said I was always "straight" with him and that's what he wanted. In return, I respected his values and was flattered by his praise, although his appreciativeness was at times an embarrassing and painful reminder of my own powerlessness.

When we came in, Harold was happy to see me and the "young doctor." He had already endeared himself to the house staff and nurses by his personal interest in them—he seemed to care as much for us as we did for him. Harold's attitude was remarkable for its quiet strength and dignity. Hesitant to take the lead, he showed us the great deference he had shown all physicians. I made it clear that we were interested in what he wanted and that his opinions were important.

Harold described how nine months earlier I had informed him of the serious and progressive nature of his heart problem. He talked about how he had tried to go back to work after his first hospitalization. He spoke with pride of the accomplishments of his thirty years of work and of how hard it had been to give that up. While he spoke, I remembered how his health had worsened in spite of his meticulous compliance with my treatments. Gradually the conversation shifted to his dying.

His major concern was to not burden his family. He had made out his will, deeding his house to his daughter and son-in-law. He had even planned his funeral service, down to the order of the music and scriptures. Harold told Rob that his daughter, Bonnie, had prepared a room at home and was waiting to welcome him whenever the doctors said he could go. As he spoke, I thought of their relationship. As a widower, Harold had been very close to his daughter. Their frank discussions of his impending death seemed to raise their relationship to a new level of intimacy and love.

He spoke of his religion, of how he had tried to lead a life of faith by loving his family, working hard, and treating others as he would like to be treated. He told the resident that he and I had discussed cardiac transplant, but he didn't want such treatment. His faith made him certain that refusing heroic medical treatments was the best decision. Harold now accepted his impending death.

When we left, I asked Rob if he had any doubts about Harold's treatment. "No," he said solemnly. I could see by the look on his face that Rob had resolved his conflicts. There was no need to summarize or instruct him; Harold had taught Rob more than I could hope to about terminal care. From then on, no more diagnostic tests were run on Harold. We contacted hospice and appropriate support services and he went home.

At first, he was alert, smiling and happy. Longtime co-workers and relatives from all over the state come to visit him. Harold's former minister from a neighboring state called to talk and pray with him. His last wish was granted when a favorite nephew was able to fly in from Japan.

He gradually became less alert until he could only stay awake 15 to 20 minutes at a time. After spending two days in a coma, he died quietly at home on a Sunday morning. I reached his home an hour later and found about twenty friends and family members had already gathered. As I

From Family Practice Center, The Moses Cone Memorial Hospital, 1125 North Church Street, Greensboro 27401-1007.

walked in the door, Bonnie, who up till that point had maintained her composure, hugged me and began to cry. I remember feeling privileged at being able to share intimately in the family's grief.

At the funeral two days later, a crowd of about 100 gathered. The service was beautiful and personal. The minister emphasized how important that last month of life had been. He said that Harold had died in a state of grace and described the expressions of love exchanged between Harold, his family, and friends. Harold chose how he would spend the last days of his life; the minister marvelled at the difficulty and rewards of that choice.

Norman Cousins summarized Harold's feelings well when he wrote in *Anatomy of an Illness*, "Death is not the ultimate tragedy of life. The ultimate tragedy is depersonalization—dying in an alien and sterile area, separate from the spiritual nourishment that comes from being able to reach out a loving hand, separate from a desire to experience the things that make life worth living, separated from hope." Although Harold might have lived longer in the hospital, he feared depersonalization. His informed choice allowed him to spend his last month of life at home, surrounded by family and friends.

Harold had been happy to tell the "young doctor" about his informed choice. Months later when I talked to Rob about our visit, it was clear that he had learned a great deal. He said that he had heard a few lectures and read about death and dying in medical school, but hadn't been sure how he could apply these lessons in practice. Seeing my relationship with Harold made Rob realize that doctors can help patients with the dying process. Rob's most vivid memory of our meeting was not of something I said, but that I had cut Harold's toenails. This simple action symbolized the closeness of our relationship.

Harold knew that I was trying to teach a lesson that day. What he may not have known was that I had learned more than the resident about what a dying patient can accomplish by facing death with openness and dignity. On my desk I have a gold pen and pencil set, engraved with my name. About a week before he died, Harold gave it to me and said, "I love you, Doc." This treasure reminds me of Harold and the lessons I have learned. □

Acknowledgment

The author wishes to acknowledge the sensitive editorial support provided by Martha Delaney and Teresa Rasco. The author also acknowledges support from the Moses H. Cone Hospital and the Greensboro Area Health Education Center, Greensboro, North Carolina, and the Department of Family Medicine, School of Medicine, University of North Carolina at Chapel Hill.

AUTHORS

INSTRUCTIONS FOR SUBMITTING PAPERS

Copyright of an article published in the *North Carolina Medical Journal* is retained by the author, but the copyright to each entire issue is the property of The North Carolina Medical Society, and permission to reprint all or any part of a published article must be negotiated with the author and the editor jointly. The reprinted material must carry a credit line signifying that it appeared in the *North Carolina Medical Journal*.

Medical articles, editorials, patient oriented articles, letters to the editor and all other text submitted for publication must be double-spaced throughout, including references and legends. The material should be typed on one side of the paper with 1¼ inch margins all around. Do not use an all-caps or a script typeface. Submit one original and one copy. Please be sure to include your phone number.

The author is responsible for the accuracy of all statements and references. Acronyms and other abbreviations should be kept to a minimum; *any acronym used should be fully translated in the text*. Refer to pharmaceutical products by their generic names; brand names may follow in parentheses. Units of measure should appear in the metric system. References, typed double-spaced, should be listed in the order of their citation in the text, not alphabetically. They should follow the style used in the *Journal*.

Illustrations should be black and white glossy prints or color or black and white slides, with legends typed in double-space on a separate sheet of paper. Since the *Journal* has a limited budget for color, it may be a factor in publishing color illustrations.

Attach to the two copies of the manuscript a cover letter giving the address and telephone number of the person who will correspond about it, and address the completed communication to the Editor, Box 3910, Duke University Medical Center, Durham, NC 27710.

All manuscripts are subject to editorial changes. If extensive revision is necessary, the author may be sent a draft of the edited article for approval before publication. The author will be sent galley proofs if the paper is published.

Authors interested in more effective writing may find *The Elements of Style* by Strunk and White and *How to Write and Publish a Scientific Paper* by Day helpful.

Extracted, with permission, from *Virginia Medical* with thanks.

NORTH CAROLINA MEDICAL JOURNAL

For Patients

VOLUME 49 / NUMBER 12 / DECEMBER 1988

Coping With Separation and Divorce

JOANNE E. TURNBULL, Ph. D.

Throughout time, the family has been the social unit which provides support and nurturance to its members. Divorce has become a common event for families, making it difficult for them to carry out these traditional functions. In this country, the number of divorces and minor children affected by divorce has risen steadily since the mid-1950s, so that today the number of divorces granted is close to half the number of marriages that occur.¹ An estimated 80% of divorced spouses eventually remarry, the majority within three to five years. Approximately 50% of couples who separate do not go on to divorce. While the children of couples who experience marital distress tend to do better than the children of couples who divorce, these reconciled couples experience more psychological distress than couples who divorce.² These statistics represent the cold, hard facts of the separation and divorce phenomenon, but tell us little of what happens to the people who are represented by the numbers.

Divorce as a Transition

Transitions are junctures or turning points in life in which people move from one life stage to another. Change is inevitable. The person undergoing a transition will experience several psychological stages, including a tendency to

cling to the old situation, a gradual letting go of the old situation, anger at having to let go, eventual acceptance of the change, and finally, engagement in a new situation. Transitions can be classified as either normative or paranormative. Normative transitions are ordinary life events that are expected. They include leaving home, starting work, getting married, having children, eventually having one's parents die. In contrast, paranormative transitions are not expected and they do not occur every day. Rather, paranormative transitions tend to be unhappy events that imply some sort of loss and place an emotional strain on those who experience them. Miscarriage, a young person's death, and job loss are life events that fall into the category of paranormative transitions. Divorce is also a paranormative transition. It is a transition in which a married person changes to a single person. Like any transition, divorce is characterized by several psychological stages.

Stages of Psychological Divorce

Many changes accompany the transition from marriage to divorce, including role changes, monetary changes, residence changes, and changes in major family relationships. For example, in a typical divorce situation, one spouse assumes additional responsibilities such as sole disciplinarian for the children and sole bread winner. The family's financial resources must be stretched as more money is needed to establish and maintain separate households. A change in residence occurs for family members who leave the

From the Department of Psychiatry, Duke University Medical Center, Durham 27710.

shared family home. Most importantly, significant relationships are altered drastically. For children, contact with at least one parent will be less frequent. For adults, even if they feel relief at the prospect of ending an unpleasant relationship, the dream of a happy marriage is lost.

How a person copes with these changes depends on several factors. First, the way in which a person deals with separation or divorce is influenced by the particular life stage in which one finds oneself. For example, divorce is a very different experience for the teenage couple, married for a short time, who decide that their lives are going in separate directions, than it is for the couple who have spent most of their adult lives together, building a common life and sharing a long history of experiences and acquaintances.

A second, related factor is the nature of the marriage, whether it is a parallel or passionate one. Parallel marriages are those in which the couple is married for the sake of convenience. In rare cases, people enter into parallel marriages purposely, such as when a person from another country marries an American citizen in order to remain in the United States. More common is the parallel marriage that evolves over time; the marriage gradually takes on the quality of a business arrangement. Eventually, there is very little shared life or intimacy between the individuals involved. The vast majority of separations occur in passionate marriages. In these marriages, there are strong emotional attachments between the spouses. Couples in passionate marriages usually have children, a shared social life, and a strong identity as a couple.

Third, the amount of material resources available to support separate households will affect the lives of the family members following the separation. Fourth, the amount and quality of support from friends and family will influence the experience. While the support of family and friends can have a stabilizing effect during the unsettled period following separation, such support is rarely provided because friends tend to ally with one spouse against the other. Finally, professional help can make a positive difference in the lives of all family members who must go through this difficult life transition.

Four phases of psychological upset and recuperation constitute the process of separation or divorce: (1) the predecision phase, (2) the decision phase proper, (3) the mourning phase, and (4) the re-equilibration phase. The predecision phase can be very short or a very long period of time. In this stage, emotional detachment occurs. It can be a trying time, because affection is gone, but it is difficult for the couple to detach from one another because they fear being alone. Economic pressures also tend to keep the couple together. When detachment finally does occur, it begins with a time of disillusionment. Dissatisfaction with the marriage increases. Tension builds. Disappointment is experienced as attempts at reconciliation fail. There is a decline in marital intimacy and the marital tie erodes. Finally, the facade of marital solidarity breaks and the couple detaches from one another. Problems are made public, as friends are told about the difficulties. Children, who may have been aware of the

problems between their parents, may be told of the impending separation. Preliminary legal counsel may be sought.

The decision period is next. It begins with a firm decision to separate by one partner. Feelings of anxiety and panic are common as the possibility of separation becomes reality. Once again, the couple tries to reconcile. These attempts at renewed marital intimacy fail yet again, and renewed outbreaks of marital fighting occur. This cycle of reconciliation attempt-renewed fighting may repeat itself several times until there is a final acceptance that divorce is inevitable. Discussions concerning financial support and child custody begin.

Once a couple is separated or divorced, a long period of recovery begins. This is a time of great psychological and social adjustment for both adults and children. Single parents find themselves isolated and overwhelmed by responsibility. Spouses who leave the home grieve the loss of home and family. Mourning now occurs, and people experience intense, difficult emotions, such as guilt, self-reproach, anger toward the other spouse, and eventual realistic sadness. In time, each partner is able to accept the positive aspects of the marriage.

The last stage is the period of re-equilibration. Re-equilibration is marked by heightened self-growth, a diminished dwelling on the marriage, and an enthusiastic approach to new activities and friendships.

Children

Over half of divorces that occur involve minor children. Figures in the last United States census indicate that approximately 18% of children under 14 were not living with both parents. An estimated 32% of children in this country will have lived with a divorced parent sometime during childhood.³

Divorce adds substantially to the normal challenges of growing up. As shown in table 1,⁴ the emotional reactions of children will vary a great deal depending on their age at the

Table 1. Characteristic Reactions to Divorce⁴

Age	
Preschool 2-1/2 - 6	frightened, confused, blamed selves, feared being sent away
Early latency 7 - 8	sadness, loss, fear, insecurity, felt abandoned, rejected
Later Latency 9 - 10	intense anger, shame, outrage, divided loyalties, felt lonely, rejected
Adolescence 13 - 18	anger, sadness, shame, embarrassment

time of divorce.

A 10-year follow-up of teenagers whose parents had divorced when they were between two and six suggests that children who were younger at the time of the breakup fared better than their older siblings who had to cope with troubled memories of family strife.^{5,6} Children, especially boys, seem to have a renewed need for their father during the teen age years. As they enter adulthood, children of divorce fear disappointment in love relationships, have lowered expectations of marriage, and a sense of helplessness over events in their personal lives. Even children who have already left home when the divorce occurs are affected.⁷ These young people report feeling vulnerable, stressed, and angry. They feel conflicted about their loyalties to their parents, and they worry about their parents' future.

Despite these sobering facts, studies have shown that parents need not feel powerless to help their children through this difficult time. Most parents do continue to talk with each other following divorce, and those who interact the most frequently tend to be supportive of and cooperative with one another.⁸ It is in the best interest of the children if couples are able to put aside their differences in order to continue their parenting roles. Unfortunately, most people are unable to do this. Although most parents would like to help their children, they are so preoccupied with their own pain and struggles that they are rarely able to support their children in the ways in which they would like. Furthermore, many parents recognize that the other parent is a good and loving parent, but hostile feelings accompany marital dissolution and prejudice the judgment at this emotional time. Because there are critical decisions to be made at this time when emotions are raw, professional help can be valuable during the separation process.

Professional Help

Families going through separation and divorce can benefit from transition counseling and mediation services. For adults, individual counseling can help to resolve any personal issues that may have contributed to the breakup, so that problems are not repeated in new relationships. More often than not, intimate relationships formed during the first two years following a separation or divorce do not work. Called "rebound" relationships, they are often formed for the wrong reasons, such as trying to avoid the emotional pain of the separation.

Counseling can also help parents to better help their children through this difficult time. Most parents are distressed about the pain and the potential damage to their children due to the separation. Ironically, because of this concern, some fail to tell the children about the separation or divorce, while others concentrate on the rational reasons for the separation and minimize the intense emotions of this event. Children need permission from adults to vent their shock, grief, anger and fear. They must be allowed to deal

with their sense of loss. Because the adults in the family are dealing with their own pain, there is a danger that children may not be allowed to express their painful feelings. With professional guidance, parents can help their children to acknowledge and master these difficult feelings. Parents should not treat a discussion with children about the divorce as a one-time thing. Parents and children should continue talking about the divorce from time to time.

Both parents have vital tasks in the growth, development, and sense of well-being of their children. Decisions made during the preseparation stage are important for the continuity of parenting. Children need continuing contact with both parents to develop emotional stability and to continue their psychosocial development. As the family reorganizes following the separation, the pattern of continued relationship between the nonresident parent and the children needs to be defined.

Parents intending to divorce should discuss certain issues with their children before the separation. This preparation for what is about to happen should be geared to the ages and developmental levels of the children. For example, discussion with preschool children should occur a week or two before the separation occurs; it also helps if they can see the new residence of the parent who will be leaving the home. School age children should be informed a month or two beforehand, while older children need longer notice. Children must be reassured that the divorce is related to adult problems and not to anything that the children have done, that the couple intends to continue as parents, and that they promise to do this even if one of them remarries. In the best situation, the children will also be told that they will live with one parent and have regular contact with the other. It should be clear to them that the divorce is permanent, and that the children cannot alter the decision and should not try to do so. Children may feel strange or different from their friends who live in two parent families. To counteract this, they can be encouraged to talk about the divorce with those people in and outside the family with whom they feel close. Children also need to stay out of parents' quarrels. They should not carry messages between the parents.

Separation and divorce proceedings are legal matters. By the nature of the legal process, they are adversarial. Parental roles should not become entangled in economic disputes negotiated through lawyers, and parenting arrangements should be made before lawyers are contacted. Mediation, which combines the disciplines of law and psychology, is a relatively new professional service for families facing divorce. The goal of mediation is to dissolve the marriage psychologically, and to forge a contract of individual and shared responsibilities. Divorce mediation differs from therapy in that therapy focuses on stress relief, behavior change, and increased self-understanding, while mediation is focused more on dealing with specific problems, resolving disputes and negotiating differences inherent in the dissolution of the marital state. By engaging in mediation and resolving issues before attorneys are contacted, hostility can be kept to a minimum, and a great deal of money can be saved.

Conclusion

Everyone suffers in a divorce and it is unrealistic to describe it as a happy event. Because few people enter into marriage with the expectation that it will end, even people who are desperately unhappy and are anxious to sever their marital ties are faced with feelings of loss and failure. A realistic goal for divorcing couples is to have a constructive divorce. There are two aspects to a constructive divorce. First, there is an effective psychological separation between the spouses, where their identity as a couple is transformed into individual identities. Second, the welfare of minor children is protected.

On the positive side, it is important to remember that every loss implies a gain, and that every crisis provides an opportunity for growth. In the years after a divorce, the quality of life usually improves for at least one of the spouses, although anger and loneliness can be pervasive.⁹ The following rule of thumb can be applied as a rough guideline to estimate how long recovery will take: people are usually ready for new relationships 18 months following the divorce; within three years, they are ready for remarriage. People who have gone through a divorce can expect a period of recovery that requires one half year for every two years of marriage. This does not mean that the divorced person will feel bad for the entire period of recovery, but rather, that the failed marriage will continue to occupy one's thoughts to some degree.

Recovering from a failed marriage can be a difficult process for adults and their children, but with help and a patient attitude, new and healthy relationships can replace the unhappy ones. □

References

- 1 Caplan G. Guidelines for divorcing parents. *Arch Dis Child* 1987;62:752-3.
- 2 Kitson GC, and Langlie JK. Couples who file for divorce but change their minds. *Amer J Orthopsychiat* 1984;54:469-89.
- 3 Glick P. Children of divorced parents in demographic perspective. *J Soc Issues* 1979;35:170-81.
- 4 Wallerstein JS, and Kelly JB. *Surviving the breakup*. New York: Basic Books, 1980.
- 5 Wallerstein JS. Children of divorce: preliminary report of a 10-year follow-up of young children. *Amer J Orthopsychiat* 1984;54:444-58.
- 6 Wallerstein JS. Children of divorce: report of a 10-year follow-up of early latency-age children. *Amer J Orthopsychiat* 1987;57:199-211.
- 7 Cooney TM, Smyer MA, Hagestad GO, Klock R. Parental divorce in young adulthood: some preliminary findings. *Amer J Orthopsychiat* 1986;56:470-7.
- 8 Ahrons CR. The continuing coparental relationship between divorced spouses. *Amer J Orthopsych* 1987;51:415-29.
- 9 Wallerstein JS. Women after divorce: preliminary report from a 10-year follow-up. *Amer J Orthopsychiat* 1986;56:65-77.

When The Best Outcome Is Death

MARJORIE A. BOWMAN, M.D., M.P.A

Sometimes the best outcome is death. In this time of ever increasing emphasis on quality of care, and therefore the measurement of the quality of care, death is considered a major bad outcome—in fact, the worst outcome. In other words, if death can be prevented, it should be, for however short a period of time—a day, a week, a month. If there is hope of prolonging a life, or maybe saving a patient to survive for several months or years, the tendency is to do “whatever is necessary, no matter what the cost.”

However, death is not always a bad outcome; but the thought that it perpetuates the myth of the godlike capabilities of physicians, oft believed by physicians and patients alike. We as physicians often do not even offer the patient an option; many patients we resuscitate have never told us that they wished to be resuscitated, because we have never asked them, even when the illness would strongly suggest that resuscitation might be required.^{1,2}

We know some patients are destined to die, and soon, but we continue to hope, and often we provide that feeling of hope to the patient and family. Maybe one more procedure, and a few more days in the intensive care unit, more antibiotics, chemotherapy, or another operation will help. Our training and experience, or sometimes numbers in the literature suggest that 95% to 100% of people in the same situation will die in the near future, but there is a slim chance. Is one in 20 enough? Should we go for it? Certainly we should make people comfortable, but when can we declare it a job well done and say enough is enough?

Many patients destined to die face multiple procedures and tubes, a cascade toward death (similar to the cascade effect described by Mold³) that seems so inescapable. That is, unless we are willing to halt it, or help patients and their families to halt it. Sometimes it seems like we torture the patients to their ultimate demise and then torture the families and society with the bills that go along with it.

Case Examples

The following examples are illustrative. Each has partial basis in actual patient cases.

Case. A 94-year-old female was admitted to the intensive care unit after she developed bradycardia followed by respiratory arrest on the way to her physician's office. She was readily resuscitated in the emergency room. She was known to have suffered from carcinoma of the colon for the previous 10 years, with progressive local extension requiring left nephrectomy one year previously, with recurrent bright red blood per rectum over the previous month. She was pleasant and well-liked by her family, but had sufficient organic brain syndrome that she was disoriented to time and place for several months prior to the admission, a fact that was generally unrecognized by the family. Her abdominal exam revealed a large hard watermelon-size mass that replaced most of the left and much of the right side of the abdomen. Her hemoglobin was 9, similar to two weeks earlier.

Comment. This patient's prognosis is poor. Her family wants her to be resuscitated, citing that many people live to be over 100 and there is no reason that she should not also. Would you suggest resuscitation if recurrent arrest develops?

Case. A 104-year-old woman with moderate chronic renal failure, chronic renal tubular acidosis, and an admission two years earlier for urosepsis, is chronically bed-bound but lives with her husband, to whom she has been married 86 years. She has not eaten for two days, has a temperature of 101.6, is clearly dehydrated, is disoriented, and has laboratory findings consistent with disseminated intravascular coagulation.

Comment. Would you recommend resuscitation if arrest occurs? Should she receive extensive antibiotics? Should she receive any antibiotics?

Case. A 38-year-old diabetic woman smoker with chronic renal failure (not requiring dialysis) had a cardiac arrest during routine surgery. She appeared to have cerebral anoxic damage and continues to require a respirator. She had ongoing recurrent complications, including two more cardiac arrests, and spent two months in the intensive care unit. Her diabetes remained uncontrolled despite multiple efforts in the hospital. She was moved to the intermediate care unit

From the Department of Family & Community Medicine, Bowman Gray School of Medicine, Wake Forest University, Winston-Salem 27103.

but continued to require a respirator. After four months in the hospital, the patient who seemed to understand and be aware of her condition, wished to have the respirator removed and did not want to be resuscitated. Her family agreed.

Comment. What do you do?

These are cases about which many physicians might creditably disagree. However, they are all patients with very poor prognoses. Sometimes the best thing to do is let patients with a very poor prognosis die before every possible medical avenue is used.^{4,5} Patient and family suffering should be considered.

Medical quality assurance systems which presume that death is a bad outcome should be reconsidered. Ethically permitting patients to die without prolonged suffering is frequently the better goal for patients, and is not a failure of medicine, physicians, or the family. We need to admit this to ourselves, our patients and our quality assurance systems. □

References

- 1 Bedell SE, Pelle D, Maher PL, Cleary PD. Do-not-resuscitate orders for critically ill patients in the hospital. How are they used and what is their impact? JAMA 1986;256:233-7.
- 2 Lo B, McLeod GA, Saika G. Patient attitudes to discussing life-sustaining treatment. Arch Intern Med 1986;146:1613-5.
- 3 Mold JW, Stein HF. The cascade effect in the clinical care of patients. N Engl J Med 1986;314:512-4.
- 4 Blackhall LJ. Must we always use CPR? N Engl J Med 1987;317:1281-5.
- 5 Ruark JE, Raffin TA, and the Stanford University Medical Center Committee on Ethics. Initiating and withdrawing life support: principles and practice in adult medicine. N Engl J Med 1988;318:25-30.

**This Publication
is available in
Microform.**



**University Microfilms
International**

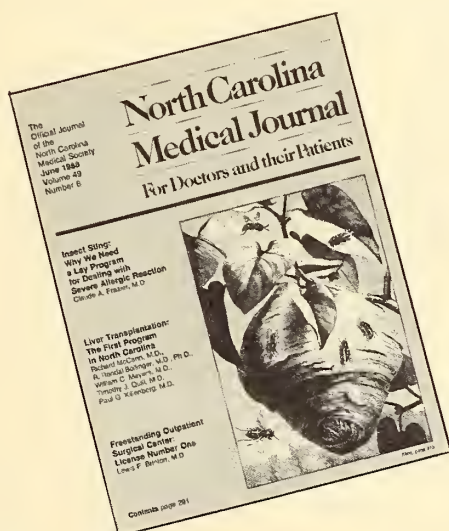
Please send additional information

for _____
Name _____
Institution _____
Street _____
City _____
State _____ Zip _____

300 North Zeeb Road
Dept. P.R.
Ann Arbor, MI 48106

North Carolina Medical Journal

Subscribe for yourself or a friend



Please enclose a check or money order for:

☐ \$12.60 (NC Residents; this includes 5% sales tax)

☐ \$12.00 (out-of-state subscribers)

☐ New ☐ Renewal

Send to NCMJ, Box 3910 DUMC
Durham 27710. (919/684-5728)

Please start my 1-year subscription:

My Name _____

Address _____

City/State/Zip _____

Please send a 1-year gift subscription to:

Name _____

Address _____

City/State/Zip _____

**A Special Group
Purchasing Program with the
North Carolina Medical Society**

Dillard
HEALTHCARE SERVICES
Distributor of Medical, Rest Room, Office, and Lab Supplies

From Such Companies As

- Ames • Baxter General Health • Davis & Geck • Kendall
- Monoject • Scott Paper Co. • Tidi

Divisions:

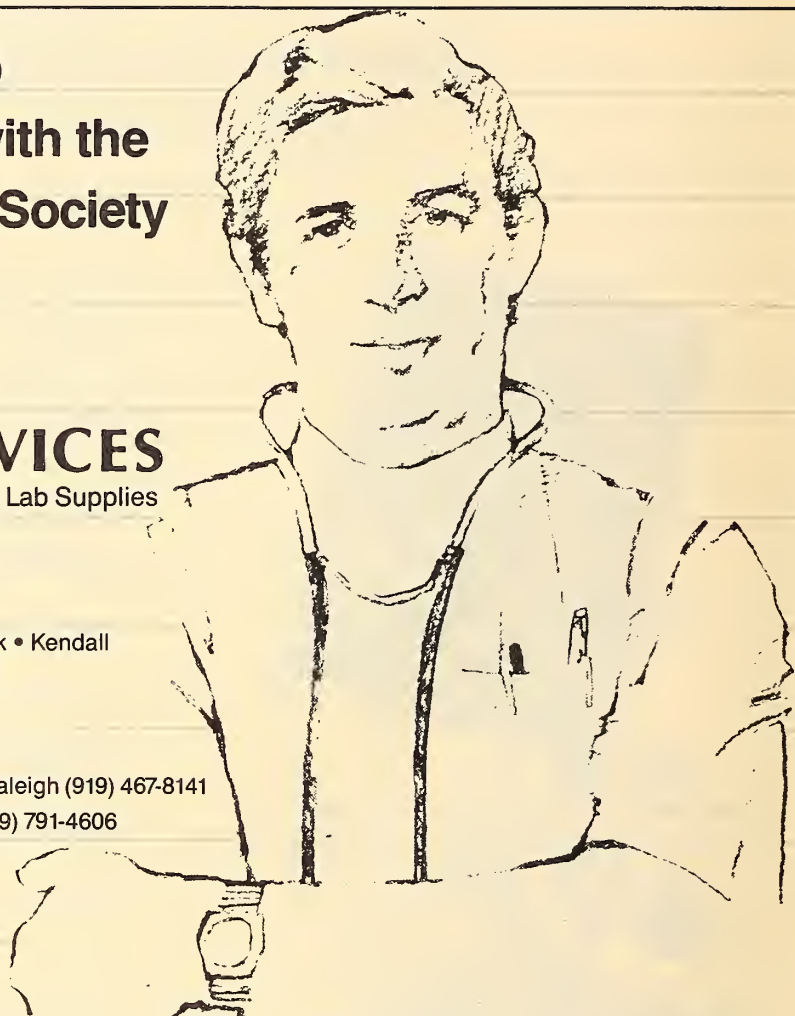
Charlotte (704) 392-6131 Greensboro (919) 299-1211 Raleigh (919) 467-8141

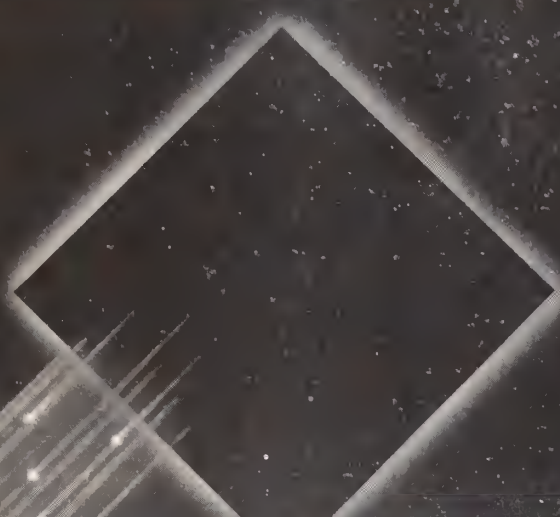
Winston-Salem (919) 768-4900 Wilmington (919) 791-4606

Greenville, SC (803) 269-2310



Endorsed by the North Carolina Medical Society





YES! You Can Submit CHAMPUS Claims Electronically!

Beginning on February 1, 1989, Health Communication Services (HCS) will offer electronic transmission for your CHAMPUS claims.

Why send CHAMPUS claims electronically?

- ◆ **Fast Turnaround.** Claims are transmitted and delivered to the carrier the same day — no mail delays.
- ◆ **Prompt Reimbursement.** Historically, 82% of electronic claims are paid in ten days or less.
- ◆ **Adjudication Response.** You will receive acknowledgment whether your claim was paid, pended or denied.
- ◆ **Good Business Sense.** Sending claims electronically reduces administrative costs, increases staff productivity, and improves cash flow.

HCS can also provide you with on-line benefits and eligibility information from our national Medicare A&B database. And we can transmit your commercial claims to twenty-five of the nation's largest commercial carriers.

To transmit claims through HCS, you can choose from three data input options:

- ◆ We can provide software to key your claims in from a P.C. or...
- ◆ We can receive claims from your computer (RJE) or...
- ◆ We can develop an automatic download from your system to ours — no manual intervention or re-keying required.

A few of the vendors who have developed their own HCS interface are Southeast Medical Computer Systems, Automation Management, Inc., Monette Information Systems, Medical Manager, and MTI.

For more information about our services, please call us at 1-800-543-6311.



Health Communication Services, Inc.

3111 Northside Avenue, Richmond, VA 23228

How To ANSWER PERPLEXING QUESTIONS IN TWO MINUTES FLAT.



The Carolina Consultation Center at the University of North Carolina medical center provides reliable help, fast and free.

The Carolina Consultation Center provides rapid access to top specialists and advanced clinical information in virtually all fields. We put 530 specialists—the entire staff of the UNC medical center—at your fingertips.

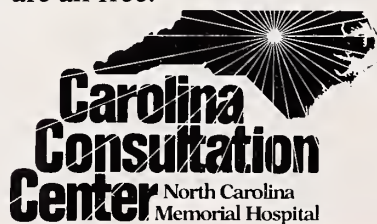
Over the past 20 months more than 5,000 physicians—one of every two practicing in North Carolina—have used the center for information, requests for support and contacts to expedite transfers of patients.

The center is staffed by trained information specialists who have only one job—to put

you in touch with the resources you need. With our computerized registry, we can make your connection quickly and see that your questions are answered in minutes.

For a free copy of the Carolina Consultation Center's Directory of Consultants, call 1-800-UNC-NCMH. This up-to-date listing of the medical staff, complete with biographies and areas of expertise, is an invaluable tool to help you determine the consultant you need, before you place your call.

The call, the directory, and the service are all free.



1-800-862-6264

Local Excision and Irradiation as Primary Treatment of Rectal Cancer

Joel Tepper, M.D., Charles Herbst, M.D., and Stephen Bernard, M.D.

In the treatment of adenocarcinoma of the rectum, surgical resection has been the mainstay of therapy for many years. Although abdominoperineal resection (APR) has been utilized for low lying tumors, a low anterior resection (LAR) can often be performed for tumors that are located higher with no adverse effect on patient survival or local recurrence.¹ With the advent of improved surgical skills and the development of the EEA stapling device, surgeons have been able to perform operations which preserve anal function in an increasing number of patients. However, these surgical procedures can result in a poor rectal reservoir and frequent bowel movements that are not always well controlled. In time, rectal function may return to a relatively normal condition. There are, however, lesions that are located so low in the rectum that a low anterior resection, even with the use of the stapling device, cannot be employed. Abdominoperineal resection remains the mainstay of therapy for these patients. Because many patients have a strong desire to avoid a permanent colostomy unless it is absolutely essential, there has been increasing interest in developing techniques which will produce a high level of local tumor control and still allow maintenance of fairly normal anorectal function. A combination of local surgical excision with radiation therapy can allow these goals to be accomplished in a substantial number of patients.

Rationale

If one attempts to design a more limited therapy to conserve anal function, it is essential that one has an understanding of the mode of spread of rectal cancer as well as the limitations of the various treatment modalities. The mode of spread falls into three categories: longitudinal spread, deep extension and lymph node metastases.

In contrast to carcinoma of sites such as the esophagus, rectal cancer does not have a tendency to spread longitudi-

nally within the bowel wall. Evidence for this comes from pathological studies showing limited longitudinal spread within the bowel wall and from clinical studies showing adequate local control in patients with a small distal margin following LAR. For example, Wolmark et al² reporting for the National Surgical Adjuvant Breast and Bowel Project found no change in treatment failure and survival for patients whose distal resection margins were less than 2 cm, 2-2.9 cm, or equal to or greater than 3 cm. Pollett et al³ from St. Marks Hospital found that in resections with a distal margin of 2 cm or less the local recurrence rate was 7.3%, versus 6.2% in patients whose distal margin was 2-5 cm, and 7.8% in the patients with distal margins greater than 5 cm.

In contrast to the limited spread longitudinally within the bowel wall, rectal cancer does have a substantial propensity for direct spread into the perirectal fat and soft tissue which is related to the pathological stage of the disease (table 1; next page). Numerous studies have shown that local failure after LAR or APR is approximately 25% in patients with Stage B disease and 35% to 50% in patients with Stage C disease. This local recurrence is not related to the longitudinal extent of disease but rather to the presence of deep extension radially into perirectal fat where the surgeon is limited in the amount of surgical margin which can be obtained. This is often not fully evaluated pathologically, but is critical for local control. It is because of this recurrence pattern that postoperative radiation therapy has been used to decrease the local failure rate after LAR or APR. In evaluating patients for local excision and irradiation to preserve sphincter function, we must be very careful to evaluate this deep extension of disease as this will be the site for failure in patients who are inadequately staged and treated.

Methods have been developed to evaluate more thoroughly the depth of local extension of the tumor prior to surgery. Both CT scanning and MRI have shown some utility in evaluating the extent of tumor into the bowel wall. However, transrectal ultrasound evaluation may be more effective than either of these. Benyon et al⁴ evaluated 51 patients with histologically proven rectal carcinoma with trans-rectal ultrasound. This was then correlated with the resected specimens in 46 patients. Ultrasound predicted invasion beyond the

From Department of Radiation Oncology (JT), Department of Surgery (CH), and Department of Medicine (SB), University of North Carolina School of Medicine, Chapel Hill 27514.

muscularis propria with a sensitivity of 97% and specificity of 92%. Lymph node involvement was predicted with a sensitivity of 94%, but lesser specificity.

The treatment of carcinoma metastatic to regional lymph nodes remains surgical. For tumors in the mid to high rectum, the primary lymphatic drainage is through the superior hemorrhoidal lymphatic system which drains into the inferior mesenteric nodal system. These lymphatic channels are treated well by either LAR or APR in that the nodes are excised with the mesentery. However, low lying rectal cancers drain by the middle hemorrhoidal system and will have a higher incidence of nodal disease in the internal iliac and obturator system. One of the reasons for employing adjuvant radiation therapy is to treat these remaining nodes. Microscopic nodal metastases are likely to be controlled with adjuvant irradiation. If one is planning local excision and irradiation with preservation of anal function, it is important to determine which patients are at high risk for nodal disease since these patients should ideally be treated by APR or LAR and adjuvant radiation. If there is a low risk for nodal metastases, local excision plus radiation to preserve anal function would be a viable option.

Fortunately, the likelihood of lymph node disease can often be predicted based on clinical and pathological criteria. For example, the risk of lymph node metastases is low when the primary tumor is confined to the bowel wall. This is shown by the low incidence of pathological Stage C1 disease (local disease limited to the bowel wall with positive lymph nodes; table 1) in many clinical studies of rectal cancer. In a review of 142 patients with carcinoma of the rectum from

the Massachusetts General Hospital, only four patients (3%) had pathological Stage C1 tumor. Once the disease extends beyond the bowel wall, the incidence of lymph node metastases increases. Thus, confining the use of local excision and radiation therapy to patients whose tumors are limited to the bowel wall will substantially reduce the likelihood of under-treating positive lymph nodes. Other factors have also been shown to correlate with the likelihood of nodal metastases. Venous or lymphatic invasion and poorly differentiated tumors are associated with high risk for recurrence and poorer long-term survival.⁵ More recently, Banner et al⁶ have described the correlation of DNA ploidy and tumor stage. In patients with diploid tumors on flow cytometric evaluation, only two of 14 patients had evidence of lymph node disease. Aneuploid or tetraploid tumors were much more likely to have nodal disease, with 24 of 40 patients having Stage C or D disease.

Thus, with the use of a variety of staging studies, tumor limited to the bowel wall with a very low incidence of metastatic disease in lymph nodes can be identified. These are patients with tumors that are not poorly differentiated, are within 8 cm of the anal verge, limited to no more than one-third of the circumference of the bowel wall and without clinical evidence of deep invasion. It is this subset of patients who are most likely to benefit from the use of a conservative treatment modality to try to preserve anal function and avoid a permanent colostomy.

Conservative Treatment for Preservation of Anal Function

Through the years a number of investigators have evaluated the use of conservative treatment of rectal carcinoma with various approaches.⁷ These approaches have included local excision, endocavitary radiation therapy, electrocoagulation, external beam radiation therapy,⁸ radioactive implant, or combinations of these modalities.

Morson et al⁹ from St. Marks Hospital have described 119 patients with tumors of the distal colon and rectum who were treated with a local excision. The vast majority of these tumors were 2 cm or less in size and 81% of them had invasion only into the submucosa. Ninety-one had what was described as a complete resection with only three recurrences. Fourteen patients with a doubtfully complete resection had two recurrences compared to five recurrences in 14 patients with an incomplete excision. The crude five-year survival in the patients with complete resection was 82% but most of the deaths were from intercurrent disease. These data were updated by Lock et al¹⁰ who described 22 patients with non-pedunculated tumors in the rectum. The surgical techniques were varied but often entailed a full thickness excision with various approaches including trans-sphincteric, transvaginal and posterior (Kraske). Fifteen of the 22 had no further surgery and one of these died of carcinoma. Five patients had an early reoperation because of what was thought to be an incomplete excision. Two patients developed a recurrence.

Table 1. Modified Dukes' Staging System For Rectal Cancer

Stage	Description
A	Disease limited to the mucosa
B1	Nodes negative—primary tumor limited to the bowel wall
B2	Nodes negative—primary tumor extending through the bowel wall
B3	Nodes negative—primary tumor fixed or adherent to adjacent structures
C1	Nodes positive—primary tumor limited to the bowel wall
C2	Nodes positive—primary tumor extending through the bowel wall
C3	Nodes positive—primary tumor fixed or adherent to adjacent structures
D	Distant metastases

However, over many years very few patients were treated by local excision for other than pedunculated tumors.

Biggers et al¹¹ from the Mayo Clinic reported on 282 patients with carcinoma of the rectum who were treated by local excision alone. These tumors were within 12 cm of the dentate line, and 234 of the 282 were adenocarcinomas. Of these 234 were 93 patients with in situ disease and 141 with invasive cancers. Survival of the 141 patients with invasive tumors was 65% at five years. Of the 234 patients, 180 never had a recurrence, five had documented distant recurrence and 49 had local recurrence. The probability of recurrence was 11% for in situ disease and 27% for invasive cancer. Hager,¹² from Erlangen, West Germany, reported on 59 patients with local excision. Thirty-nine patients who had disease only into the submucosa had an 8% local recurrence rate compared to a 17% local recurrence rate in 20 patients with invasion into the muscularis propria. Distant metastases occurred in one patient in each group. Similar results have been found in other series.¹³

Electro-coagulation has also been used by a number of investigators. The largest series reported is that of Madden et al.¹⁴ In a group of patients with operable disease, 71% were alive at five years with 62% free of disease. The exact selection of tumors for this approach is less defined than in many of the series with local excision. Others have reported similar results with electro-coagulation. One difficulty with electro-coagulation is that general anesthesia and multiple procedures are often required. Bleeding is a complication that occurs in a moderate number of patients.

A number of investigators have evaluated the use of primary radiation therapy in rectal cancer. Although external beam radiation therapy alone has been used, overall local control has been poor and this technique alone is generally not employed. A number of centers have utilized endocavitary radiation therapy, a technique popularized by Jean Papillon¹⁵ in Lyon, France. It consists of four applications approximately two to three weeks apart from a 50 KV contact radiation therapy machine which is placed directly over the tumor through a sigmoidoscopic type device. Of 133 patients followed for more than five years by Papillon only 9% have died from metastases or regional spread of tumor. A total of 26 failures were observed (14%). Six of these patients were salvaged surgically. This technique has also been utilized by Sischy et al¹⁶ from Highland Hospital in Rochester, New York. A 95% local control was obtained in 121 patients with only six local recurrences. Of the 121 patients, 80 had been followed for a minimum of 18 months.

Since the data with local excision or electro-coagulation as a single modality shows substantial local failure, combined therapy using local excision and external beam irradiation has been tried. Rich et al¹⁷ reported on 26 patients treated with this combination. Local failure occurred in only one of 17 patients in whom no gross residual disease remained after surgery. Fifteen of the 17 remained without evidence of disease at the time of last followup. In patients with gross residual disease after excision, local failure occurred in five of nine patients.

Conservative Treatment at UNC

Given the data presented, it is clear that a substantial number of patients with relatively small carcinomas of the rectum, who otherwise would require an abdominoperineal resection and permanent colostomy, can be treated effectively with a more conservative approach. Electro-coagulation and local excision have both been found to be useful in certain subsets of patients. However, the data of Biggers et al¹¹ and the electro-coagulation data of Madden¹⁴ show that there is still a substantial local failure rate after these approaches. The substantial data on the use of adjuvant post operative radiation therapy after abdominoperineal resection in more advanced rectal carcinomas has shown that radiation therapy can control microscopic residual disease located in the tumor bed. For this reason, the combination of local surgical procedure to remove the primary tumor mass and radiation therapy to treat microscopic remnants of disease is an approach which can cure a substantial percentage of patients with small localized rectal cancers.

The evaluation of patients for a conservative procedure is one which takes a great deal of experience and care. It is clearly not appropriate to treat in this manner patients who have very large circumferential lesions or tumors that are locally advanced with fixation to adjacent structures. These factors can often be determined by the radiographic studies described earlier. We limit this approach to tumors that can be locally excised without leaving any gross residual disease. Tumors that infiltrate beyond the bowel wall or that are poorly differentiated will have a higher likelihood of positive regional lymph nodes and would also not be appropriate for local excision and radiation therapy.

It is critical that the surgical excision be performed in such a manner that the specimen can be removed en bloc and appropriately marked. The surgical margins should be inked and fully evaluated, and the depth of invasion of the tumor assessed. These tumors should be excised with a wide margin including the full thickness of the bowel wall. Patients who only have carcinoma in situ require no further treatment. Patients who have carcinoma invasive into the muscularis propria are at higher risk for a local recurrence and have a modest risk of nodal failure. For both these reasons, we use postoperative radiation therapy to a dose of 4,500 to 5,000 rads to the local primary site and to the regional lymphatics. Given the data regarding the enhancement of local tumor control by 5-Fluorouracil,¹⁸ we also give 5-FU at the beginning and end of the radiation course to sensitize the tumor to the external beam radiation therapy. For patients in whom excision results in a minimal surgical margin or in whom there is a positive margin microscopically, we feel external beam radiation therapy alone is insufficient for obtaining local control. These patients receive APR or interstitial implantation (placement of radioactive sources directly into the tumor bed) to the areas at highest risk for residual disease, plus external beam irradiation.

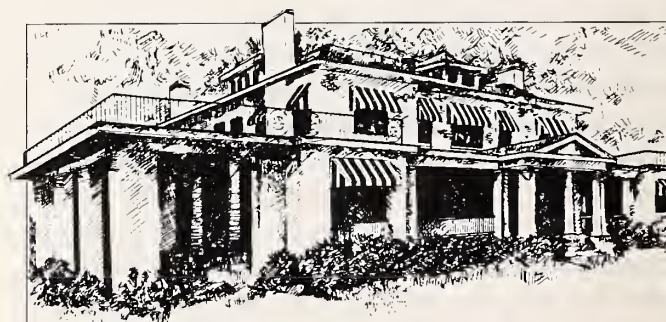
It is clear that local excision and radiation therapy with sphincter preservation cannot be used in all patients with

adenocarcinoma of the rectum. However, if patients are appropriately chosen, one should be able to obtain local tumor control and long-term cure while still preserving good sphincter function in most patients. Candidates for this treatment include patients with well or moderately well differentiated adenocarcinoma within 8 cm of the anal verge, tumors limited to one-third or less of the circumference of the bowel wall, and without clinical evidence of adherence to deep structures. Local excision plus postoperative irradiation should be included in the therapeutic armamentarium of the treatment of localized adenocarcinoma of the rectum.

References

- 1 Slanetz C, Herter F, Grinnell R. Anterior resection versus abdominoperineal resection for cancer of the rectum and rectosigmoid. *Am J Surg* 1972;123:110-7.
- 2 Wolmark N, Fisher B. An analysis of survival and treatment failure following abdominoperineal and sphincter-saving resection in Dukes' B and C rectal carcinoma. *Ann Surg* 204:480-9.
- 3 Pollett W, Nicholls R. The relationship between the extent of distal clearance and survival and local recurrence rates after curative anterior resection for carcinoma of the rectum. *Ann Surg* 1983;198:159-63.
- 4 Benyon J, Roe A, Foy DM, et al. The staging of rectal cancer using endoluminal ultrasound. *Dig Dis Sci* 1986;New Series 31(10 Suppl):123S.
- 5 Knudsen J, Nilsson T, Sprechler M, et al. Venous and nerve invasion as prognostic factors in postoperative survival of patients with resectable cancer of the rectum. *Dis Col & Rect* 1983;26:613-7.
- 6 Banner B, Tomas-DeLegva J, Roseman D, Coon J. Should flow cytometric DNA analysis precede definitive surgery for colon carcinoma? *Ann Surg* 1985[AU: VOL-UME?]:740-4.
- 7 Baker A. Local procedures in the management of rectal cancer. *Seminars in Oncology* 1980;7:385-91.
- 8 Rider W. Is the Miles operation really necessary for the treatment of rectal cancer? *J Canadian Assoc Radiologists* 1975;26:167-75.
- 9 Morson B, Bussey H, Samoorian S. Policy of local excision for early cancer of the colorectum. *Gut* 1977;18:1045-50.
- 10 Lock M, Cairns D, Ritchie J, Lockhart-Mummery H. The treatment of early colorectal cancer by local excision. *Br J Surg* 1978;65:346-9.
- 11 Biggers O, Beart R, Ilstrup D. Local excision of rectal cancer. *Dis Col & Rect* 1986;29:374-7.
- 12 Hager T, Gall F, Hermanek P. Local excision of cancer of the rectum. *Dis Col & Rect* 1983;26:149-51.
- 13 Grigg M, McDermott F, Pihl E, Hughes E. Curative local excision in the treatment of carcinoma of the rectum. *Dis Col & Rect* 1984;27:81-3.
- 14 Madden J, Kandalaft S. Electro-coagulation as a primary curative method in the treatment of carcinoma of the rectum. *Surg, Gynecol & Obstetrics* 1983;157:164-79.

- 15 Papillon J. Intracavitary irradiation of early rectal cancer for cure. *Cancer* 1975;36:696-701.
- 16 Sischy B, Jones D. Endocavitary irradiation - ten years experience. Personal Communication.
- 17 Rich R, Weiss D, Miles C, et al. Sphincter preservation in patients with low rectal cancer treated with radiation therapy with or without local excision or fulguration. *Radiology* 1985;156:527-31.
- 18 Moertal CG, Childs DS, Reitemeier RT, et al. Combined 5-Fluorouracil and super voltage radiation therapy of locally unresectable gastrointestinal cancer. *Lancet* 1969;2:865-7.



FROM OUR HOUSE TO YOURS

Teer House, home of the Duke Substance Abuse Program for Youth, provides the warm and uplifting environment that teens need to resolve their problems with alcohol and drugs. Our treatment program lets adolescents participate in family and school activities, putting what they learn in our house into practice in theirs. Call 479-5554 for more information on our all-day and after-school programs.

TEER HOUSE

The Duke Substance Abuse Program for Youth

FOR ALCOHOLISM AND CHEMICAL
DEPENDENCY

SOMETIMES STAYING NEAR

HOME
SWEET
HOME

Offering
EXECUTIVE
RECOVERY
MANAGEMENT
Program

MAKES

GOOD
CLINICAL
SENSE

Charlotte
Treatment
Center 
IS AMETHYST*

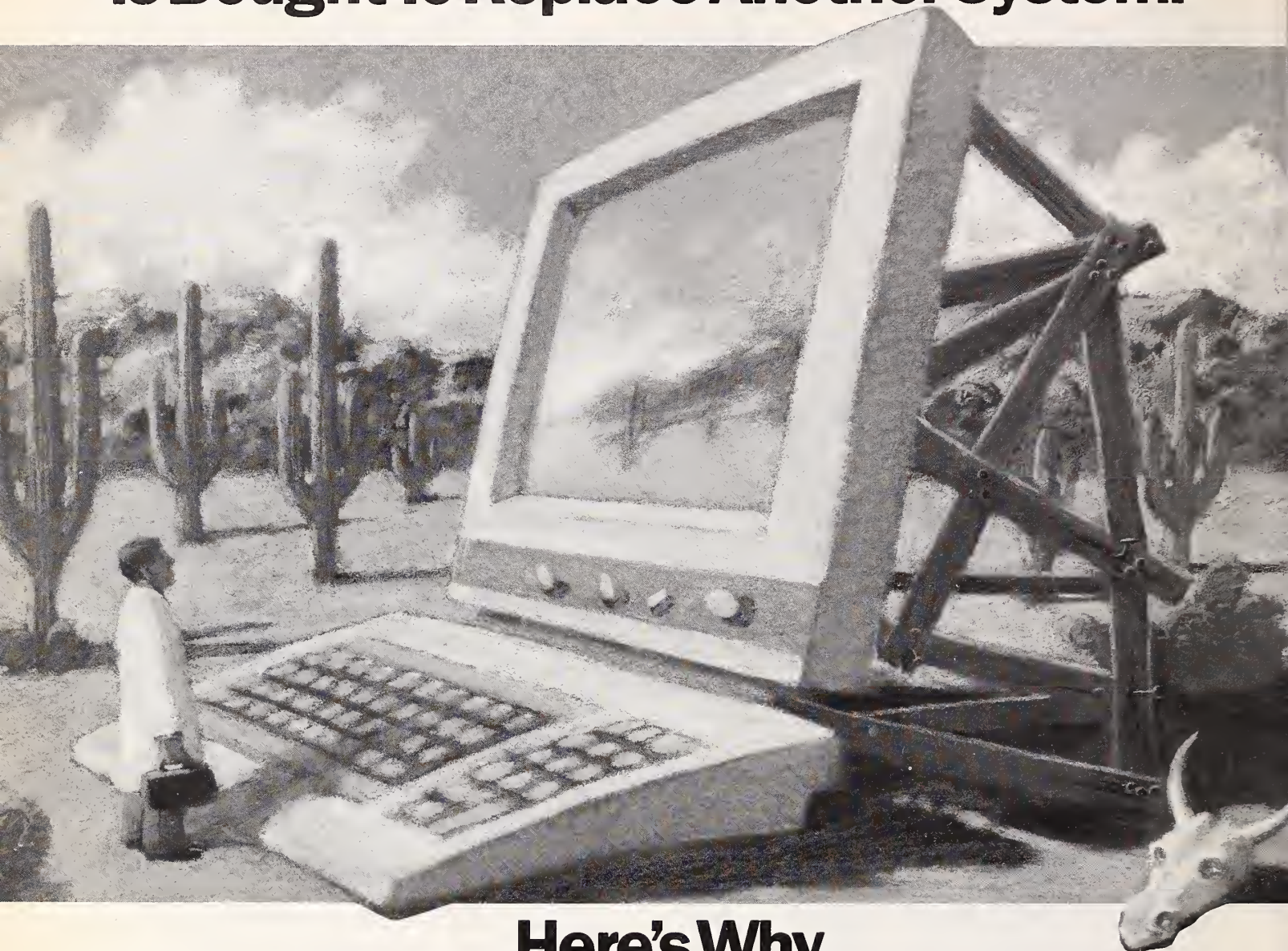
P.O. BOX 240197
1715 SHARON ROAD WEST
CHARLOTTE, NC 28224
704/554-8373

JCAHO Accredited
Member NAATP
Member NCHA

JACK E. HARVILLE
EXECUTIVE DIRECTOR

*Amethyst - from the Greek: **NOT DRUNKEN**

1 Out Of Every 4 Medic Computer Systems Is Bought To Replace Another System.



Here's Why.

Too many practices find out about weak support too late. The smallest glitch takes hours of searching for help that never comes. The distributor went out of business. The software people say it's the hardware. And the hardware people don't answer the phone.

With Medic, that can't ever happen. Since we are the system developers, we can provide all the hardware and software expertise you'll need.

We start by assessing your practice's current needs and even the space you've got for computer stations. Then we follow through, with everything from helping you custom design your bills to seminars on getting the maximum benefit from your system.

That's the security Medic provides to more than 6,000 doctors in 2,000 practices from coast to coast. And it's backed by a \$2.5 billion organization. Plus Texas Instruments hardware, with its excellent track record for reliability and expandability.

For a system you can start with and stay with, call Medic. Specialists in computer systems for America's medical community.



Please tell me how Medic Computer Systems can help my practice

Name

Address

City State Zip

Phone () Number of physicians in practice

Specialty

Medic Computer Systems

8601 Six Forks Rd., Suite 300, Raleigh NC 27615 12/88 NC



8601 Six Forks Rd., Suite 300, Raleigh, NC 27615, 919-847-8102. In NC Call: 1-800-877-5678. Outside NC Call: 1-800-334-8534.
Other Offices: Ann Arbor, Atlanta, Austin, Chicago, Cincinnati, Dallas, Denver, Ft. Lauderdale, Hartford, Houston, Jackson, Kansas City, Los Angeles, Minneapolis, Nashville, Oklahoma City, Orlando, Philadelphia, Phoenix, Pittsburgh, Richmond, San Antonio, San Diego, San Francisco, Tampa.

Look-Back: Transfusion-Acquired HIV Infection at Duke University Medical Center

Patti J. Allen and John A. Koepke, M.D.

The acquired immunodeficiency syndrome (AIDS) is caused by infection with a retrovirus now called the human immunodeficiency virus (HIV).¹ The names HTLV-III (human lymphotropic virus-type III), LAV (lymphadenopathy associated virus), and ARV (AIDS-associated retrovirus) have been used previously to refer to this virion. A person who has a confirmed positive HIV antibody test is infected with the HIV. The terms AIDS-related complex (ARC) and AIDS actually refer to clinically defined stages of the HIV infection. AIDS is the end stage of HIV infection. Over half the people ever diagnosed with AIDS have died.

The first reports of AIDS appeared in June, 1981, when six cases of *Pneumocystis carinii* pneumonia (PCP) in homosexual men were reported in the Morbidity and Mortality Weekly Report (MMWR). In the seven years since AIDS was first described and named it has evolved from being viewed as a localized epidemiologic puzzle to a worldwide epidemic. In the United States as of March 26, 1988, over 57,000 cases of AIDS had been reported to the Centers for Disease Control (CDC), including 452 from North Carolina. The U.S. Public Health Service has estimated that 1 million to 1.5 million Americans are already infected with HIV² and 50 million to 100 million people may be infected worldwide by 1991.

From all evidence to date, HIV can be transmitted in several ways: (1) sexually; (2) through sharing of contaminated needles; (3) perinatally; (4) via exposure to blood products through transfusion; or (5) rarely, percutaneously. Homosexual and bisexual men remain the largest group at risk of developing AIDS and account for about 72% of the total cases of AIDS. Other risk groups include intravenous drug abusers (17% of total cases), heterosexual partners of

persons with AIDS or of those at high risk (3% of total cases), transfusion recipients (2% of total cases), hemophiliacs (1% of total cases), and people with no identified risk (5% of total cases). Current data demonstrate that substantial numbers of new infections continue to occur in all population groups except hemophiliacs and transfusion recipients.² However, the proportion of transfusion-acquired cases is expected to increase (as a result of infections acquired before anti-HIV screening was available in 1985) until 1990 or later (projected 2.5% of cases by the end of 1991).

In December 1982, when only 788 cases of AIDS had been reported, the CDC reported a 20-month-old infant who had developed a cellular immune deficiency and opportunistic infection after multiple transfusions, including platelets from a donor who subsequently developed AIDS.³ This was the first clear indication that AIDS could be transmitted by blood transfusion.

In March 1983, the major blood banking organizations began efforts to eliminate donations from members of groups at high risk for AIDS by requested self-deferral.⁴ Routine screening of blood donors for anti-HIV was instituted in the spring of 1985 with licensing of the ELISA. In June 1986, the American Red Cross recommended notification of recipients of blood products from donors later found to be anti-HIV positive. This process was called the Look-back program.

Purpose Of Look-Back

The blood products traced through the Look-back program are not known to be infective. They are suspect only because at a later date the donors of these products were found to be infected (i.e., after screening was initiated or at a subsequent donation).

The primary objective of the Look-back program for the blood banking organizations was to stop the spread of HIV infection. Especially in the first months after screening was available the extent to which the blood supply had been contaminated was not known. It was recognized that infected

From Hospital Laboratories, Duke University Medical Center, Durham 27710.

transfusion recipients would not perceive themselves to be at risk and might infect others through sexual contact. It was also hoped that informing recipients of potential exposure to HIV might enable infected individuals to obtain earlier health care.

Methods

All blood products used at Duke University Medical Center are obtained from the American Red Cross Collection Centers in the region. Seventy-two percent of the 80,000 to 85,000 units of red cells and components transfused annually at Duke come from the Carolinas Region American Red Cross located in Charlotte. All donated products are screened for ABO, Rh, syphilis, HB_sAg, anti-HB_c, alanine aminotransferase, and anti-HIV. All donated products are initially screened for anti-HIV (Abbott ELISA). Units that test positive (0.8% of donations) are retested. Approximately one quarter of these are repeatedly reactive (0.2% of total). Repeatedly reactive tests are confirmed with a Western Blot. About 0.02% of all units are confirmed to be HIV antibody positive in this area. No units with repeatedly reactive screening results are transfused regardless of subsequent findings. The confirmed positive donor is notified of his or her antibody status via certified mail and is urged to contact the Red Cross for counseling and referral.

If the seropositive donor has donated previously, a Look-back is initiated. All previous donations dating back to 1977 are identified. Hospitals are notified of the potential for HIV transmission from any of the components prepared from the donated units. The hospital is requested to trace the disposition of these products and notify and test the recipients. A report to the Red Cross of the HIV antibody status of the recipient completes the Look-back.

At Duke the Transfusion Service identifies recipients of the implicated blood products. Hospital records are examined to ascertain the indication for transfusion, the clinical status of the recipient (if known), the attending physician at the time of transfusion, and the referring physician. The Service informs the attending physician of the Look-back

and of the subsequent course of the investigation, and notification is discussed. If the attending physician has continuing contact with the recipient, he or she is asked to inform the recipient of the possible exposure to HIV through transfusion and to request permission for an HIV antibody test. If the patient is no longer being seen at Duke, the Transfusion Service or the attending physician requests the referring primary care physician to inform the recipient and to obtain testing which, by law, requires the consent of the patient.

Results

Between March 30, 1985, and March 30, 1988, the Duke Transfusion Service had been notified through the Look-back program of 33 potentially infectious blood products (see table 1). Twenty-eight products were transfused to 26 different recipients; one was discarded; and adequate records could not be found on four of the products.

Of the 26 recipients identified, 17 (65%) are deceased, none due to AIDS-related causes. This proportion of post-transfusion mortality is not unlike that for all patients receiving blood. Only one of the deceased recipients is considered to have possibly transmitted the virus prior to death; his spouse has not been tested. As noted above, medical records of four of the recipients were unobtainable; thus their status is unknown.

Nine (35%) of the recipients are alive (see table 2). Three received blood products for heart surgery, three for gastrointestinal bleeding/surgery, one for a renal transplant, one for orthopedic surgery, and one for chronic hemolytic anemia. They range in age from six to 78 years of age. Five are females and four are males.

Of these nine living recipients five (56%) are seronegative, three (33%) are seropositive, and one (11%) is not known to have been tested. Two of the seropositive recipients received transfusions for heart surgery and are asymptomatic. One is a man whose spouse is seronegative. The serologic status of the sexual contact(s) of the female recipient is unknown; however, she is presently pregnant.

Three of the living recipients received products from serial donations by the same donor (donor #5). The recipient of the most recent of these donations (December 1984) is a kidney transplant recipient who has been screened twice by ELISA (both negative) and has had a negative viral culture. The recipients of donations given two and six months earlier are seropositive.

One additional case of HIV infection at Duke, although not part of the Look-back program, was probably acquired through transfusion. This case involved an older man who underwent a coronary artery bypass procedure in 1985. Two to three weeks after returning home he experienced symptoms of an acute viral infection. Two months later his wife had an acute febrile illness. Approximately a year and a half after the surgery he was diagnosed with AIDS-related complex and his spouse was found to be HIV positive. He denied other risk factors for HIV infection and review of transfusion

Table 1. Disposition of Look-Back Blood Products

33 products	26 recipients
	28 products
	4 lost to follow-up
	1 outdated
26 recipients	17 deceased
	1 with potential for transmission prior to death
	16 without potential for transmission
	9 alive at last follow-up
	3 anti-HIV +
	5 anti-HIV -
	1 untested

records revealed one donor who reported close personal contact with a member of a high-risk group but who declined to be tested.

Discussion

The effectiveness of the Look-back program as a means of identifying transfusion-acquired HIV infections is debatable. However, of four cases of transfusion-acquired HIV infection at Duke, three were identified by the Look-back program. The Central Ohio Region Red Cross compared the results of large-scale transfusion recipient screening for HIV and Look-back. Of 2,343 transfusion recipients tested, only one (0.4%) was confirmed seropositive versus 12 of 20 (69%) of those screened through Look-back.⁵ Investigators at the Irwin Memorial Blood Bank in San Francisco, an area with a high prevalence of HIV infection and transfusion-acquired AIDS, regard the donor identification procedure of Look-back to be inadequate. They argue that since the majority of high-risk donors self-deferred from blood donation prior to the initiation of testing in 1983 and subsequently have not returned, the frequency of detecting HIV positive donors would decline. This in fact did occur. By actively seeking donors reported to have AIDS and investigating their previous donations, the San Francisco investigators have achieved a seven-fold increase in identification of seropositive recipients over standard programs. They found an approximately 50% seropositive rate in traced recipients⁶ (see table 2). Recipients of blood donated by Look-back donors have a substantially higher rate of seropositivity than general transfusion recipients.

Some infected previous donors are not being identified through Look-back, since the procedure depends on donation by donors who probably realize that they should no longer donate blood. But experience with the Look-back program has shown that self-deferral is not completely effective. After blood collection agencies instituted measures to encourage self-exclusion of high-risk individuals there was indirect evidence that the number of homosexual men who donated blood decreased. In Atlanta, the percentage of blood donated by men aged 21 to 30 decreased following the recommendations. Significant decreases were also seen in the number of units that showed serological evidence of HBV or syphilis.

The rate of seropositivity among traced living recipients has shown remarkable consistency, hovering around 50%, especially in light of the significant variation in the proportion of living recipients who are actually contacted and tested (see table 2). At Duke, eight (89%) of nine living recipients were contacted and tested. Three of eight (38%) were seropositive. This rate of seroprevalence is similar to that seen in the seven Look-backs for which figures are available.⁷⁻¹³ Among living, tested recipients, studies in other areas found that 37% to 67% (mean = 54%) had seroconverted (see table 3, next page).

In the United States almost two-thirds of transfusions (62%) are given in association with surgical procedures.

Cardiovascular disorders and malignant neoplasms are the most common disease categories recorded.¹⁴ In three of Duke's cases of transfusion-acquired HIV infection (two from Look-back, one from other sources) the patients were transfused during cardiac surgery. There is some evidence that a disproportionate number of the transfusion-acquired AIDS cases have occurred in patients who had heart surgery. If this is indeed the case it may be due to increased survival of these patients compared to transfusion recipients in general. Among recipients of transfusions for all causes it is generally found that the percentage of persons transfused who die of their underlying disease during the first, second, and third post-transfusion years is 50%, 66%, and 75%, respectively.¹⁴ The survival rate may be significantly higher among patients transfused for heart surgery.¹⁵

The rate of HIV acquisition via transfusion also appears to be disproportionately high among neonates and infants. Fisher et al reported that infants had received less than 2% of blood transfused but accounted for about 10% of transfusion-acquired AIDS cases.¹⁶ These investigators speculated that young children might be more susceptible because of immunologic immaturity. It was demonstrated in the first transfusion-acquired cases of AIDS that in infants, HIV could be contracted by receiving one or less than one unit from an infected donor.

Transmission of HIV via transfusion appears to be very efficient. A study in San Francisco of 31 infected donors (30 with AIDS; one asymptomatic) and 62 recipients found that the donors demonstrated a well-defined onset of infectivity, after which all recipients became seropositive.⁹ Other studies have found the infection rate, even with products known to be anti-HIV positive, to be very high but not invariant.^{17,18} A study in San Francisco found that 30 (91%) of 33 recipients of known antibody-positive blood (from stored serum) had seroconverted.¹⁷

Table 2. Living Recipients of Transfusions Identified Through Look-Back

Donor #	Date of Donation	Sex	Age	Indication	HIV Antibody Status
2	1-4-85	F	64	MVR	Negative
4	11-22-82	F	63	Total hip replacement	Negative
5	12-27-84	M	33	Renal transplant	Negative
5	10-18-84	M	22	GI bleed	Positive
5	6-28-84	F	19	AVR	Positive
6	12-20-83	M	68	CABG	Positive
11	1-19-86	M	22	HgbSS/CML	Negative
17	12-22-85	F	78	GI bleed	Untested
20	4-24-84	F	6	GI bleed	Negative

Duke found unexpected results for a series of three recipients from a single donor (see table 1). Donor #5 had donated in 6/84, 10/84, and 12/84. The recipients of the first and second donations were found to be seropositive. The recipient of the third donation is seronegative. Possible explanations for this sequence of findings are as follows. (1) The 12/84 recipient is a kidney transplant recipient, chronically immunosuppressed to avoid organ rejection. Perhaps this result represents a false-negative antibody test. Yet this recipient has been tested by ELISA twice, both nonreactive, has had a negative viral culture, and remains clinically well three and a half years after the transfusion. Serologic results of infected organ recipients have not been found to be significantly different from those of other HIV infected individuals.¹⁸ (2) It may be possible that early in HIV infection with viremia the donor unit is infectious. Later on with higher antibody levels the unit may be "safer," i.e., non-infectious. And (3) this might represent incomplete transmission of HIV through blood transfusion, or (4) a resistance to infectivity.

The "middle" recipient had been seen in the Emergency Room for an acute GI bleed for which he received several transfusions. No referring physician was identified in his hospital record. The State Health Department agreed to notify the recipient under the auspices of their sexual contact notification program. Their procedure is to meet personally with potentially infected individuals to provide counseling, support, and referral to proper authorities for testing, counseling, and treatment. This recipient chose to be tested anonymously through the health department, but notified Duke of the results.

Local/primary care physicians have taken the lead in

notification and testing of recipients. Because they have an established, ongoing relationship with the recipient they are in the best position to plan the notification, taking into account the individual's coping abilities and support system. The value of having a familiar, supportive physician available to present the situation to the patient cannot be overestimated. Because AIDS has become associated with socially unacceptable lifestyles, people have difficulty seeing it simply as an infectious disease. People with AIDS have experienced social and emotional isolation, hysterical reactions from families and acquaintances, loss of their insurance, loss of their jobs, even loss of their homes. When notification is done it is essential that it be handled in a sensitive, supportive, and confidential manner. Recipients are not required to obtain antibody tests and if they do so they are not required to report the results to the Red Cross.

Studies of transfusion-acquired HIV infection have been and are potentially very valuable in providing a detailed description of the natural history of HIV infection because the specific date of transfusion is known. From all available evidence, the infection appears to follow a similar course in adults no matter what the route of exposure. Within weeks of infection, 10% to 20% of people will develop symptoms of an acute illness resembling infectious mononucleosis including fever, malaise, weight loss, and lymphadenopathy.²⁰ It is self-limited and resolves after one to three weeks. Most people develop antibodies to the virus six to 12 weeks after infection, but periods as long as 13 months have been reported. Infected individuals become viremic and contagious sometime between infection and the development of antibodies. The onset of this infectious period is unknown, and these persons cannot be detected with antibody screening tests

Table 3. Comparison of Results from Eight Look-Back Studies

Study Location Year Reference #	anti-HIV + Previous Donors	Recipients Identified	Deceased % of Total	Unknown	Alive	Alive and Tested	% of Total Recipients	% of Living Recipients	HIV Antibody Status (% of alive and tested)
San Francisco, CA Nov. 1987 ⁷	92	406	223 (55%)	70	113	46	11%	41%	Positive 27 (59%) Negative 19
S.E. Wisconsin Oct., 1986 ⁸	6	25	11 (44%)		14	9	36%	64%	Positive 6 (67%) Negative 3
San Fran., LA, Sacramento, CA Jan., 1987 ⁹	32	201			87	59	29%	68%	Positive 39 (66%) Negative 20
American Assoc. of Blood Banks April, 1987 ¹⁰	816	761	426 (56%)	53	274	236		86%	Positive 122 (52%) Negative 114
Farmington, CT Mar., 1987 ¹¹	31	94	70 (74%)	8	16	13	14%	81%	Positive 5 (38%) Negative 8
Atlanta, GA 1987 ¹²	35	89	48 (54%)		41	35	39%	85%	Positive 13 (37%) Negative 22
Los Angeles, CA 1987 ¹³	14		77		70	62		88%	Positive 38 (61%) Negative 24
DUMC 1988 This report	33	26	17 (65%)	4	9	8	31%	89%	Positive 3 (38%) Negative 5

used by blood banks.

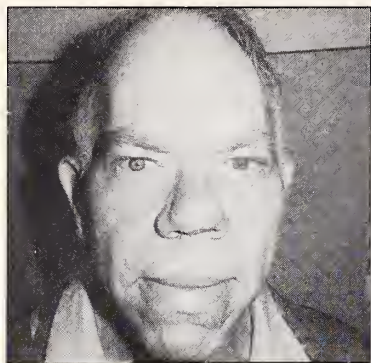
Incubation periods (defined as time from infection to AIDS) for transfusion-acquired AIDS have been variously reported to be shorter than or similar to those for sexually-transmitted HIV infection. For adults, incubation periods of four to 86 months have been reported with a mean of 34 months. The mean reported for children is somewhat shorter at 22 months (range four to 68 months).²⁰ It must be noted that some of these figures may represent symptoms not meeting the case definition of AIDS and that due to the short observation time it is thought that the incubation period for transfusion acquired AIDS may be much closer to the incubation period (5-7 years) for sexually transmitted cases.¹⁹ Either the donor or the recipient may become symptomatic first; there is no consistent pattern. The percentage of infected individuals who go on to develop AIDS is not known, but a rough estimate is that 5% of infected individuals develop AIDS each year.²¹

Ideally, routine screening of blood donations for the HIV antibody would completely eliminate the risk of transfusion-acquired HIV infection. Unfortunately, because the infectious period begins prior to antibody production, persons who have newly acquired HIV infection may pass screening tests. In a recent report there were 13 cases of transfusion-acquired HIV infection from seven donors who were screened as negative for HIV antibody at the time of donation. All seven donors were later determined to have been recently infected through high-risk behavior, and all seven failed to self defer from donating. All subsequently seroconverted. Accounting for the incidence of new infection that will not be detected by currently employed antibody tests, transmission of HIV by infectious seronegative donors was estimated to be one in approximately 38,500 transfusions.²² □

References

- 1 Coffin J, et al. Human immunodeficiency virus (letter). *Science* 1986;232:697.
- 2 CDC. Human immunodeficiency virus infection in the United States: a review of current knowledge. *MMWR* 1987;36:Suppl.5-6.
- 3 CDC. Possible transfusion-associated acquired immunodeficiency syndrome (AIDS)—California. *MMWR* 1982;31:652-4.
- 4 *MMWR* 1983;32:101-3.
- 5 Ng AT, Conway MA, Blanda E, et al. Tracing HIV-infected blood recipients: large-scale recipient screening vs. look-back testing (letter). *JAMA* 1987;258:201-2.
- 6 Busch MP, Samson SM, Perkins HA. Is look-back doing the job? *Transfusion* 1987;27:503-4.
- 7 Perkins HA, Samson S, Garner J, et al. Risk of AIDS for recipients of blood components from donors who subsequently developed AIDS. *Blood* 1987;70:1604-10.
- 8 Menitove JE. Status of recipients of blood from donors subsequently found to have antibody to HIV. *N Eng J Med* 1986;315:1095-6.
- 9 Ward JW, Deppe DA, Samson S, et al. Risk of human immunodeficiency virus infection from blood donors who later developed the acquired immunodeficiency syndrome. *Ann Intern Med* 1987;106:60-1.
- 10 Bove JR, Rigney PR, Kehoe PM, Campbell J. Look-back: preliminary experience of AABB members. *Transfusion* 1987;27:201-2.
- 11 Kakaiya RM, Cable RG, Kelton J. Look-back: the status of recipients of blood from donors subsequently found to have antibody to HIV (letter). *JAMA* 1987;257:1176-7.
- 12 Grindon AJ, Critchley SE, Ward JW. Risk of HIV infection in recipients of untested blood donors now anti-HIV positive (abstract). *Transfusion* 1987;27:541.
- 13 Pepkowitz S, Smith C, Fisher F, et al. High incidence of transfusion associated HIV infection in patients transfused from 1979-1985 as determined by AIDS "look-back" studies (abstract). *Transfusion* 1987;27:541.
- 14 Curran JW, Lawrence DN, Jaffe, et al. Acquired immunodeficiency syndrome (AIDS) associated with transfusions. *N Eng J Med* 1984;310:69-75.
- 15 Pollock AF, Rubio P, Jones J, et al. Protracted severe immune dysregulation induced by cardiopulmonary bypass: a predisposing etiologic factor in transfusion-related AIDS? *J Clin Lab Immun* 1987;22:1-5.
- 16 Fisher MC. Transfusion-associated acquired immunodeficiency syndrome—what is the risk? *Pediatrics* 1987;79:157-60.
- 17 Donegan E, Transfusion Safety Study Group. Serum antibody positivity in recipients of anti-HIV positive blood (abstract). *Transfusion* 1986;26:576.
- 18 John Ward. CDC. Personal communication 3-30-88.
- 19 Seligmann M, Pinching AJ, Rosen RS, et al. Immunology of human immunodeficiency virus infection and the acquired immunodeficiency syndrome. An update. *Ann Intern Med* 1987;107:234-42.
- 20 Peterman TA. Transfusion-associated acquired immunodeficiency syndrome. *World J Surg* 1987;11:37-40.
- 21 Bartlett J. Personal communication.
- 22 Ward JM, Holmberg SD, Allen JR, et al. Transmission of human immunodeficiency virus (HIV) by blood transfusions screened as negative for HIV antibody. *N Eng J Med* 1988;318:473-8.

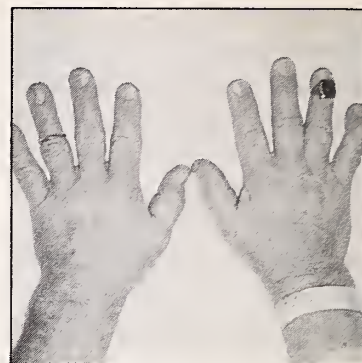
Marie's Disease



Acromegaly:

Enlargement of hands, feet, ears, and nose due to pituitary hypersecretion of growth hormone.

Hypertension, muscle weakness, and nerve entrapment syndromes are common. Finger enlargement may keep old rings from fitting any longer (right).



Pierre Marie (1853-1940) possessed "brilliantly acute powers of observation." Most physicians would consider themselves fortunate to describe one disease—Marie described six: acromegaly, hypertrophic pulmonary osteoarthropathy, ankylosing spondylitis, cleidocranial dysostosis (defective ossification of skull and clavical), hereditary cerebellar ataxia, and peroneal muscular atrophy. Marie's memory and habit of taking careful notes complemented his ability to observe. For example, in 1886 he and Charcot examined a patient with a rigid spine, but could make no diagnosis. Ten years later Marie saw a second patient and thereafter presented the first French report of ankylosing spondylitis. Each of Marie's six diseases were established through careful and thorough description of eight or fewer patients.

Marie was born in Paris on September 9, 1853. Upon graduation from college, he told his father of his desire to study medicine. His father answered, "No. I have decided you should study law." For three years, Marie dutifully plodded through his studies of law and was called to the French bar, but instead registered as a student at the Faculty of Medicine in Paris. In 1883 he submitted his qualifying thesis, which included the first description of the tremor of thyrotoxicosis. Marie served at the Hospice de la Salpetriere (see Charcot's Joint, NCMJ 1988;49:389) where Charcot, the Professor of Clinical Neurology, selected Marie as clinical chief, laboratory chief, and private assistant. Together Marie and Charcot described peroneal muscular atrophy (Charcot-Marie-Tooth disease) and suggested that the disorder was of neuropathic rather than myopathic origin. Charcot considered Marie the best of his many accomplished pupils.

In 1886, Marie wrote, "There is a disease most of all characterized by hypertrophy of the feet, the hands, and the face. We intend to call it acromegaly...." Including detailed histories and meticulous measurements, he described the evolution of post-pubertal bone enlargement in two French women. When the first, a 37-year-old, came to Charcot's clinic complaining of severe headaches, her enormous hands drew immediate attention. The patient's menses had ceased at age twenty-four. Thereafter, she had noticed growth of her hands, changes in her face, hunger which recurred "a quarter of an hour after taking food," and pain in her head, back, and

arms. When she returned to her family home for care, her mother and relatives could not recognize her. The second patient, aged 54 when Marie examined her, had stopped menstruating at age 29. Five months later, she "noticed that she was growing larger," and at age 30 she became blind. She recalled finding that "last year's hat" no longer fit her head, and eventually her shoe size increased dramatically. Marie cited in his paper previously described cases that he felt were actually instances of acromegaly and concluded that acromegaly could be distinguished from Paget's disease, myxedema and leontiasis ossia. He remembered a hen's egg-sized pituitary tumor found at autopsy in an earlier case and suspected that the condition was related to pituitary dysfunction; in 1921 Evans and Long isolated growth hormone from the anterior pituitary and showed that excessive growth hormone caused acromegaly.

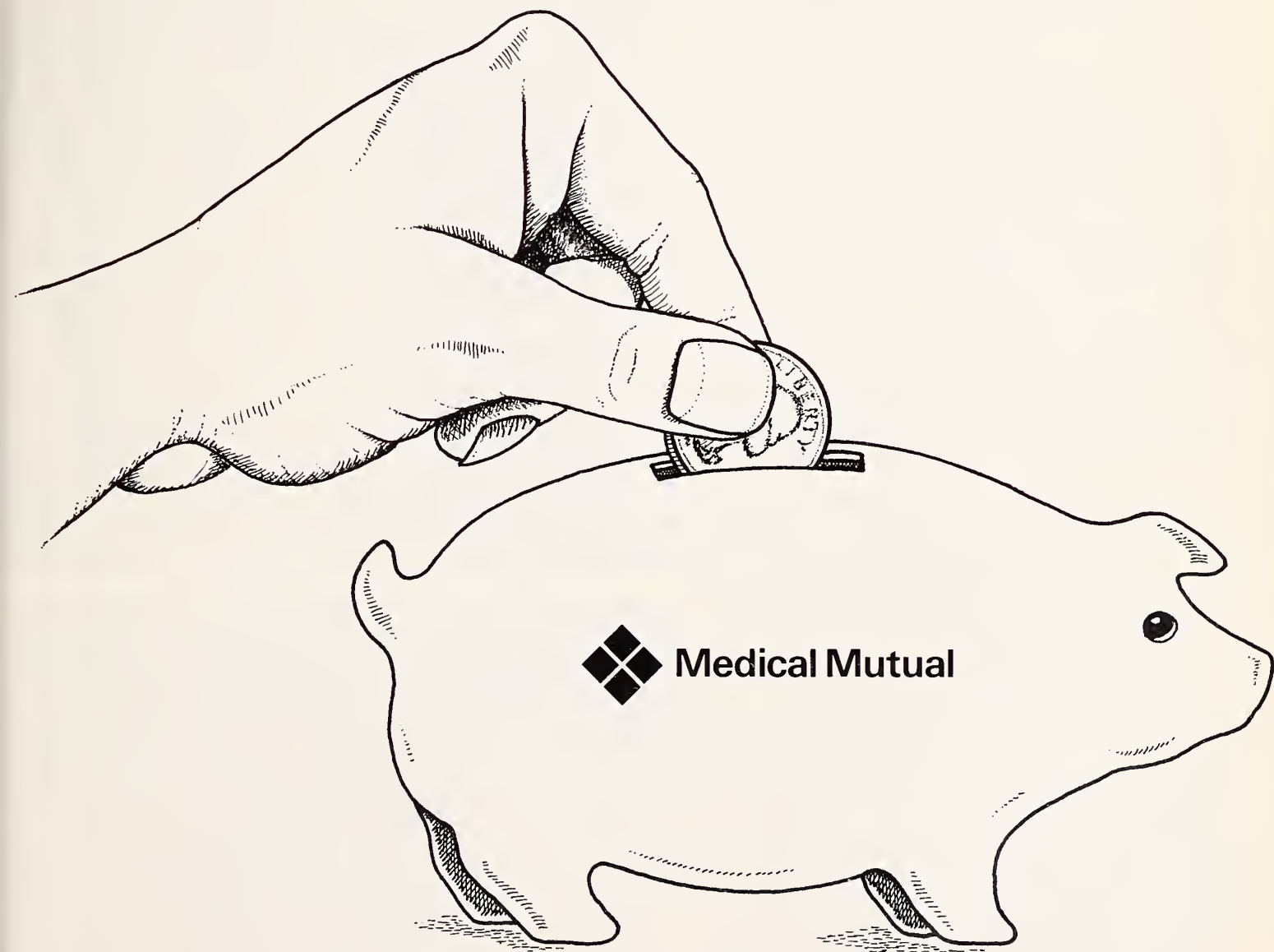
In 1890, Marie's interest in patients with enlarged extremities led him to recognize clubbing of the fingers (hypertrophic pulmonary osteoarthropathy) in patients with chronic pulmonary disease (see Hippocratic Nails, NCMJ 1988; 49: 195). He described drumstick-shaped fingers, curving nails, and in some cases, involvement of the large joints and spine.

Charcot died in 1893, and Dejerine assumed the chair of neurology at the Salpetriere. In 1897, possibly because of conflicts with Dejerine, Marie left to found the department of neurology at the Hospice de Bicetre, where he attracted students and physicians from around the world, including Percival Bailey of Chicago. In 1907, Marie became professor of anatomy at the Bicetre, but in 1917, at age sixty-five, he returned to the Salpetriere as Professor of Clinical Neurology, the chair Charcot had held. He retired in 1925 and died in 1940, a few weeks before Paris fell to the Nazis.

Marie is acknowledged with Duchenne and Charcot as the greatest of French neurologists. His interest in clinical phenomena was wide-ranging and perceptive. He is remembered for his keen observations, for his dedication to "the pursuit of truth" even when that pursuit drew criticism, and for his willingness to share his learning with his students.

—Carolyn A. Ellsworth and Francis A. Neelon, M.D.
Duke University Medical Center, Durham

Medical Insurance Agency. It's Like Doing Business With Yourself.



Medical Insurance Agency is not like any other insurance agency. When you do business with us, the profits come back to you.

It's simple, really. Medical Insurance Agency is a subsidiary of Medical Mutual that provides a full line of insurance policies geared to physicians' needs. While Medical Mutual provides professional liability coverage on a break-even basis, the Agency serves as an income source, returning profits to the company.

Endorsements from both the North Carolina Medical Society and

North Carolina Dental Society have helped Medical Insurance Agency demonstrate its potential. In 1987 profits generated by the Agency benefited all Medical Mutual policyholders, in effect subsidizing each professional liability premium by \$32. Members of the North Carolina Medical Society save again through lower rates on premiums.

And that's just the beginning. The state's professional endorsements give Medical Insurance Agency great buying power, which results in special coverages and prices for our insureds.

This means that we can continue to enhance our policies to meet the unique needs of physicians, with special programs such as our non-cancellable disability income plan to protect your future earnings.

Doing business with Medical Insurance Agency. It's simply good business.



Medical Insurance Agency, Inc.

Subsidiary of Medical Mutual Insurance Company
of North Carolina

Suite 101 Lower Level, 222 North Person Street
Post Office Box 28388 Raleigh, NC 27611-6088
919/828-9336 1/800-822-6561

Edward C. Halperin, M.D., Book Review Editor

Hairy Cell and Chronic Lymphocytic Leukemia: Thirty Years of Progress, edited by Andrew Huang. New York: Elsevier Science Publishing Company, 1987, 203 pages.

Reviewed by John W. Anagnost, M.D., Hanover Medical Specialists, 1515 Doctors Circle, Wilmington, NC 28401.

As a clinical hematologist, I frequently am asked to consult on patients with chronic lymphocytic leukemia and an occasional patient with hairy cell leukemia. Because of this, I looked forward to reading a textbook on the subject, especially one that involved as many well known authors as included here. Both Duke University Medical Center and the University of North Carolina-Chapel Hill have well known and well earned reputations in the field of hematology because of the extensive clinical experience that they have accumulated.

The book is the result of a symposium held on hairy cell leukemia and chronic lymphocytic leukemia at Duke University Medical Center in 1985. Contributing speakers included various members from Duke and the University of North Carolina that brought a broad and eclectic experience to the discussion. Speakers included Drs. Harry Gallis (infectious disease), Andrew Huang (hematology), Jeffers Palmer (hematology), Wendell Rosse (hematology), Bertha Bouroncle (hematology), and Kanti Rai (hematology).

The result is a very thoughtful overview of the discussion of hairy cell leukemia and chronic lymphocytic leukemia. My only serious reservation about the book, however, is that too frequently the book gets into somewhat thin discussions of what I have always found to be a very fascinating topic. Although it should be read by any general internist or family practitioner who has an interest in the hematologic disorders, subspecialists in hematology or oncology may find very little that is new here. However, it does bring various aspects of the chronic leukemias (biology, immunology, natural history, treatment, and complications) together in one book.

Our understanding of the basic biology of hematologic and oncologic disorders has enormously increased over the last few years and has proven to be a fascinating study. Both hairy cell leukemia and chronic lymphocytic leukemia have given us an opportunity to see how normal immunologic pathways can be dislocated. Autoimmune hemolytic anemia or ITP is frequently seen in CLL. Also it is quite well known that there are obvious and dangerous infectious complications associated with this disease. Hairy cell leukemia also

has a very peculiar pattern of increased atypical microbacterial infections that I have always found quite fascinating. Finally, there is a definite increased incidence of vasculitis in patients with hairy cell leukemia. I would have enjoyed having a much more in-depth discussion of the immunologic perturbations that occur in these diseases and that might possibly be causing these clinical syndromes.

The book is quite succinct and is easily read. It is approximately 200 pages in all. Of this, the longest chapter is spent on the question of cytology and cytochemistry of chronic lymphocytic leukemia and hairy cell leukemia. Also another chapter (and significant portion of the book) is involved in a retrospective review of lymphomas (1969-1984) seen at University of North Carolina-Chapel Hill. Although there is extensive information and statistical findings, I am not sure what purpose it served in a book that is concentrating on the discussion of chronic lymphocytic leukemia and hairy cell leukemia.

Despite these drawbacks, there are other areas of the book that are quite excellent. Dr. Bouroncle provides an excellent historical overview of hairy cell leukemia. This is especially pertinent in that Dr. Bouroncle was one of the earliest investigators of this disease in the late 1950s. Dr. Huang discusses the treatment of hairy cell leukemia; however, I found this discussion to be altogether too brief. There have been several recent discussions of the role of splenectomy, chemotherapy, Interferon, and now Deoxycoformycin in the treatment of hairy cell leukemia. It is clear that this is quite an involved subject, but one that has been extremely exciting over the last few years. We are now in a position where we can produce a complete remission in many patients that have this disease with the use of Deoxycoformycin, and definitely change the clinical course with the use of Interferon. Although it is brief, we are given an excellent overview of this area. For me, another fascinating subject was the role of radiation therapy in the treatment of chronic lymphocytic leukemia and hairy cell leukemia. To a medical oncologist, this proved to be an excellent review, and provided me several fascinating insights into the use of radiation therapy. Dr. Rosse, whose work in immunohematology is quite well known, discusses the pathologic immune state that is seen in lymphoproliferative disorders and the result is an excellent clinical discussion. Finally, Dr. Rai gives us a brief but succinct idea of how he treats chronic lymphocytic leukemia.

Despite my feeling that this book only whets the appetite of hematologists and oncologists who are better versed in the area, I found it to be an excellent resource for practitioners who want a good overview of chronic lymphocytic leukemia and hairy cell leukemia. It is also an enjoyable book to read and provides a resource for bringing together many of the facts known about these diseases. □

From the Division of Radiation Oncology, Box 3085, Duke University Medical Center, Durham 27710.



ALLAN J. HAMILTON, M.D.

Neurosurgical Resident and Research Fellow,
Massachusetts General Hospital, Boston, Massachusetts.
Captain, U.S. Army Reserve.

EDUCATION Ithaca College, B.A. (Magna Cum Laude);
Hamilton College (Pre-med); Harvard Medical School.

RESIDENCY General Surgical Internship. Neurosurgical
Residency, Massachusetts General Hospital.

CONTINUING EDUCATION Neurology and Neuro-
surgery Research Fellowship Training, National Institutes
of Health.

OUTSTANDING ACHIEVEMENTS Olsen Memorial
Fellowship, National Masonic Medical Research Foundation;
Albert Schweitzer Fellowship, International Albert Schweitzer
Foundation; Harvard Medical School Cabot Prize for Best
Senior Thesis; recently published article, "Who Shall Live
and Who Shall Die" in Newsweek Magazine.



Soldier being examined for effects of high-altitude cerebral edema.

“The work I’m doing in the Army Reserve fits perfectly with my academic research interests in civilian life. The Army is very concerned with the effects of high-altitude cerebral edema, which is a mirror model of cerebral hypoxia, something I deal with every day in our neurosurgical intensive care unit. I couldn’t ask for a smoother transition. And that’s true for a lot of Reserve physicians. All we really do is change our clothes, not our mindset.

“Some of the projects the Army is undertaking are on the cutting edge of research. For example, I’m currently involved in developing for the Army a prototype of a non-invasive intracranial pressure-monitoring device that we hope will allow us to measure pressure changes as the brain swells—without drilling holes in the skull. If we can get our design to work, such a device could revolutionize high-altitude medicine as well as civilian neurosurgical care.

“The quality of medicine and the caliber of people I’ve been associated with in the Army Reserve are, without question, equal to civilian hospitals. In fact, I’m giving serious consideration to applying for an active duty academic position in Army Medicine when my residency ends at Massachusetts General.”

Find out more about the medical opportunities in the Army Reserve. Call toll free 1-800-USA-ARMY.

**ARMY RESERVE MEDICINE.
BE ALL YOU CAN BE.**

THE LOWER RESPIRATORY TRACT—

More vulnerable to infection in smokers and older adults



Experience counts

Ceclor[®] Pulvules[®]
250 mg
cefaclor

think of it first

For respiratory tract infections due to susceptible strains of indicated organisms.

Summary.

Consult the package literature for prescribing information.

Indication: Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A β -hemolytic streptococci).

Contraindication: Known allergy to cephalosporins.

Warnings: CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:

- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in

moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.

- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:

- Gastrointestinal (mostly diarrhea): 2.5%
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] and toxic epidermal necrolysis or the above skin manifestations accompanied by arthritis/arthralgia, and frequently, fever): 1.5%; usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%, and, rarely, thrombocytopenia.

Abnormalities in laboratory results of uncertain etiology

- Slight elevations in hepatic enzymes.
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis: elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest[®] tablets but not with Tes-tape[®] (glucose enzymatic test strip, Lilly).

[061088L]

Additional information available from
Eli Lilly and Company, Indianapolis, Indiana 46285.

PV 2351 AMP



Eli Lilly Industries, Inc.
Carolina, Puerto Rico 00630

Letters to the Editor

An opinion on insurance

To the Editor:

I recently saved over \$3,400 this year by switching my malpractice insurance coverage from Medical Mutual Insurance Company of North Carolina to The Medical Protective Company. I would suggest to other physicians that they contact Stuart Mitchelson, P.O. Box 13489, Charlotte, North Carolina 28211, 704/541-8020, for more information and a quote.

William M. Hendricks, M.D.
Asheboro Dermatology Clinic, P.A.
407 South Cox Street
Asheboro 27203

which may merely involve the changing of prescription-writing habits for some. According to the Board of Pharmacy: signing the left line on the prescription blank leaves product selection up to the pharmacist; signing on the right line directs the pharmacist to dispense as written. To assure that your prescription is to be dispensed as you desire, not as mandated by any law, use the two-line prescription blanks and sign on the appropriate line, and state "dispense as written" when telephoning in a prescription. It is also suggested that you write in your own handwriting, "dispense as written," and/or write "use brand name" in your own handwriting. Apparently these products can override the problems generated by some mandated generics.

Ronald B. Mack, M.D.
Associate Professor of Pediatrics
Bowman Gray School of Medicine of Wake Forest
University

Concern about generic drugs

To the Editor:

As Chairman of the Committee on Drug Abuse and Pharmacy of the North Carolina Medical Society I receive many communications via the mail and telephone concerning legal and illegal drug use. Recently there have been many such communications concerning the mandating of the use of generic products for patients covered under the Medicaid Pharmacy Program. The patients who seem to have problems relating to this mandate are those who require such medications as digoxin, theophylline and anticonvulsants. The latter group, including such medications as carbamazepine (Tegretol), valproic acid (Depakane), and phenytoin (Dilantin), seems to be the most troublesome, especially when a switch to generic forms of the drug are made and loss of seizure control results, e.g., "breakthrough" seizures. The American Academy of Pediatrics Committee on Drugs said, in 1987, that "Generic substitution is based on the supposition that therapeutic equivalence, palatability, and equivalent safety/adverse reactions exist among the various brands of a prescribed drug. However, there is little evidence to support the assumption of bioequivalence for most therapeutic agents in infants and children." The Epilepsy Foundation of America issued a Statement on Substitution of Generic Anticonvulsant Drugs in 1988 that states "...all rule-making bodies...be made aware of the potential adverse effects of changing of one formulation of an anticonvulsant to another without the prior expressed permission of the treating physician and the agreement of the patient."

Physicians in North Carolina who are concerned about this problem have a relatively simple method of resolution,

References

- 1 Ballin JC. The real costs of generic substitution. *NY State J of Med* 1988;88:121.
- 2 MacDonald JT. Breakthrough seizures following the substitution of Depakane capsules with a generic product. *Neurology* 1987;37:1885.
- 3 Baker JR, et al. Clinical relevance of the substitution of different brands of sustained-release theophylline. *J Allergy Clin Immun* 1988;81:664.
- 4 Nightingale SL, et al. Generic drugs and the prescribing physician. *JAMA* 1987;258:1200.
- 5 Colaizzi JL, et al. Critical therapeutic categories: a contraindication to generic substitution? *Clin Therapeutics* 1986;8:370.
- 6 Wyllie E, et al. Increased seizure frequency with generic primidone. *JAMA* 1987;258:1216.
- 7 Roberts RJ, et al. Generic prescribing, generic substitution, therapeutic substitution, committee on drugs. *Pediatrics* 1987;79:835.
- 8 North Carolina Medical Society Bulletin, May 1988, p.4.
- 9 Epilepsy Foundation. Statement on the substitution of generic anticonvulsant drug. *J Epilepsy* 1988;1:49.

Classified Ads

50-YEAR-OLD PRACTICE FOR SALE - Physician retiring. 510 N.W. Broad Street, Southern Pines, NC 28387. Phone 919/692-6022 or 919/295-6891.

NORTH CAROLINA: Attending faculty position available December 1, 1988 at the assistant professor level or above, in tenure track, depending upon candidate's qualifications. Emergency medicine residency training or board preparation preferred. Emergency department has fully autonomous academic departmental status. Emergency medicine residency began July 1983. Hospital designated as Level I regional trauma center. Helicopter service began April 1985. Compensation competitive, plus excellent fringe benefits. Contact: E. Jackson Allison, Jr., MD/MPH, FACEP, Professor & Chairman, Department of Emergency Medicine, East Carolina University School of Medicine, Pitt County Memorial Hospital, Greenville, NC 27858-4354; or call 919/551-4757. Federal Law requires proper documentation of identity and employability at the time of employment. It is requested this documentation be included with your application. ECU is an AA/EEO employer, and encourages applications from qualified women and minorities.

INTERNIST, with or without subspecialty - to associate with nephrologist in coastal North Carolina. Riverfront community near beaches. 200 bed hospital with most surgical specialties. Send CV and cover letter to Code 90, NCMJ, Box 3910, DUMC, Durham, NC 27710.

MEDICAL OFFICES FOR LEASE - Several medical offices available at Glenwood Professional Village. Former practitioners include pediatricians, internists and OB/GYN. Purchase option available. Call 919/872-4924.

FOR SALE - HOLTER: Complete two channel Datamedix Pegasus Ambulatory Monitoring System with printer and two monitors (AMUs). In excellent condition. Send inquiries to Code 95, NCMJ, Box 3910, DUMC, Durham, NC 27710 or call 919/629-4176.

FAMILY PRACTICE. BE/BC. Southeastern United States. Urgent care practice. Comprehensive benefits, competitive compensation and bonus. Malpractice coverage, advancement potential and flexible scheduling. Resume to James Hacker, SEI Health Services, 7725 Little Ave., Charlotte, NC 28226 or call 704/542-7100.

NORTH CAROLINA: Full-time or part-time Emergency Department physician. Join three full-timers. Modern ED, 30,000 visits, pleasant community, Blue Ridge foothills, near Piedmont Triad. Hospital contractual with self-billing. Call C. V. Stabler, MD, ED Director, Northern Hospital of Surry County, Mount Airy 27030. 919/789-9541.

NORTH RALEIGH family practice for sale. Established 25 years. Retiring. Available January 1989. No OB, medicated or HMO. 919/782-5601 after 6:00 p.m. for details.

NORTH CAROLINA — Freestanding medical center seeks full-time physician to join staff. Please send CV to Luanne McCoy, First Health, 220 Beatty Drive, Belmont, NC 28012. 704/827-0253.

HICKORY - PSYCHIATRIST: 2nd M.D. needed to join multi-disciplinary fee-for-service group. Live in 1987 "All America City" and admit, as private attending, to three local hospitals with varied units (child, adult, adolescent A&D, eating disorder, pain . . .) that serve four + counties. Develop outpatient satellites. Competitive 1st year salary guarantee plus incentive. Call toll free in NC 1-800/537-9117 to request information packet, or send vitae to Philip J. Schmitt, M.D., Medical Director, Piedmont Treatment Center, P.O. Box 9149, Hickory, NC 28603.

FAMILY PRACTICE ESTABLISHED past 25 years seeking BC/BE physician to phase out senior partner in dual practice. Excellent hospital facilities in socially stimulating community. No obstetrics. CV to J. E. Minick, M.D., 5029 Country Club Road, Winston-Salem, NC 27104 or call 919/768-9515.

BTX - Specializing in top quality brand-name used Medical and Electronic equipment. When you are thinking about a purchase, please call me so you can save. Prices range from 7% to 50% of new list. Phillip LeFrois, 919/828-0960, 704 N. Boylan Ave., Raleigh 27605-1402.

BE/BC CARDIOLOGIST needed to initiate a cardiology practice. Excellent opportunity to work with 137 bed hospital and over fifty other physicians in central North Carolina. Send inquiries to Code 100, NCMJ, Box 3910 DUMC, Durham, NC 27710.

BE/BC OPHTHALMOLOGIST needed in 137 bed hospital in central North Carolina. Growing community, close to the triangle area. Send inquiries to Code 100, NCMJ, Box 3910 DUMC, Durham, NC 27710.

BE/BC PULMONOLOGIST needed in 137 bed hospital in central North Carolina. Will work closely with other Internal Medicine specialties. Send inquiries to Code 100, NCMJ, Box 3910 DUMC, Durham, NC 27710.

MULTISPECIALTY GROUP of 16 physicians, located in beautiful Piedmont area of North Carolina needs recently trained BC/BE General Internist, with or without subspecialty, for busy practice. Group practice is close to two hospitals. Association leads to equal Shareholdership within two years. Full benefit package, guaranteed salary and professional management. Send CV to: Administrator, Statesville Medical Group, P.A., P.O., Box 1460, Statesville 28677 or call 704/878-2011.

CONDO FOR SALE: 1/4 share. Myrtle Beach area: Ocean view, pool, three bedrooms, cable TV, completely furnished with washer and dryer. Owned with three other professional couples, 13 weeks/year each. Expenses shared equally. Excellent condition. \$25,800. Terms. Evenings, 919/764-4217.

DIAGNOSTIC PSYCHOLOGICAL TESTING - Experienced, licensed Ph.D. psychologist and candidate (full clinical training) at UNC-Duke Psychoanalytic Institute, available to perform outpatient, in-depth psychodiagnostic testing. Dr. Allan A. Bloom, Ph.D., 919/787-7307 (Raleigh).

TRAINING CENTER PROGRAM DIRECTOR - has overall responsibility for the delivery of programs and services at a fully ICFMR-certified, ACDD accredited, twelve year old public residential facility serving 223 residents. Serves as clinical director and must be knowledgeable of ICFMR regulations, ACDD standards, and behavior management programming for a developmentally disabled population. Must have managerial and supervisory skills and be able to relate well with both professional and paraprofessional staff. Must possess good clinical abilities. Prefer a doctoral degree in Psychology or Education and five years progressively responsible experience in managing residential programs for persons who are mentally retarded. Excellent State fringe benefits. Salary Range: \$33,833 to \$46,209. Send vita and request for application to Human Resource Manager, Southwestern Virginia Training Center, Route 1, Box 415, Hillsville, Virginia 24343. Application deadline is December 30, 1988. An Equal Opportunity/Affirmative Action Employer.

PRACTICES FOR SALE - North Carolina/South Carolina -

Beautiful mountain resort areas, Coastal cities and quaint midland towns. Several high quality general and specialty practices for sale, as well as associateship/partnership opportunities in high quality general and specialty practices. In South Carolina call 803/329-9655 or write AFTCO Associates, P.O. Box 4126, Rock Hill, SC 29730. In North Carolina call 704/637-2231 or write AFTCO Associates, 401 Mocksville Ave., Salisbury 28144.

AMBULATORY CARE PHYSICIAN - Immediate opening at an ambulatory care center in Burlington, NC. Position offers three 13-hour days per week, competitive salary, and outstanding benefit package. FP, IM, ER, BC/BE or previous ambulatory care experience required. Send CV to: Attention Medical Director, Apollo Medical Systems, Inc., 211 Six Forks Rd., Suite 207, Raleigh 27609.

NCMJ Classified Ads...

Send your ad to:

Editorial Assistant
NCMJ
Box 3910 Duke University Medical Center
Durham 27710

Please specify the number of months you'd like your ad to run, and tell us your name, address, and phone number.

Closing date is the 1st of the prior month.

Rates:

NCMS members, \$15/25 words, plus
25¢ each additional word;
Others, \$25/25 words, plus 25¢ each
additional word.

Send no money; you will be billed.
For further information, call 919/684-5728.

Continuing Medical Education

Continuing Throughout the Year

Geriatric Education Modules in geriatric medicine, geriatric mental health, health promotion, and long-term care

Place: Durham

Fee: \$10 per module

Info: Geriatric Education Center, Box 3003 DUMC, Durham 27710. 919/684-5149

January 8-11

Educational Negotiations: Content and Process

Place: Rougemont

Credit: 20 hours Category I AMA, AAFP 2.0 CEU

Info: Cindi Easterling, Office of CME, DUMC, Durham 27710. 919/684-6878

January 9-13

Diagnostic Ultrasound: Obstetrics

Place: Winston-Salem

Credit: 7 hours per day, Category I AMA

Info: Registrar, Ultrasound Center, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4505

January 11-14

Therapeutic ERCP - International Symposium

Place: Durham

Credit: 23 hours Category I AMA, 2.3 CEU

Info: Cindi Easterling, Office of CME, DUMC, Durham 27710. 919/684-6878

January 16-20

Diagnostic Ultrasound - Radiology (Abdomen)

Place: Winston-Salem

Credit: 7 hours per day, Category I AMA

Info: Registrar, Ultrasound Center, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4505

January 20

Neurology Day

Place: Greenville

Credit: 6.5 hours Category I AMA

Info: Mary C. Valand, Office of CME, ECU School of Medicine, Greenville 27835-7224. 919/551-5200

January 23-27

Diagnostic Ultrasound: Neurovascular

Place: Winston-Salem

Credit: 7 hours per day, Category I AMA

Info: Registrar, Ultrasound Center, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4505

January 30-31

Diagnostic Ultrasound: Transcranial Doppler

Place: Winston-Salem

Credit: 7 hours per day, Category I AMA

Info: Registrar, Ultrasound Center, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4505

February 1-3

Diagnostic Ultrasound: Arterial/Venous Doppler

Place: Winston-Salem

Credit: 7 credit hours per day Category I AMA

Info: Registrar, Ultrasound Center, Bowman Gray School

of Medicine, Winston-Salem 27103. 919/748-4505

February 3

Medical & Legal Aspects of HIV Infection and Transmission

Place: Greenville

Credit: 6 hours Category I AMA

Info: Mary C. Valand, Office of CME, ECU School of Medicine, Box 7224, Greenville 27835-7224. 919/551-5200

February 6-10

Diagnostic Ultrasound: Echocardiography

Place: Winston-Salem

Credit: 7 hours per day Category I AMA

Info: Registrar, Ultrasound Center, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4505

February 9-10

Future Directions in Care for Alzheimer's Disease Research Center Conference

Place: Durham

Credit: CEU

Fee: Penny Ligon, Staff Assistant, Third Annual Joseph and Kathleen Bryan Alzheimer's Disease Research Center Conference, 725 Broad Street, Durham 27705. 919/286-3228

February 10-11

Psychotherapy: Its Place in Psychiatric Treatment

Place: Research Triangle Park

Credit: Category I AMA, AAFP, CEU

Info: Cindi Easterling, Office of CME, DUMC, Durham 27710. 919/684-6878

February 13-14

Diagnostic Ultrasound: Urology

Place: Winston-Salem

Credit: 7 hours per day Category I AMA

Info: Registrar, Ultrasound Center, Bowman Gray School of Medicine, Winston-Salem 27103. 919/748-4505

New Members

David Wade VanHooser, 3212 Landerwood Dr., Charlotte 28210

Cleveland

Frederick Fletcher Adams, III (IM), 808 Schenck St., Shelby 28150

Charles Sigman Hayek (PD), 101 Grover St., Shelby 28150

Durham-Orange

Yvette Elaine Bessent (STUDENT), B-105 Ashley Forest Dr., Chapel Hill 27514

Mary Martha Bledsoe (STUDENT), 203-15 Conner Dr., Chapel Hill 27514

Steven Dunning Brown (RESIDENT), 2606 Oberlin Dr., Durham 27705
 Daniel Lyle Clarke-Pearson (OBG), Box 3079, DUMC, Durham 27710
 Frank Christopher Detterbeck (RESIDENT), 123 Stateside Dr., Chapel Hill 27514
 Dennis Christopher Doherty (RESIDENT), 3835 Guess Rd., #402, Durham 27704
 Billie J. Forehand (STUDENT), 30 Spring Garden Apts., Chapel Hill 27514
 Douglas K. Graham (STUDENT), 4800 University Dr., # 22K, Durham 27707
 Michael Andrew Hertzberg (RESIDENT), 3100 Hornbuckle Pl., Durham 27707
 Richard S. Moore, Jr., (STUDENT), 128 Ridge Trail, Chapel Hill 27514
 Judd Wendell Moul (RESIDENT), 60 Newton Dr., Durham 27707
 David Scott Price (STUDENT), 108 Poplar St., Chapel Hill 27516
 Gary Wayne Roper (STUDENT), 212-B Simpson St., Carrboro 27510
 Lynda L. Rozas (STUDENT), 105 Fidelity St., # 815, Carrboro 27510
 Robert George Ruegg, Jr. (P), Dept. of Psychiatry, CB 7160, UNC, Chapel Hill 27599
 Arlene C. Sena (STUDENT), 201 Howell St., Apt. 4B, Chapel Hill 27514
 Lisa L. Wang (STUDENT), 20F University Lake Apts., Carrboro 27510

Forsyth-Stokes-Davie

Sam Russell Fulp (RESIDENT), 2959 Burke Mill Rd., Winston-Salem 27103
 Suzanne Powell Hess (RESIDENT), 863 Shoreland Rd., Winston-Salem 27106
 Stanley Lamar Smith (FP), 2065 Craig St., Winston-Salem 27103

Macon-Clay

Cathy Romine Long (AN), 70 Jones Creek Rd., Franklin 28734
 Jim Thomas Long, Jr., (AN), 70 Jones Creek Rd., Franklin 28734

Mecklenburg

Yong Hui Ahn (RESIDENT), 839 Scaleybark Rd., Apt. 74, Charlotte 28209
 Craig Donald Brigham (ORS), 1822 Brunswick Ave., Charlotte 28211

John Stuart Gaul, III (ORS), 2600 E. 7th St., Charlotte 28204
 Arthur Montgomery Hendrix, Jr. (EM), PO Box 1238, Davidson 28036
 Richard Eckert nmann (IM), 1350 S. Kings Dr., Charlotte 28211
 Andrew Craig Renz (RESIDENT), 1507-A Briar Creek Rd., Charlotte 28205
 Linda Carol Selsor (D), 3535 Randolph Rd., 101 Wendover Bldg., Charlotte 28211
 Peter Loren Tucker (PS), 1900 Randolph Rd., Charlotte 28207

Moore

Jack Link Young (N), PO Box 1749, Pinchurst 28374

Onslow

James Curtis Gant (PD), 12 Office Park Dr., Jacksonville 28546
 Craig Bryon Olson (R), 11 Office Park Dr., Jacksonville 28540

Pitt

Karen Denise Coward (STUDENT), 800 Heath St., 85 Village Green Apts., Greenville 27858
 Benjamin Gerald Hines (U), # 2 Doctor's Park, Greenville 27834
 Samuel Baker Pollock, Jr. (CDS), ECU School of Medicine, Div. of Cardiac Surgery, Greenville 27858
 William Mark Riddle (RESIDENT), ECU, Dept. of Family Medicine, Family Practice Center, Greenville 27834
 Richard Zane Shultzaberger (IM), Quadrangle Internal Medicine, Greenville 27834
 Stephen Michael Skrip (RESIDENT), 319-G St. Andrews Dr., Greenville 27834
 William Wakefield Tipton (GS), # 10 Doctor's Park, Greenville 27858

Polk

Sandra Lee McCormack (FP), 1124 Lynn Rd., Tryon 28782

Wake

Robert Joseph Caudle (ORS), PO Box 10707, Raleigh 27605
 Robert J. Starkenburg, 4624 Mill Village Rd., Raleigh 27612

Wilson

Chung Hoon Kang, (FP), 1017 Lakeside Dr., Wilson

Watauga

Harold Nichols Frazier, Jr. (GS), Watauga Surgical Group, P.A., State Farm Road, Boone 28607

Index to Advertisers

Baron Financial	636	Medical Mutual Insurance Co. of NC	663
Blue Cross and Blue Shield of NC	620	Medical Protective Company	625
Burroughs Wellcome	629	Miles Pharmaceuticals	624 a-b
Caremark Homecare	630-631	MONY Financial Services	618
Carolina Consultation Center	650	Roche Laboratories	Covers 3-4
Charlotte Treatment Center	655	Saint Albans Psychiatric Hospital	637
Crumpton Company	Cover 2	Teer House	654
Health Communication Services	649	U.S. Air Force	628
Eli Lilly & Company	664-b	U.S. Army Reserve	664a, 638
Hinrichs Financial Group	626	U.S. Navy Reserve	617
Medic Computer Systems	656	Winchester Surgical Supply	624

SUBJECT INDEX

- Adrenal adenoma, virilizing
 associated with normal urine 17-ketosteroid, 352
- Agitated patient, management of, 497
- Agoraphobia, and panic disorder, 507,521
- AIDS (Acquired Immune Deficiency Syndrome) (*see also* HIV)
 clinical, 297
 and HIV, 5, 297
 Neuropsychiatric manifestations, 542
 psychiatric aspects, 493
- Allergic reactions
 to eggs, 155
 to insect sting, 315
 and pet ownership, 29
- Anorectic agents, 168
- Antidepressants
 fluoxetine, 391
 second-generation, 549
- Aortic arch syndrome, 564
- Argyria, 451
- Argyrol toxicity, 451
- Baylin, George J., M.D., 163
- Biological psychiatry
 and psychotherapy, 539
- Bowman Gray School of Medicine, 377
- Breast cancer, 255
 fibrocystic disease and, 255
- Breast surgery
 for cancer, 255
 for fibrocystic disease, 255
 reconstruction, 255
 for reduction, 255
- Bromocriptine overdose, 17
- Callaway, J. Lamar, M.D., 46
- Cancer (*see* breast, cervical, lung, prostate, rectal)
- Carbon monoxide poisoning, 292
- Cervical carcinoma, recurrent
 and interstitial irradiation, 306
- Charcot's joint, 389
- Charts, inpatients', 105
- Chronic crippling illness
 care of patients with, 251
 living with, 252
- Coagulation Factor X, 328
- Computers
 and medical office management, 99
- Country Doctor Museum, 606
- Davis, James E., M.D.
 inaugural address as president of AMA, 413,416
- Death
 when best outcome, 645
 and patient's preferences, 639
- Depression
 and antidepressants, 391, 549
 in cancer patients, 546
 and dementia of the Alzheimer's type, 536
- Diabetes self-care programs in North Carolina
 reimbursement for, 370
- Diagnosis and medical technology, 609
- Divorce, 641
- Doctor-patient relationship
 and bad surgical result, 336
- Drug abuse, 595, 597
- Drug Enforcement Administration
 physician registration with, 455, 602
- Duke University Medical Center
 Combined Medical Specialties Unit, 11
 liver transplantation program, 324
 Osler tradition at, 91
- Eating disorders, 533
- Esophagus
 non-neoplastic disorders, 129
- Emergency medical technicians
 exposure to AIDS and hepatitis, 192
- Eucalyptus oil poisoning, 599
- Fibrocystic disease, 255
 and breast cancer, 255
- Fluoxetine, 391, 549
- Fragile X Syndrome, 203
- Future of medicine, 197, 213, 334
- Gatling gun, 332
- Gatling, Richard, 332
- Geriatric nutrition, 632
- Geriatric psychiatry, clinical problems, 536
- Gull's Disease, 267
- Hippocratic Nails, 195
- Hospital care
 and patient charts, 105
 horrors of 201
- Hospital ethics committees, 157
- HIV (Human Immunodeficiency Virus), 5, 297 (*see also* AIDS)
 antibody testing, 5
 counseling, 5
 psychoimmunologic and neuropsychiatric relationships, 542
 transfusion-acquired infection, 657
- Hyperthyroidism
 with myxedema, 357
- Indigent care
 of children, 21, 37
- Insect sting, 315
- Insomnia, 503
- Jellyfish envenomation, 25
- Lead-containing hobby glazes
 safety of, 31
- Left arm pain
 and aortic arch syndrome, 564
 and thoracic outlet syndrome, 564
- Lice, 318
- Lipton, Morris A., M.D., Ph.D., 486
- Liver transplantation
 in North Carolina, 324
- Low vision, 89
- Lung cancer
 relation to passive and active cigarette smoking, 151
- Malpractice, 334, 336, 621, 627
- Marie's Disease, 662
- Mastoiditis, 125

Mill wheel murmurs, 569

Myocardial infarction
discussion for patients, 441
evolution of therapy, 381

National Library of Medicine
use of computerized files, 360

North Carolina Medical Society
participation in, 211

Obesity, anorectic agents in control of, 168

Osler, William, M.D.
tradition at Duke Medical Center, 91

Osteonecrosis
bilateral proximal tibial, 237

Otitis, malignant external, 125

Outpatient surgery
freestanding surgical center for, 312

Pain management programs, 526

Panic disorder and agoraphobia, 507, 521

Peer review, 591

Plummer's Nails, 36

Pediatric care
for indigents, 21, 37

Politics and medicine
views of NC gubernatorial candidates, 423
views of presidential candidates, 433

Polypharmacy
in nursing home, 41, 43

Potassium bromate poisoning, 243

Pm medications
in rest home, 43

Prostate cancer
management of clinically localized, 75

Psychiatric illness
in geriatric patients, 536
and medical illness, 11
National Alliance for the Mentally Ill, 517

Psychotherapy, 519
and biological psychiatry, 539

Public health, in North Carolina, 467

Radiology
practices in North Carolina, 1979-1989, 51

Rectal cancer
local excision and irradiation as primary treatment, 651

Rhododendron toxicity, 363

Sickle cell pain crisis, diagnosis, 583

Smoking cessation, 145, 151

Spangler, Ernest B.
address to NCMS as president-elect, 418

Stuart Factor (coagulation Factor X), 328

Superior gluteal neuropathy
isolated, secondary to intramuscular injection, 85

Third World medicine, 587

Thoracic outlet syndrome, 564

Thyroid nodules, 81

TMJ (Temporomandibular joint) syndrome, 574

Toxins
argyrol 451
bromocriptine overdose, 17
carbon monoxide, 292
eucalyptus oil, 599
metronidazole, 133
potassium bromate, 243
rhododendron, 363

Tuberculosis, 69

Vision
low, 89

Workers Compensation, 185

AUTHOR INDEX

Alexander, Eben, Jr., Anorectic agents in the control of obesity 168
Drug enforcement administration: renewal of physician registration ... 455, 602

Allen, Pati J., Look-back: transfusion acquired HIV infection at Duke University Medical Center 657

Anagnost, John W., Book review: Hairly cell and chronic lymphocytic leukemia: thirty years of progress 664

Anastasio, Geraldine D., PRN medications in a rest home setting 43

Anderson, Banks, Jr., Low vision 89
The "noisesome" hospital chart 105

Anderson, Gunnar H., Jr., Concomitant occurrence of hyperparathyroidism and myxedema 357

Anixter, William L., Panic disorder and agoraphobia: an update for primary care physicians 507

Aronson, Philip R., Concomitant occurrence of hyperparathyroidism and myxedema 357

Barboriak, Peter N., Hippocratic nails 195

Baggett, John, The mental illness awakening 517

Barrett, George C., Physician's forum: Hospital ethics committees 157

Barrett, Rolland J., Interstitial irradiation in the management of recurrent carcinoma of the cervix, after previous radiation therapy 306

Berger, Bruce R., Approaches to insomnia: helping patients, avoiding pitfalls, doing no harm 502
Medical licensure application process: strengths and weaknesses 365

Bisgrove, Eilene Z., The practice of radiology in North Carolina, 1979-1989: a survey of all practices in the state 51

Blum, Fredric, Jellyfish envenomation 25

Blythe, William B., On the occasional horror of being healed in a hospital 201
The numbers racket 609

Bobbitt, Julian D., The model health care provider liability reform act: a summary and commentary 621

Bollinger, R. Randal, Liver transplantation: initiation of the first program in North Carolina 324

Bona, Joseph R., Management of the agitated patient: a pharmacological update 497

Bowman Marjorie A., When the best outcome is death 645

Breckman, W.D. Jr., Book review: Wildlife in North Carolina, by Jim Bean and Lawrence S. Early 339

Brinton, Lewis F., Freestanding outpatient surgical center: license number one 312
Who is to blame? 597

Brooks, W. Blair, The combined medical specialties unit: after five years 11

Brown, Terry M., The new antidepressants 549

Bryan, James A., II, Emperor's clothes are costly 591

Buchanan, William P., Objective laboratory parameters in the diagnosis of sickle cell pain crisis 583

Burger, Bruce R., Medical licensure application process: strengths and weaknesses 365

Butler, Radford, I got sick on July twenty-five, two thousand 213

Califf, Robert M., Heart attack 441

Callanan, Nancy P., What is the Fragile X syndrome 203

Callaway, J. Lamar, I only wear a raincoat when it rains 46

Campbell, Paul T., Left arm pain isn't always angina 564

Christakos, Arthur C., Book review: The physician as teacher, by Thomas L. Schwenk and Neal Whitman 603

Cline, Kathleen A., Emergency medical technicians' exposure to AIDS and hepatitis: current infection control practices in North Carolina 192

Clore, Ellen Rudy, Keeping lice at bay 318

Cook, Perry F., Malignant external otitis: an unusual route to mastoiditis 125

Corey, Ralph, Jellyfish envenomation 25

Craighead, W. Edward, Advances in biological psychiatry and psychotherapy are not mutually exclusive 539

Crellin, Paul I., Roles for a small museum: the case of the Country Doctor Museum 606

Daughtry, Sue, Reimbursement and diabetes self-care programs in North Carolina 370

Davis, James E., Inaugural address of the President of the AMA 413

Denny, Floyd W., Jr., Medical care for poor children: who provides, and who pays for it? 37

Diosegy, Arlene, Physician's forum: Hospital ethics committees 157

Droba, Marion, Depression in cancer patients: diagnostic and treatment considerations 546

Dyer, Allen P., Physician's forum: Hospital ethics committees 157

Ellsworth, Carolyn A., Marie's disease 662

Evans, Dwight L., Depression in cancer patients: diagnostic and treatment considerations 546
HIV: psychoimmunologic and neuropsychiatric relationships 542
The new antidepressants 549

Fetter, Bernard F., George J. Baylin, M.D.: a tribute 163

Finestone, Douglas H., The Combined Medical Specialties Unit: after five years 11

Fischer, Janet J., Tuberculosis: new facets of an old disease 69

Fore, William W., Reimbursement and diabetes self-care programs in North Carolina 370

Fowler, Wesley C., Depression in cancer patients: diagnostic and treatment considerations 546

Fox, Jonathan C., Bilateral proximal tibial osteonecrosis: a case of the "deep knee bends" 237

Francis, Joanna, Low vision	89	McIvor, Andrew C., Discovering how lucky we really are	587
Fraser, Robert W., The management of clinically localized prostate cancer: a summary of the consensus statement of the National Institutes of Health ...	75	Meriwether, Rebecca, Human immunodeficiency virus antibody testing and counseling	5
Frazier, Claude A., The sweet thing revisited	29	Metzloff, Thomas B., Medical malpractice and the potential for alternative dispute resolution	627
The eggless egg: coping with food allergies at Easter	155	Meyers, William C., Liver transplantation: initiation of the first program in North Carolina	324
Insect sting: why we need a lay program for dealing with the emergency of a severe allergic reaction	315	Miller, Helen, The new antidepressants	549
Gamble, John R., The North Carolina Medical Society: are we on the right track?	211	Mitchell, Phillip R., Carbon monoxide poisoning	292
Gil, Karen M., Pain management programs: clinical and research perspectives	526	Munster, Margaret, Heart attack	441
Golden, Robert N., HIV: psychoimmunologic and neuropsychiatric relationships	542	Neelon, Francis A., Charcot's joint	389
Depression in cancer patients: diagnostic and treatment considerations	546	The Combined Medical Specialties Unit: after five years	11
The new antidepressants	549	Gull's disease	267
Gonzalez, Jorge J., Another look at thyroid nodules	81	Hippocratic nails	195
Graham, John B., "Stuart Factor" (coagulation Factor X): a North Carolina saga	329	Malignant external otitis: an unusual route to mastoiditis	125
Greenfield, Joseph C., Evolution of therapy of myocardial infarction (comment)	381	Marie's disease	662
Gregory, Jerry G., Approaches to insomnia: helping patients, avoiding pitfalls, doing no harm	502	Nemeroff, Charles B., Advances in biological psychiatry and psychotherapy are not mutually exclusive	539
Medical licensure application process: strengths and weaknesses	365	Depression in cancer patients: diagnostic and treatment considerations	546
Haggerty, John J., Jr., Depression in cancer patients: diagnostic and treatment considerations	546	Oakley, Stanley P., Psychiatric aspects of AIDS for the non-psychiatrist	493
Halperin, Edward C., A doctor interviews the candidates for governor	423	Orr, Mildred C., Reducing polypharmacy in the nursing home	41
George Bush, Michael Dukakis, and health policy issues in the 1988 presidential campaign	433	Page, Coin T., North Carolina worker's compensation	185
The management of clinically localized prostate cancer: a summary of the consensus statement of the National Institutes of Health	75	Pedersen, Cort, HIV: psychoimmunologic and neuropsychiatric relationships	542
The model health care provider liability reform act: a summary and commentary	621	Depression in cancer patients: diagnostic and treatment considerations	546
Book reviews: Emperor of the air, by Ethan Canin	338	Poe, Timothy E., Fluoxetine: a new antidepressant	391
North Carolina illustrated, 1524-1984, by H.G. Jones	273	Pomerantz, Sandy, AIDS: a primer for the primary care practitioner	297
On moral medicine: theological perspectives in medical ethics, by Stephen E. Lammers and Allen Verhey	605	Pories, Walter J., Feeding the elderly patient	632
Hansen, Peggy, Biopsy (poem)	265	Porter, William G., Richard Gatling and his gun	328
Harrell, George T., The Osler tradition at Duke	91	Quill, Timothy J., Liver transplantation: initiation of the first program in North Carolina	324
Harris, Harold J., Book review: A world unsuspected: portraits of Southern childhood	393	Raft, David, Depression in cancer patients: diagnostic and treatment considerations	546
Harris, Jerome, George J. Baylin, M.D.: a tribute	163	Randall, Marcus E., Interstitial irradiation in the management of recurring carcinoma of the cervix after previous radiation therapy	306
Harrison, Cora, What is the Fragile X syndrome?	203	Rankin, Richard R., Jr., How it is to be on the bed	252
Harrison, Tinsley, Evolution of therapy of myocardial infarction	381	Ranney, Jane C., Objective laboratory parameters in the diagnosis of sickle cell pain crisis	583
Hazzard, William R., The Department of Medicine at Bowman Gray School of Medicine of Wake Forest University: changing priorities in changing times	377	Reifler, Burton V., Clinical problems in geriatric psychiatry: the relationship between dementia of the Alzheimer's type and depression	536
Heine, Donald L., Virilizing adrenal adenoma associated with normal urine 17-ketosteroid level: a story of an unusual woman	352	Rockwell, W. J. Kenneth, Eating disorders: evaluation and treatment	533
Hensel, William A., Informed consent	639	Rogers, David E., Evolution of therapy of myocardial infarction	381
Herbst, Charles, Local excision and irradiation as primary treatment of rectal cancer	651	Rozear, Marvin, Reflections on the care of patients with chronic crippling illness	251
Herman, Steve, What does it take to quit smoking?	145	Some thoughts on drug abuse	595
Heyman, Albert, George J. Baylin, M.D.: a tribute	163	Sanders, James H., Jr., Reducing polypharmacy in the nursing home	41
Holmes, Valerie, Depression in cancer patients: diagnostic and treatment considerations	546	Schanberg, Rachel, Book review: Love, medicine, and miracles, by Bernie S. Seigel	272
Hudson, William R., George J. Baylin, M.D.: a tribute	163	Schroering, Edward S., Jr., Gull's disease	267
Hughes, Jack, The management of clinically localized prostate cancer: a summary of the consensus statement of the National Institutes of Health	75	Schuring, Arnold G., Facing a bad result	336
Physician's forum: Hospital ethics committees	157	Serafin, Donald, Of medicine and the breast	255
Irons, Thomas G., Results of a community-based comprehensive pediatric care program: significant reduction in inpatient care costs for indigent children	21	Simel, David L., Left arm pain isn't always angina	564
Jackson, Don V., Jr., Lung cancer: relationship to passive and active smoking	151	Simmons, Dale J., Physician's forum: Hospital ethics committees	157
Jordan, John S., The Combined Medical Specialties Unit: after five years	11	Simmons, Everett C., Approaches to insomnia: helping patients, avoiding pitfalls, doing no harm	502
Kahler, Pem, Admission, 1985 (poem)	514	Medical licensure application process: strengths and weaknesses	365
Adjustment disorder (poem)	523	Simon, Jeffrey S., Depression in cancer patients: diagnostic and treatment considerations	546
Sun Sensitive (poem)	523	Smiley, M. Lynn, Human immunodeficiency virus antibody testing and counseling	5
Kaufman, Michael D., Isolated superior gluteal neuropathy due to intramuscular injection	85	Spangler, Ernest B., Address of the President-Elect of the North Carolina Medical Society	418
Keefe, Francis J., Pain management programs: clinical and research perspectives	526	Spiridigliozzi, Gail A., What is the Fragile X syndrome?	203
Kerr, Colin P., Computers in the office: who, what, and why?	99	Staab, Edward V., The practice of radiology in North Carolina, 1979-1989: a survey of all practices in the state	51
Killenbergh, Paul G., Liver transplantation: initiation of the first program in North Carolina	324	Stead, Eugene A., Jr., The National Library of Medicine: the great equalizer between small hospitals and major medical centers	360
Kirk, William S. Jr., The TMJ syndrome: is it a reasonable diagnostic term?	574	Stopford, Woodhall, Safety of lead-containing hobby glazes	31
Koepke, John A., Look-back: transfusion-acquired HIV infection at Duke University Medical Center	657	Straznickas, John R., Charcot's joint	389
Lachiewicz, Ave, What is the Fragile X syndrome?	203	Sugg, Zola M., Reimbursement and diabetes self-care programs in North Carolina	370
Levine, Ronald H., Conjoint report to the North Carolina Medical Society and the North Carolina Commission for Health Services	467	Tepper, Joel, Local excision and irradiation as primary treatment of rectal cancer	651
Linfors, Eugene (editor) Physicians forum: Hospital ethics committees	157	Tillotson, Emily G., The Combined Medical Specialties Unit: after five years	11
Lipton, Morris A., From the guest editor	487	Tomberlin, Kenneth G., I got sick on July twenty-five, two thousand	213
Livemore, Jean, What is the Fragile X syndrome?	203	Travis, James L. III, Physician's forum: Hospital ethics committees	157
Lurie, Scott N., Plummer's nails	36	Tucker, W. Stuart, Symptoms and signs of syndromes associated with mill wheel murmurs	569
Mack, Ronald B., Fair dinkum koala kruisine—eucalyptus oil poisoning	599	Turnbull, Joanne E., Coping with separation and divorce	641
Fate accompli: rhododendron toxicity	363	Ungaro, Peter C., Another look at thyroid nodules	81
Maizy doats and dozy doats and a kiddle eat almost anything: bromocriptine (Parlodel) overdose	17	Objective laboratory parameters in the diagnosis of sickle cell pain crisis	583
Return with us now to those thrilling days of yesteryear: argyrol and argyria	451	Vernon, Charles R., Psychotherapy: one perspective	519
Round up the usual suspects: potassium bromate poisoning	243	Warren, David, Medical malpractice and the potential for alternative dispute resolution	627
A trollope is not necessarily a ho-ho	133	Weaver, James P., Marketing, malpractice and the value of "I don't know"	334
Madison, Donald L., American medical student activism: 1964-1968	457	The Model Health Care Provider Liability Reform Act: a summary and commentary	621
Mason, George A., Depression in cancer patients: diagnostic and treatment considerations	546	Physician's forum: Hospital ethics committees	157
Mathis, James L., Panic disorder and agoraphobia	521	Weddle, Richard A., Evaluation and management of selected non-neoplastic disorders of the esophagus	129
May, Ronald B., Results of a community-based comprehensive pediatric care program: significant reduction in inpatient care costs for indigent children	21	Werk, Emile E., Jr., Another look at thyroid nodules	81
McCann, Richard, Liver transplantation: initiation of the first program in North Carolina	324	White, Thomas R., Pm medications in a rest home setting	43
McCartney, Cheryl F., Depression in cancer patients: diagnostic and treatment considerations	546	Williams, David A., Pain management programs: clinical and research perspectives	526
McGough, James J., Management of the agitated patient: a pharmacological update	497	Wright, Paul H., Physician's forum: Hospital ethics committees	157
		Yaggy, Duncan, Medicine—present and future	197
		Yankaskas, Bonnie C., The practice of radiology in North Carolina, 1979-1989: a survey of all practices in the state	51
		Zislis, Paul D., HIV: psychoimmunologic and neuropsychiatric relationships	542

526891



3 1378 00526 8910

